Mémoire.

Sustainability Communications addressing Climate Change.

A shift from economic to environmental argumentary
in public and corporate communications
through the Climate Change factor?

Toward an understanding of current
modes of production and consumption limits:
changing behaviour, not climate.

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Cette analyse ne représente que l'opinion personnelle de son auteur et ne peut en aucun cas être attribuée au Programme des Nations Unies pour l'environnement où le stage a eu lieu.

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"The danger posed by war to all of humanity – and to our planet – is at least matched by the climate crisis and global warming. I believe that the world has reached a critical stage in its efforts to exercise responsible environmental stewardship."

Ban Ki-Moon, UN Secretary General -

"Climate Change is shaping global markets and global consumer attitudes. There will be winners and losers. Companies who seize the opportunities, who adopt environmental, social and governance policies and who evolve, innovate and respond to these challenges are likely to be the pioneers and industry leaders of the 21st century".

UNEP Executive Director Achim Steiner" -

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International conjuncture: some clear signals of Climate Change

While the candidacy to the presidential election was marked by the shadow of Nicolas Hulot's candidacy, forty years after the first "accords de Grenelles" a new "green revolution" (to borrow the expression to the famous author of the speech " Notre maison brûle et nous regardons ailleurs") is going to take place in Paris.
In the United States, Al Gore has walked off with an Oscar, while Arnold Schwarzenegger has spearheaded one of the most ambitious pieces of environmental legislation in California.

The global response to Climate Change has been driven in no small part by the predictions and forecasts of the Intergovernmental Panel on Climate Change (IPCC), which has led to an apparent consensus on the issue: NGOs are convinced, politicians persuaded, business on board and the media is covering it all.

But what of the public? Is this 'second coming' of the environmental issue reaching the critical mass required to bring about a behavioural and cultural turning point? Or, just as in the late 1980s when global warming first entered into the spotlight, will it fade quietly back to the periphery? Will the public shun the issue and continue flying, driving and buying with unchecked enthusiasm, sending the climate towards a dangerous tipping point?

Past and recent trends certainly give little cause for comfort: annual carbon dioxide emissions are now 26% higher than in 1990; energy consumption in the household sector has risen by about 40%; distances travelled by private car increased by 17% between 1996 and 2004; and the number of passenger kilometres by plane rose from 125 billion to 260 billion worldwide between 1990 and 2000. We currently need three planet Earths to sustain our current lifestyles and service the ecological debt[1].

Evidence abounds that there have been other species of flora and fauna on this planet other than what we have left today. Certain phenomena all around the world are becoming more and more distinct. This cannot be taken for random occurrences that individually have nothing to do with each other.

Variability in previously known weather patterns has reached alarming proportions and the need for something to be done has never been so apparent.

One culprit has been singled out as the most culpable of all, greenhouse gas. A wide range of human activity is responsible for the production of greenhouse gases. From the refrigerators we use at home to industrial machinery and process that release CFCs (Chlorofluorocarbons) among other global emissions into the atmosphere. Another serious culprit is the fossil fuels used to drive modern industry and most transport systems. Besides polluting the air that we breathe, fossil fuel emissions from engines create a thick blanket of carbon dioxide above the planet. This leads to a gradual but steady rise in the global temperature. Coupled with the adverse effects of an ozone layer tattered by the ozone depleting effects of CFCs, the earth literally receives a beating from the sun. Contemporary scientific wisdom holds it that this is the primary cause of these adverse climate variability manifestations.

The first major global assessment of Climate Change science in six years has concluded that changes in the atmosphere, the oceans and glaciers and ice caps show unequivocally that the world is warming (IPCC - Paris, 2 Feb, 2007)

1 Tipping Point or Turning Point? Social Marketing & Climate Change, Phil Downing and Joe Ballantyne

It is to be expected that the alarm on Climate Change raises a lot of controversies. There are many arguments for and against taking action.

People from all walks of life concur that something is happening to our planet. Since the 1960's a pattern has emerged that clearly shows a marked and clear lengthening of the dry season and a heightened occurrence of drought conditions on the African Continent.

In Europe in recent years, tales of people dying from heatstroke have struck the headlines on a scale never heard of before. Just two years back, Britain experienced one of its worst droughts ever. Last year was Finland's warmest summer in over a hundred years and French people live in constant fear that the unfamiliar and unpredictable vagaries of heat waves will claim yet more lives.

Asia has in the recent past experienced constant and extreme flooding in almost all the countries. This has been as a result of excessive rainfall in a way not witnessed before and that no amount of urban planning could have helped lessen the destructive effect of the rains.

The Americas have not been spared as well. For a continent that has always experienced hurricanes, the latest of these have taken a turn for the disastrous. With Katrina an entire city had to be evacuated; emergency measures were unable to cope with the effects and lives were lost as well as property and infrastructure worth billions of dollars destroyed. It will take years for New Orleans to look the same.

El Niño and la Niña, originating from Latin America, describe phenomenon that are as different as day and night. One refers to the phenomenon of too much rain while the other refers to extended and extreme periods of drought. Either of these have serious repercussions on the lives of communities within which they are occurring. They herald such serious threats as damage to crops due to flooding or drought, contagious disease outbreaks, damage to infrastructure and housing, they spark conflicts such as water related disputes and disputes over grazing land in pastoralist communities. For countries dependent on hydropower, more than agriculture is threatened as manufacturing is constantly disrupted by power outages and rationing.

Scientific studies show that a marked increase in the sea level is expected by mid this century. This is attributed to the melting of the polar icecaps releasing huge volumes of water. This threatens the existence of some countries known to be low-lying as they are likely to be submerged under the sea. That will mean tens of millions will be permanently displaced. The melting is attributed scientific evidence placing global average rise in temperature at a dangerous level of between $1.4 - 5.8^0$ Celsius over the next 100 years. (IPCC Report – Paris, Feb 2, 2007)

Australia's and Africa's deserts have almost doubled in size over the last quarter century and are quoted to be encroaching arable land and grasslands at an alarming rate. This means that in the next half century, the growing human population will be concentrated into very small areas of land and an acute shortage of resources such as water and cultivatable land will be experienced within the few habitable ecosystems. The duration and intensity of drought has increased over wider areas since the 1970s, particularly in the tropics and subtropics. The Sahel, the Mediterranean, southern Africa and parts of southern Asia have already become drier during the 20th century. (IPCC Report – Paris, Feb 2, 2007)

The world is bracing for a more water-tight future as the threat of water scarcity to industry is quite serious. According to the compilation by the Pacific Institute, many businesses big and small, made profit losses or were closed as a result of water scarcity. Further, a compilation by World Water Crisis headlines for this year is full of cases of company closure and public demonstrations related to water crises.

By 2002, people in 31 countries (less than 8% of world population) faced chronic water shortages. A further 25% lived in situations approaching a position of serious water stress. Over 2.8 billion people from 48 countries will face water stress conditions by 2025 (or some 460 million people), of these countries, 40 are in west Asia, North Africa or Sub-Saharan Africa. By 2050, the number of countries facing water stress could rise to 54 whose combined population will be about 40% (4 billion people) of a projected 9.4 billion global population. (Climate Change 2001 Impacts, Adaptation and Vulnerability – Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change).

The world's average surface temperature has increased by around 0.74°C over the past 100 years (1906 - 2005). This figure is higher than the 2001 report's 100-year estimate of 0.6°C due to the recent series of extremely warm years, with 11 of the last 12 years ranking among the 12 warmest years since modern records began around 1850. A warming of about 0.2°C is projected for each of the next two decades.

The world is going to be a "hotter" place to live in, first due to the fact that global temperatures are set to be higher than they are presently and secondly due to the pressures that will be exerted on the available resources to make sure they carter for a bigger population. Food producing areas will significantly shrink as well as the dependability of traditional rainfall dependant agriculture[2].

The ecological footprint

The ecological footprint is a way of measuring human pressure on the natural environment. "The ecological footprint of a population is the biologically productive land and water areas required to produce the resources consumed and assimilate the wastes generated by that population using prevailing technology." (WWF, UNEP, WCMC et Global Footprint Network : 2004) According to the WWF "Living Planet Report 2002", humanity's global ecological footprint has almost doubled over the last 35 years. It is now 20% in excess of the biological capacity of the earth. The study also shows profound inequalities between countries: on average, the footprint per person is six times as great in high-income countries as in low-income ones. In 10 years, the ecological footprint per person has grown by 8% in rich countries and diminished by 11% in the poorest[3].

A new way of measuring human pressure on the natural environment is the use of carbon calculators, which are more and more spread on the Internet.

Technological response, mitigation and adaptation

New technologies are keys to tackling the menace of global warming from GHGs if we are to save our planet from years of our practices of producing global emissions that now threaten our own survival in an increasingly unstable environment.
The good news is that many of the required technologies already exist and there are many opportunities to improve and expand on their use; and more importantly as well as more challenging, on improving on our lifestyles.

2 Global Climate Change: New Challenges for Education and Training Around The World, Keynote address by at the 4th World Environmental Education Congress, 2 - 6 June 2007 Durban South Africa by Mr. Ibrahim Thiaw, Director , Division of Environmental Policy Implementation, UNEP

3 UNEP Toolkit on sustainability communications. Resources for education in Marketing and Advertising; July 2007.

Mitigation

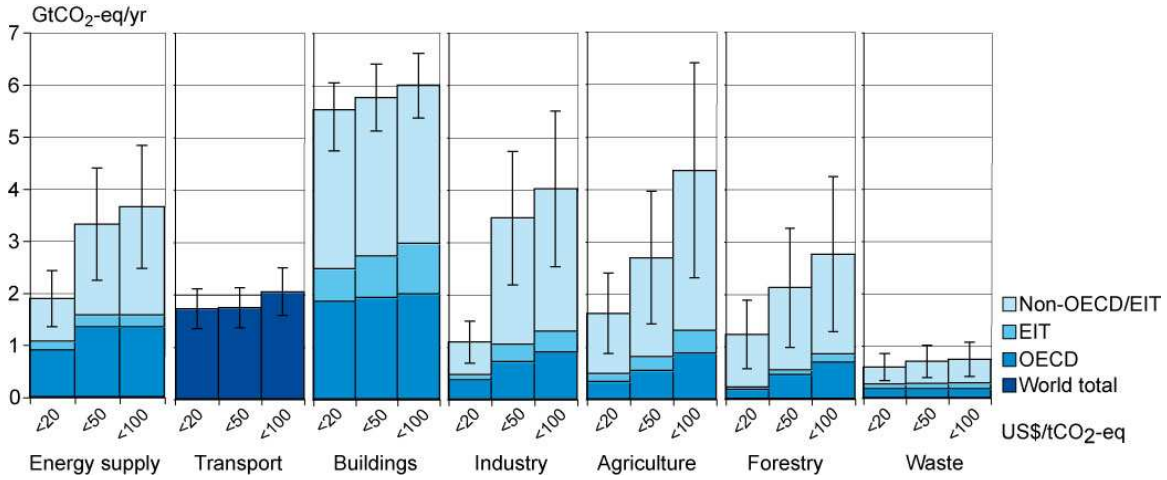
Amongst mitigation strategies, reducing greenhouse gases goes directly to the proximate cause of global warming. As the Stern review notes, the current level of carbon dioxide in the atmosphere is 380 ppm (parts per million) and the total warming effect due to all (Kyoto) greenhouse gases emitted by human activities is now equivalent to around 430 ppm of carbon dioxide (i.e. CO2 equivalent), and is rising at more than 2ppm each year. The Stern Review argues that the risks of the worst impacts of Climate Change can be substantially reduced if greenhouse gas levels in the atmosphere can be stabilised between 450 and 550ppm CO2 equivalent. The biggest challenge as mentioned above is how to work out a system and mechanisms that facilitate most efficiently and fairly reduction of greenhouse gas emissions to the agreed safe level. However, while achieving this target will require significant economic change, not all change is bad and the transition to a low carbon economy will create significant business and technology opportunities.

Energy conservation, especially in the built environment and transportation sectors, must be part of a core response. Economically developed societies will need to consider how low-energy consuming lifestyles can be promoted. Fossil fuel must be replaced with energy sources such as solar energy that do not emit greenhouse gases nor further pollute Earth with bio-toxic substances.
One of the most important natural processes relates to the role played by terrestrial ecosystems, particularly the world's forests, in removing carbon dioxide from the atmosphere. Forest protection and restoration is an urgent matter because of the extent and ongoing rate of forest destruction[4]. Unfortunately, it is an issue that to date has received inadequate attention in the global warming policy debate, at the exception of ponctual initiatives such as UNEP billion tree campaign in 2006.

Figure 1. All sectors and regions have potential to contribute to CC mitigation[5]

4 Nicholas Stern's report to the UK Government was very clear about the importance of forests to solving the global warming problem. As Stern notes, curbing deforestation is a highly cost-effective way of reducing greenhouse gas emissions. Emissions from deforestation are very significant as they represent around 18% of global emissions, a share greater than is produced by the global transport sector. The world's forests are an important part of the global carbon cycle and Earth's natural processes that help regulate the concentration of greenhouse gases in the atmosphere.
About half the world's forests have now been cleared for agriculture and human settlement.

5 Climate Change: Mitigation. AR4 of the Intergovernmental Panel on Climate Change (IPCC), by Prof Ogunlade R Davidson Co-Chair, Working Group III, DTIE – UNEP, Paris, France, June 29, 2007.



Note: estimates do not include non-technical options, such as lifestyle changes.

Adaptation

The rapidly changing climate results in adverse consequences for agricultural productivity, water resources, human settlement, human health, and ecological systems. In the past decade, almost 300 million people per year in developing countries have been affected by climate related disasters and each decade the rate increases by 80 million people per year. Floods and droughts affect most people and both are projected to become more frequent under global warming scenarios. Even if our mitigation actions are successful, and atmospheric levels of greenhouse gases are stabilised, we will still have to live with the impacts of rapid Climate Change due to legacy and lag affects.

'Adaptation' means to build resilience and minimise costs by changing those business-as-usual practices that deplete limited natural resources. Adaptation measures depend on the different types of climate variability each area experiences; for example, small island countries may need risk diagnosis and response methods (awareness raising and monitoring), construction guidelines to protect key public assets (hospitals) in vulnerable coastal areas, and protection of coastal ecosystems and biodiversity affected by sea level rise. Some African countries will need to alter land-use and agricultural policies in their marginal agricultural lands given the increased drought-related stress brought by Climate Change.

There is no doubt that adaptation can be a 'win-win' solution in economic terms. The whole purpose of adaptation is to build resilience and reduce costs. Therefore, adaptation will also bring new business opportunities once people's mindsets have changed and accepted that a certain amount of global warming is now inevitable. Moreover, adaptation will contribute to world peace and security by reducing the risk of natural disaster and environmental refugees.

Responding to the challenge of Climate Change through implementing appropriate mitigation and adaptation strategies will actually force us to consider more sustainable ways of living and alternatives to current consumption and production patterns that are exhausting Earth's natural resources[6].

6 Winning the Struggle Against Global Warming. A Report to the Earth Charter International Council by Brendan Mackey - 1 and Song Li - 2, 1 The Australian National University, 2 The World Bank Group.

Sustainable Development and Climate Change mitigation

Making development more sustainable by changing development paths can make a major contribution to Climate Change mitigation, but implementation may require resources to overcome multiple barriers. There is a growing understanding of the possibilities to choose and implement mitigation options in several sectors to realize synergies and avoid conflicts with other dimensions of Sustainable Development. Irrespective of the scale of mitigation measures, adaptation measures are necessary. Addressing Climate Change can be considered an integral element of Sustainable Development policies. National circumstances and the strengths of institutions determine how development policies impact GHG emissions. Changes in development paths emerge from the interactions of public and private decision processes involving government, business and civil society, many of which are not traditionally considered as climate policy. This process is most effective when actors participate equitably and decentralized decision making processes are coordinated. Climate Change and other Sustainable Development policies are often but not always synergistic. There is growing evidence that decisions about macroeconomic policy, agricultural policy, multilateral development bank lending, insurance practices, electricity market reform, energy security and forest conservation, for example, which are often treated as being apart from climate policy, can significantly reduce emissions. On the other hand, decisions about improving rural access to modern energy sources for example may not have much influence on global GHG emissions.

Climate Change policies related to energy efficiency and renewable energy are often economically beneficial, improve energy security and reduce local pollutant emissions. Other energy supply mitigation options can be designed to also achieve Sustainable Development benefits such as avoided displacement of local populations, job creation, and health benefits.

Reducing both loss of natural habitat and deforestation can have significant biodiversity, soil and water conservation benefits, and can be implemented in a socially and economically sustainable manner. Forestation and bioenergy plantations can lead to restoration of degraded land, manage water runoff, retain soil carbon and benefit rural economies, but could compete with land for food production and may be negative for biodiversity, if not properly designed.

There are also good possibilities for reinforcing Sustainable Development through mitigation actions in the waste management, transportation and buildings sectors. Making development more sustainable can enhance both mitigative and adaptive capacity, and reduce emissions and vulnerability to Climate Change. Synergies between mitigation and adaptation can exist, for example properly designed biomass production, formation of protected areas, land management, energy use in buildings and forestry. In other situations, there may be trade-offs, such as increased GHG emissions due to increased consumption of energy related to adaptive responses[7].

Standards of legitimization and science-policy communication distortions.

The Intergovernmental Panel on Climate Change (IPCC) follows standards of legitimacy as the basis of their operational method. It uses a three working group process that bases its assessments in sequence. Working Group I assesses the state of climate science. Working Group II bases their social impacts assessments on the scientific assessment of Working Group I. Working Group III considers the mitigation of Climate Change based on the assessments of Working Group I and II. The actions of the IPCC policy process start with science as the foundation for action and use economic efficiency criteria to assess

7 Working Group III contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report Climate Change 2007: Mitigation of Climate Change. Summary for Policymakers

mitigation options. The assessments are used to formulate protocols that are binding if ratified by member states. This final and most contentious step applies the legitimacy of democratic governance.
The IPCC's Climate Change science-policy organizational structure is based on the legitimacy of reason (science), economic efficiency (impacts) and democratic governance (policy). But these are often incompatible.
Distortions necessarily arise between these iterations and represent a process of cascading uncertainty. The iterations make due with incomplete information relying on their operating principles to guide decision-making. These operating principles determine the character of the three iterations. Understanding the character of the iterations, then, is crucial for improved communication and understanding of the intent and findings of each level, and ultimately better policy.
It is important to recognize that each level is characterized by the necessity of the institutions involved adhering to their various legitimizing criteria. Science communicates hypotheses for further testing representing a never-ending process of inquiry using reason. Impacts assessments Climate Change Communication Conference transform the scientific hypotheses into social currency that are ranked by their economic efficiency. Policy gives the impacts assessments social and political purpose based on democratic ideals. The varying intents dissuade common communication between the levels. Therefore, it is necessary to understand the intent of the iteration to be able to interpret the character of the results given.

Science is carried forth in an empirical, orderly and reviewed fashion of applied reason - the Scientific Method. The Scientific Method prods scientists to be cautious, to be skeptical and to strive for precision where the lack of information, anomalies or uncertainty is the basis for inquiry. This method follows a sequence of four steps from induction to deduction to prediction to testing (Holt, 1982). The first step is to gather information on the problem in question and, by using induction, derive a theory. The second step is to deduce predictions from the theory generated in the first step. Investigation of data that can be used to test the theory is then gathered.
Fourth, confronting it with evidence tests the theory. Testing either rejects or accepts the theory until a better theory is found. This open-ended fourth step keeps scientists in a state of perpetual re-testing and search for better data, evidence and theory. The ultimate goal is to uncover that which cannot be proved otherwise - 'truth'.
"By discarding the bad ideas and confirming good ones, the scientist has a unique opportunity to clear up conflicting ideas into a systematic body of objectively confirmed knowledge" (Holt, 1982).
In the Climate Change science-policy process, General Circulation Models (GCMs) are used as the basis of the IPCC science assessments. Climate models attempt to replicate the forces that makeup the atmosphere to create a plausible simile. The intent is to include enough variables to offer a simulation that responds like the natural system and to create past and future data for verification and forecasting.
Like the other areas of Climate Change science, GCMs are not immune to uncertainties. It is the nature of science to uncover and dwell on these anomalies, but it is fully expected that the anomalies can be solved if the proper dose of reason is applied - understanding takes time. GCM researchers are equally optimistic. Legates (1999) identified that GCM uncertainty arises because the science of physical flux processes are not well understood, that there is a lack of adequate data, and that there is limited computer technology and modeling capability.
Since scientists are currently unable to know all the extensions of climate, assumptions need to be made and variables held constant. This varies GCM model results. The IPCC's Working Group I reports the average from the various models. These averages are passed on to the impacts community as scientific consensus even though the range of output results does not look good independently. Generally the problem with GCMs is that one incorrect variable amplifies in the large scale. These uncertainties in GCM modeling science cascade onto the impacts community.

The impacts iteration, which considers the costs of and mitigation of Climate Change, attempts to transform the incomplete and uncertain scientific results into social science assessment.

The economics-based impacts iteration, like the GCM based science iteration, magnifies the cascading uncertainty. Climate Change policy inherits this information and is left to sift it out. But even with certain science and impacts assessments, policy and politics use other criteria (consistent with democratic governance) as the basis for decision-making.
Once an issue enters the policy realm, the science and impacts work gives way to the necessity of making recommendations based on incomplete and uncertain information. The decision to implement policy with an uncertain foundation is made by inflating the available information with normative significance. Thus the policy process seeks normative purpose where policy is passed and pursued with determined intent. Whether it is environmental protection, social progress or self-interested political power, the intent distorts the information gathered from the science and impacts communities. The certainty of the science and impacts work, then, may be irrelevant if it does not support the efficacy at achieving its political purpose. Climate Change abatement ultimately comes down to this process. No Climate Change agenda will be implemented without its application through the political process.
Climate Change will increasingly be exposed to many varied interests arguing for the costs to be borne by someone else or that global warming is not happening.

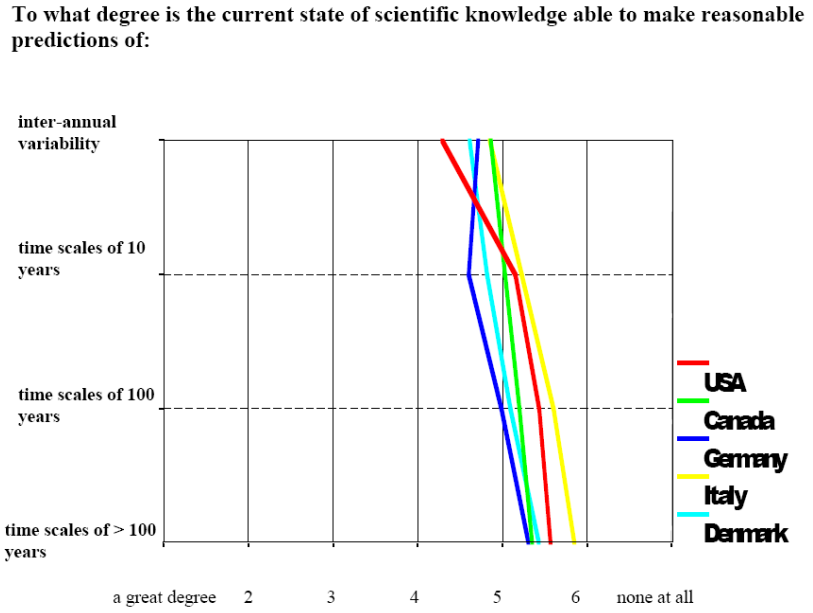
Thus, the relationship between Climate Change science, impacts and policy remains a series of incompatible links. The resulting cascading uncertainty compels scientists, researchers and policy-makers to circumvent the most difficult aspect: to include democratic governance.
To maintain the foundations of legitimacy in the Climate Change policy process "necessitates communication in a language and through forms of analysis that the various groups and interests that make up the body politic can understand and appreciate" (O'Riordan, 1995). To comprehend the gaps inherent in the understanding of Climate Change at these different levels, there is a need to improve the capacity for communication between them. The innate characteristics of science, impacts and policy need to be understood within each other's framework. Better understanding of the foundations of the iterations, the legitimizing roles they play in society and the inherent uncertainties they produce will improve the communication between them so that they can be mutually supportive.[8]

Country	Mailout No.	Return
USA	460	149
Canada	40	35
Germany	500	228
Italy	240	73
Denmark	100	28

The following figures are part of the results of a survey among climate scientists in the USA, Germany, Canada, Denmark and Italy (Bray and von Storch, 1997)

8 The Science-Policy Process: Communication Distortions at Each Iteration, Jon Rosales

Figure 2, 3 and 4



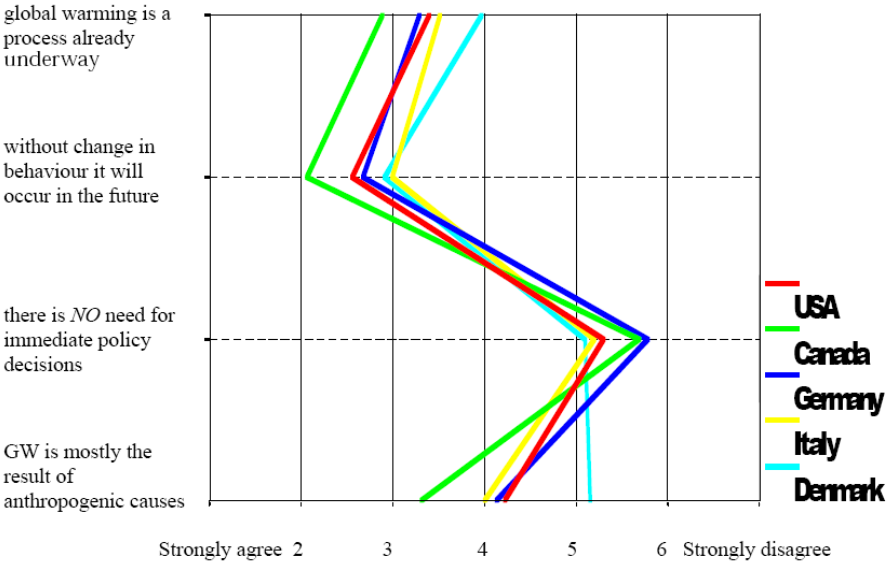
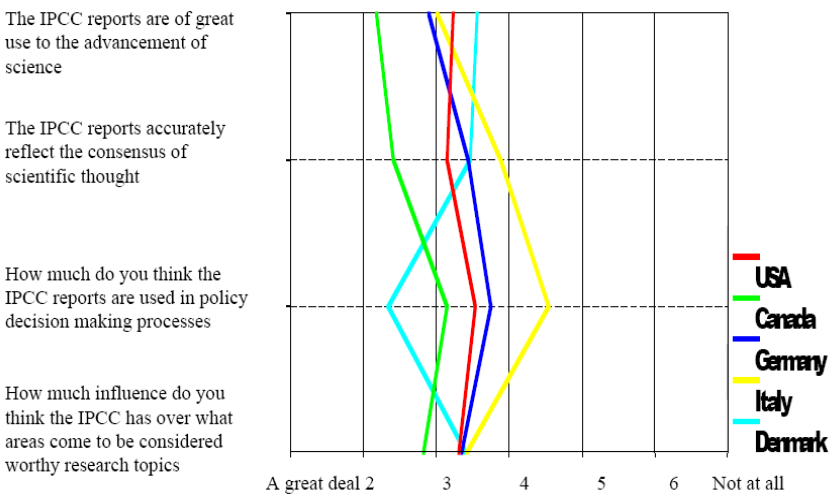


FIGURE 5: Climate Scientists' Assessment of the IPCC: mean responses



Source of figure 2, 3 and 4: Speaking Truth to Power Revisited: Science, Policy and Climate Change**,** *Dennis Bray*

When we look at these statistics from 1997, in Figure 2[9] it is evident that consensus among climate scientists at that time still was towards the *inability* to make predictions, marginally in creasing with longer Climate Change time scales. In Figure 3 we can see that even the margin of certainty that global warming is underway did not seem to be overwhelmingly convincing. That it will occur in the future was perceived as a stronger possibility, how far in the future however, remained uncertain (given the results of Figure 2). Furthermore, there was only a marginal attribution given to anthropogenic causes.
Further analyses suggested only a very marginal relationship (R. Square) between the claim to understanding the climate-society relationship and the perception of the need for immediate policy consideration.

The IPCC has become recognized as the pinnacle of international efforts to consolidate the results of climate sciences. However, it seems the results are also open to multiple interpretations as is evident in the failure to ratify most climate related agreements. Consequently, climate scientists themselves were asked to evaluate its utility. In effect this will assess if the full scope of scientific opinion is reaching the policy debates at the international level, and the impact of such an institute upon the science itself. These results are presented in Figure 5. As is apparent, there are less than glowing appraisals of the IPCC.

More recent statistics would certainly show an even greater consideration for the IPCC as its results are more and more accurate. As a consequence the need to have transparent and understandable communication between science, policy-making and civil society is even more challenging.

Several countries have already pledged to 'go' carbon neutral as their response to the Climate Change challenge including Costa Rica, New Zealand, Norway and the Holy See or Vatican. In addition, many cities including over 300 in the United States are setting- or contemplating setting- greenhouse gas emission reduction targets.
Some have announced C-Neutral strategies for some areas of their urban operations.

9 Fig 2, 3 and 4: Speaking Truth to Power Revisited: Science, Policy and Climate Change, Dennis Bray

Further research may reveal that urban areas in many parts the world may be contemplating or have already pledged C-neutrality too at least in part.
Indeed it would seem logical to suggest that, in the countries which have pledged C-neutrality their cities and urban centres will be key to the eventual success; the cities will be looking at going C-neutral as a result of their government's decision.
Some other important players, either in terms of their emissions or in terms of their political or symbolic importance may well follow suit in the years to come: multinationals, events such as the Olympics and big exhibitions, intergovernmental/UN agencies and programmes, NGOs perhaps even Royal Households.
There may be also substantial interest in C-neutrality among even smaller social and economic units such as kindergartens, schools, small businesses and even individual households and citizens.

See presentation of the role of UNEP, DTIE and SCP, Priorities and strategies; and internship report in Annex.

Analytical framework

Sustainability, Climate Change adaptation and mitigation are expressions of the issues that production and consumption patterns will have to address to build a society where individuals and the environment are respected **(Framing)**. Numerous public and private actors have already committed themselves to this path. For them, the issues of sustainability are also issues of communication. From corporate communication to public awareness campaigns, from (notably "community-based") marketing to advertising, the messages of sustainability are embodied in practices that are increasingly well-established **(Part 2).**
Integrating Sustainable Development and low carbon principles into producer and consumer behaviour entails an acceptance that businesses and consumers (in their capacity as economic agents) have a responsibility for, and an active role to play in, the realization of the common good. What was once the exclusive preserve of the private domain is now seen as closely tied to social, political and environmental considerations. But reintegrating the economy into the social and environmental world is also a task for consumers, who express their civic commitment in their purchasing and consumption decisions. The issue here is not necessary to consume less (though it could also be) but to consume better; and to adopt more sustainable and carbon neural lifestyles through behaviour changes. Thus any analysis of the evolutions (from information to motivation), strategies and good/bad practices in the field of sustainability communications and social environmental marketing would not be fully completed without, prior to it, an analysis of what motivates consumer-citizens changes in knowledge, attitudes and behaviours **(Part 1).** As a consequence review of the existing and proliferating literature on the issue should allow us to understand both bottom up and top down approaches, that is to say the reality of consumer-citizens demands and expectations and the response from public and private actors.

Among the main questions and hypotheses that we will address throughout this research are:

H- Though not operated yet, behaviours changes are primordial in order to mitigate Climate Change. Communication can help to generate the shift.

H1- Which is the importance of sustainability communications addressing sustainability? How can campaigns inject some urgency into behaviour change? What specific information needs to be communicated to inform the public about Climate Change and its implications? Changing behaviour not to change Climate Change.
H1b- Translating scientific knowledge into a language and form accessible to the community is essential.

H2- Are all the consumer-citizens equal in regards of their attitudes and behaviours to Climate Change? Which role do habits and socio-cultural norms play?
H2b- Which is the nature of the link between attitude change and behaviour change?
H3- Is typifying Climate Change as 'an emergency', with alarmism, capable of shifting opinions and behaviours?
H4- A real demand of the consumer-citizen for green products and services exist and the ecological argument is increasingly prevailing for consumption and purchasing.
H5- Climate Change might appear as a new way of framing sustainability communications, maybe to the detriment of other environmental issues.
H6- The way Climate Change is addressed depends on the cultural background.
H7- Are the key sectors for Climate Change mitigation easy to communicate on? (how we run our homes, the food we eat; how we get around; and how we travel on our holidays)
H8- Sustainable Development and Climate Change can benefit to business.
H9- Community based marketing and "small actions" campaigning, together with some other techniques of commerce, are among the most effective ways of changing behaviour.
H10- Advertising can serve sustainability.

Part 1 – Citizen-consumers attitudes and behaviours toward sustainability and Climate Change

I. Citizen-consumers behaviours and Sustainable Consumption

The Consumption Perspective in Environmental Research

For a long period, social science research on the environment was more oriented towards the production process and/or the debate on capitalist or industrialist forms of production. It was not before the emergence of a critical discourse with regard to negative environmental effects of the (global) consumer society that concept of lifestyles and the domain of consumption have attracted more and more attention, especially after the Rio summit in 1992, where the development of sustainable consumption patterns was an issue of the Agenda 21. With regard to both Sustainable Development issues in general and to Climate Change in particular consumption issues have become more and more important.
Most environmental pressure in the developed world are due to the Western (US, Western Europe) or „modern" way of life. Furthermore, we are observing the rise of a global consumer society, more or less heading towards Western standards of energy and resource consumption, despite remaining poverty. More or less voluntary lifestyle changes are necessary to achieve a Sustainability Transition (complementary to technological changes) and to stabilize the global climate.
In recent years research on consumption and environment has found more attention and the results are stimulating (Stern 1997, Princen 2002). There is no doubt that consumption as a social process and consumerism as a social reality (or ideology, as some scholars prefer to put it, cf. Lodziak 2002) contribute to a substantial degree to local and global environmental problems and pose some serious constraints (if not clear obstacles) to a Sustainable Development of the planet.
This holds especially true with regard to the emergence of a world consumer society. In recent years the purchasing power of growing middle and upper class members has reached the total purchasing power of US consumers and is about to grow further (Myers/Kent 2003)[10].

Consumers' impact on the environment

The rise in the number of households has far-reaching environmental implications. These include:

1. changes in land use as more dwellings are needed;
2. a rise in total energy consumption (up by 20 per cent since 1970 though consumption per household has scarcely changed);
3. increasing quantities of 'capital goods' needed for each household such as cookers, washing machines, refrigerators, televisions and telephones, and the products and services associated with them;
4. an increase in the volume of goods sold in the shops;
5. a trend towards smaller-sized packs of groceries and other products leading to increased waste packaging for disposal;

10 Changing Global Lifestyle and Consumption Patterns: The Case of Energy and Food. Fritz Reusswig Hermann Lotze-Campen Katrin Gerlinger Potsdam Institute for Climate Impact Research (PIK) Global Change & Social Systems Department

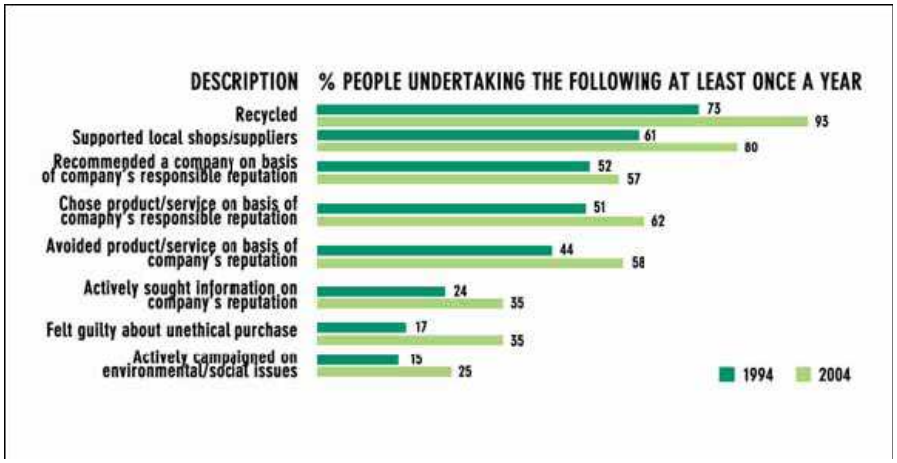
6. the impact of increased transport of both goods and shoppers, as increasing numbers of people make shopping trips;
7. an increase in consumer expenditure.

What does concern about ‘‘the environment’’ mean? Which are the key environmental issues for citizen-consumers?

People’s perception of environmental problems falls into three categories: concern for the environment as a global issue which tended to be remote from everyday life; concern about the consequences of environmental pollution for individual health such as air pollution and asthma; and the more local aesthetic aspects to do with litter, roadworks, dog mess and tree-planting.
It often seems unfair to single out members of the public for criticism for lacking knowledge on the causes and consequences of environmental problems when much of the scientific knowledge available has only recently entered the public domain.
Global warming and Sustainable Development only appeared recently on the list of people’s environmental worries. Although most people are concerned about the environment, they remain very ignorant about the main issues, which are complicated.
A huge information gap exists in people’s knowledge about environmental problems. If people are to be encouraged to act on their concerns they need to be better informed[11].

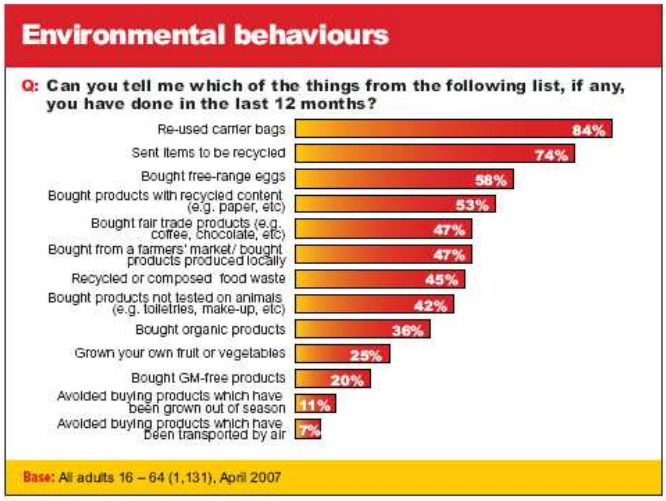
Consumers’ environmental actions and basic barriers to action

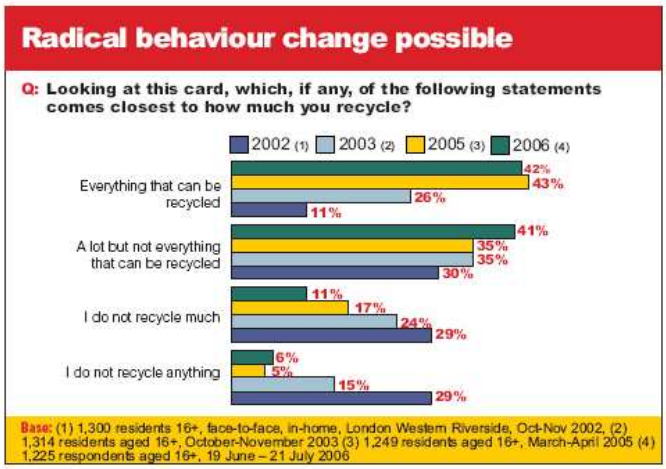
Figure 6: UK Consumers are behaving and consuming more responsibly



Source: Let them eat cake. Satisfying the new consumer appetite for responsible brands Anthony Kleanthous & Jules Peck

11 Consumers and the Environment. Can consumers save the planet? Published by the National Consumer Council, London, September 1997





Source: Tipping Point Or Turning Point? Social Marketing & Climate Change, by Phil Downing and Joe Ballantyne

A mass of people are ready and willing to see new policies introduced that will help them change their behaviour in the face of Climate Change and global poverty, but most frequently they need the government to set an example and make it easier for them to do the right thing.
Besides, generally people are willing to change, but they need to see others acting around them to feel their efforts are worthwhile. Fairness matters. A combination of incentives, community initiatives, pledges and feedback will reassure people that they are part of a collective movement that's making a real difference.

Four overall impact on the environment around us are: how we run our homes, the food we eat; how we get around; and how we travel on our holidays. The way to connect with people's aspirations in these areas is to promote symbolic and effective action that touches their everyday lives.
When people act as shoppers, they expect some issues to have been dealt with. They are generally not aware that Government and retailers are delegating to them the responsibility of choosing society's way out of unsustainability. The complexity of information required to make a judgement on product sustainability can leave even the most dedicated green consumer confused and disempowered. Government, manufacturers and retailers need to work together to edit out unsustainable choices on consumers' behalf and get new sustainable products onto the shelves instead. Choice editing for sustainability is cost-effective and popular, and will create new markets for business.

There are ways in which sustainability imperatives collide with contemporary consumer aspirations, particularly when it comes to foreign travel and the car culture. With the right process, government should not be scared to engage people and business in dialogue on thorny issues.[12]

The principal day-to-day influence people have on the environment relates to the buying, using and disposing of products, and to their consumption of services. Very few people would reduce their use of central heating, cookers, refrigerators, freezers, vacuum cleaners or washing machines–all now viewed as essential to modern living. Most people would not give up even 'less essential' items, or recent household innovations.
Studies of families who have tried to adopt 'green' lifestyles show that in practice it is relatively easy to reduce energy consumption and the amount of waste produced, slightly harder to effect big reductions in water consumption, and very difficult to cut down on car use and to alter shopping habits.

Consumers consistently say they are concerned about the impact of the products they purchase, and that they prefer to buy from companies that take social and environmental responsibilities seriously. But there remains a major gap between consumers' concern and everyday action, even where basic information to guide choices is readily available. For example, nearly 90% of people in the UK say they oppose caged egg production, but only 50% of eggs sold by major supermarkets are free range; more than 80 % of shoppers want to reduce food miles, but only a quarter look at country of origin labels; and over a quarter of people say they would pay a little more for a green electricity tariff, but only a very small minority have actually made the switch.
If this is not just a sign of wishful thinking and self-delusion by both consumers and pollsters, it is a serious missed opportunity to help align markets towards sustainability. While consumers are not the only stakeholders concerned with corporate responsibility (CR), they can be a critical driver of change. Conversely there is a real risk that the progress towards more sustainable businesses and markets will be undermined in the longer term if consumers are not engaged. There are a number of theories about the causes of the persistent gap between consumers expressed concerns and their actual purchasing choices:

- Consumers in general are only paying lip service to CR issues and are more concerned about things like price, quality, convenience and status.
- Consumers just do not have the time to evaluate all the information available to them and are put off by the complexity and disputed nature of many sustainability issues.
- It is not lack of information that prevents consumers acting but habits and cultural norms; role models and word-of-mouth communication has not been fully utilised to overcome consumer inertia and scepticism.
- Organisational disconnect. Organisations' CR strategies are simply detached from consumers' interests and expectations and are not communicated well at brand and product levels.
- Public debate about sustainability issues remains dominated by one-sided arguments, scare-mongering, spin and incomprehensible jargon from all sides: consumers do not know whom to trust.

These theories are not mutually exclusive; in fact they are all useful in explaining the gap between consumer concerns and action. In the past two decades attention has turned to using insights into consumer behaviour to develop tools and strategies to align business behaviour and consumer concerns.
Two broad waves of approaches have been seen:

- Information was the focus of the first wave of approaches in the 1980s and 1990s. Ethical consumer guides, boycott campaigns and the promotion of certification and labeling schemes such

12 Shifting opinions and changing behaviours. A Consumer Forum report by Opinion Leader Research, May 2006

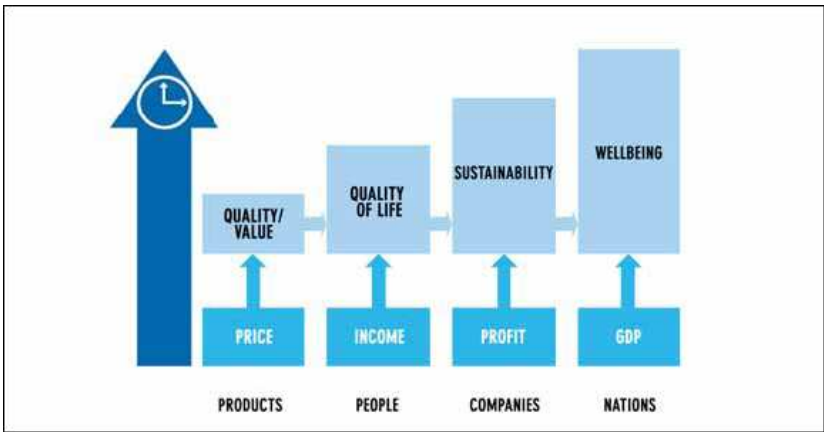
as Fairtrade, Forest Stewardship Council and organic food aimed to raise awareness and provide information about the impacts of different products and companies.

- Motivation is the focus of the second wave, where in the last few years companies have more explicitly explored how they can build brand reputation by aligning with consumers concerns and desires. This approach recognizes that customers do not necessarily want to 'read the small print' underlying their purchasing choices but that they do expect companies that they trust to act in a trustworthy manner.[13]

Values are shifting

Ordinary people increasingly realise through their observations of the world – through flood, famine, disease, poverty, inequality and crime – that societies do not necessarily become happier and healthier as they get richer. The implications are profound, and progressive elements exist at every level: macroeconomists talk of a shift from GDP to "wellbeing"; business professionals make the "business case" for sustainability; and as individuals, we strive to improve the quality of our lives, both through our careers and the products or services on which we spend our money or our time.

Figure 7: Elements of the sustainable paradigm shift



Although most consumers do not understand or use the term "sustainability", a number of trends have emerged that demonstrate consumer demand and give hope for further advances in sustainable consumption. A few of them are summarised below.

Organics: Once the preserve of a privileged and eco-conscious few, the world market for organic food and drink has grown from almost nothing 10 years ago to an estimated US$25bn in 2005. Northern Europe has led this charge, with Britons spending more than £1.1bn (US$2bn) and Denmark seeing 7 per cent of all food sales by value in the organic sector. In the UK, 50 per cent of baby food sales are now organic. In the US, sales of organic products have been growing at 20 per cent – 10 times the pace of the conventional food market, generating an estimated US$15bn in sales in 2005. The world's taste for organic products is not limited to food; this year alone, Marks & Spencer, Oasis and Top Shop have all launched clothing ranges made from organic cotton, the demand for which considerably outstrips the available supply.

Healthy living: According to the National Consumer Council (NCC), the trend for healthier food and drink has reached a tipping point in the UK. Britain's recent research by the NCC reports that two thirds

13 What Assures Consumers? By Maya Forstater and Jeannette Oelschaegel with Maria Sillanpää. An AccountAbility/National Consumer Council Report, July 2006

of consumers have changed what they eat in the last year: despite McDonald's success with its healthier ranges, its overall business has suffered badly, resulting in the closure of 25 UK branches.

Fairtrade: Originally pioneered in Germany and the Netherlands in the 1980s, Fairtrade brands now exist in 20 countries including France, Germany, Japan, the UK and the US, and grew by 40 per cent globally in 2004. According to the Financial Times, sales of Fairtrade certified products have grown at 40-50 per cent per year for the last five years in the UK, where there are now Fairtrade coffee brands comprising 364 different products.

Downsizing: driven by concerns about health, the environment and cost, downsizing is emerging as a significant trend in developed markets. In 2004, stung by the success of Morgan Sperlock's documentary film, Supersize Me!, McDonald's discontinued its Super Size meals and enjoyed a 10 per cent increase in sales as a result. Most dramatic of all has been the crash in sales of sports utility vehicles by 33 per cent in the year to September 2005, accompanied by a rise in small car sales of 23 per cent, from 13.6 per cent of the US car market to 18 per cent. This has prompted BMW and Ford to plan launches of smaller cars in 2007. The trend has even extended to houses: the National Association of Home Builders reports that the trend for larger homes in the US has ended; instead, people are kitting out their homes with the latest gizmos and comforts.

Mass Luxury: Also dubbed "New Luxury", this trend has seen middle-class consumers spending their money on Starbucks coffee, lowend models from up-market car makers (such as Mercedes A and B Class cars and BMWs) and designer clothing. Although not necessarily a force for sustainability, the move away from cheap, disposable, low-quality products tends to be more eco-efficient, because of the more efficient use of natural resources and the longer life expectancy of the products. For middleclass consumers, the money they choose to spend on luxury items is not then spent on poorly made disposable items.

Localism: Widespread public concern over the environmental costs of air transport (of both people and goods), together with the "cloning" of city centres as chain stores squeeze out local retailers, has fuelled a new enthusiasm for local produce and domestic holidays.

Maslow Basics

Famous in the 1950s as the father of humanist psychology, Maslow recognized three main states – defined by needs – which humans beings fall into: sustence or security-driven; esteem driven or outer-directed; and, inner-directed. Cultural Dynamics, a research company run by London-based Californian, Pat Dade, calls them settlers, prospectors, and pioneers.

In the sustenance- or security-driven state, which is naturally where we all start, we need things like food, warmth, security, belonging, sex – the basics of individual, family and social life. Once these needs are met, some people go on to explore further needs, such as esteem for ourselves and the esteem of others. Here we want to succeed and be seen to succeed, to be recognized for, in some ways, being better than some others. These people are usually called 'outer directeds'.

For some, even this is not enough. One day there seems to be more to life than just the trappings of success and achievement. They become 'inner directed', looking for deeper meanings, finding new meaning and value in things beyond their safety, security or status giving properties.

Once people cross the boundary between 'esteem driven' (outer directed) and 'inner directed' they cannot go back. They can however move back from esteem-driven to security-driven, if their circumstances significantly deteriorate.

Driven as they are by different needs, people behave differently, think differently, and are motivated differently, in each group. They may have the same specific behaviour but will have different reasons or motivations for doing it – and will respond of course, only to a proposition which works "in their terms".

For campaigners, whose business is mainly persuasion, knowledge of motivation is, or should be, worth its weight in gold. Here is a rule for how value-modes mapping and insights may help in constructing campaign propositions and running campaigns.

Figure 8 and 9

SEGMENT of population	Dominant motivation	Action mode	Desire	Why they save dolphins in Seatown	I want a brand to …
Inner directed PIONEERS	Exploration	Do it yourself	Better questions	I feel I could be one myself – and for their own worth	Bring new possibilities
Outer directed PROSPECTORS	Status and esteem of others	Organise	Answers	Good for the town's image and economy (and my house price)	Make me look good
Security driven SETTLERS	Being safe and belonging	"Someone should do something about it"	Safetgaurd agaisnt external threat	So long as the dolphins keep coming back, Seatown will be Seatown	Make me secure

SEGMENT of population	I like to meet	I connect through	I like to be associated with	I most respond to threats to	I
Inner directed PIONEERS	New challenging and intriguing people	My own networks	Good causes that put my values into practice	Visions and causes	Am me
Outer directed PROSPECTORS	Desirable and important people	Big brands, systems and organisations	Success	What I've worked for	Am successful
Security driven SETTLERS	People like me and people I know	Club and family	tradition	My way of life	Know my place

Source: Research Into Motivating Prospectors, Settlers and Pioneers To Change Behaviors That Affect Climate Emissions, Chris Rose (Campaign Strategy) with Pat Dade (Cultural Dynamics) and John Scott (KSBR)

The main dangers arising from this for any developer of campaign propositions include: producing campaign propositions which make no sense in one or more important modes; assuming a values mode or motivation based on wealth or occupation or social class; projecting your own way of thinking onto others; accidentally threatening people rather than offering them what they want; projecting arguments rather than meeting needs[14].

Three well-known consumer segmentations – Roper Starch, MORI and LOHAS – all identify mainstream consumer segments for whom environmental and social factors are influential in their consumption choices. Taken together, they make a convincing case that more than 50 per cent of consumers value environmental and social performance highly enough to let it influence their choice of brand. There is also compelling evidence from consumer surveys and academic studies of enormous untapped commercial potential among mainstream consumers for responsible brands.

Part of the problem with the existing sources of information on consumers' response to environmental and social issues is that it is based on attitudes rather than behaviour. Clearly, there is a difference between what people say they would do in a survey and what they actually end up doing.

In response to this gap in knowledge, some planners and academics have developed ways of grouping consumers according to their values, based on interpretations of Maslow's hierarchy of needs.

As the table below illustrates, Dade and Rose offer two further levels of segmentation, with each of the main groups being split into subgroups. Young and Rubicam has also developed a segmentation based on

14 A Tool For Motivation Based Communication Strategy (revised version December 2004) Chris Rose

Maslow's work, this time comprising seven groups. Paul Ray, Roper Starch Worldwide and MORI offer their own segmentations, still based on Maslow but focused on sustainability[15].

Figure 10 and 11

SEGMENTATION APPROACH	MAIN PROPONENTS/STUDIES
Pioneers - Eclectics; Pioneers - Seekers; Prospectors - Players; Prospectors - Optimists; Settlers - Rationals; Settlers - Protectors.	Dade/Rose
Pioneers: Transcenders; Flexible individuals; Concerned Ethicals; Transitionals. Prospectors: The Tomorrow People; The Now People; Happy Followers. Settlers: Golden Dreamers; Certainty First; Brave New World; Smooth Sailing; Roots.	Dade/Rose
Seven kinds of people: Explorers (seek difference/novelty/discover); Aspirers (seek status); Succeeders (seek control); Reformers (seek enlightenment); Mainstreamers (seek security); Strugglers (seek escape); Resigned (seek to survive).	Y&R
Five segments with varying degrees of concern and action: true blue greens 11%, major green purchasers and re-cyclers; greenback greens 5% will buy or give green but won't make significant lifestyle changes; sprouts 33% who care but would only spend a little more to buy green; grousers 18% see the environment as a problem but somebody else's; basic browns 31% essentially don't care/won't care.	Roper Starch Worldwide
LOHAS (Lifestyles of Health and Sustainability) 30%; Nomadics 38%; Centrists 25% Indifferents 7%.	Paul Ray
Global watchdogs 5%; conscientious consumers 18%; do what I can 49%; brand 6%; look after my own 22%.	MORI

Table 1: Consumer segmentations

15 Let them eat cake. Satisfying the new consumer appetite for responsible brands Anthony Kleanthous & Jules Peck

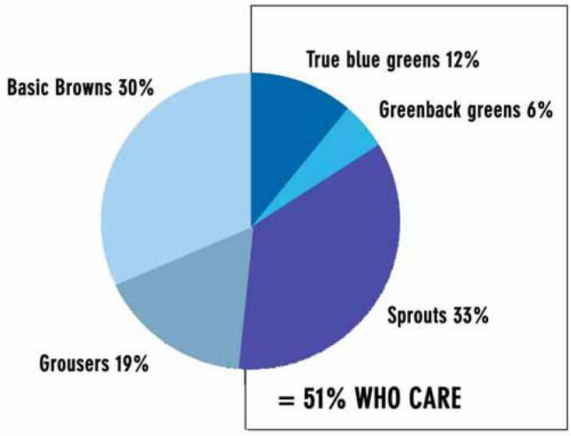


Figure 7: Roper Starch's segmentation based on environmental values

Young & Rubicam has used Maslow as the starting point for a model that identifies seven types of people – Reformer, Explorer, Succeeder, Aspirer, Mainstream, Struggler and Resigned – and links each to a set of values that drives them (Figure 8).

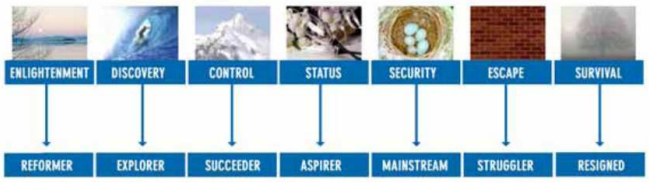


Figure 8: Y&R's "Seven Kinds of People" and the values that drive them[68]

Models of Consumer Behaviour

Rational Choice

This model contends that consumers make decisions by calculating the individual costs and benefits of different courses of action and choosing the option that maximizes their expected net benefits. Several key assumptions underlie the model. These are that: individual self- interest is the appropriate framework for understanding human behaviour; 'rational' behaviour is the result of processes of cognitive deliberation; and that consumer preferences are exogenous to the model, that is to say they are taken as given without further elaboration as to their origins or antecedents.

Adjusted Expectancy Value Theories

Rational choice theory is a form of 'expectancy value' theory. In this kind of theory, choices are supposed to be made on the basis of the expected outcomes from a choice and the value attached to those outcomes. A range of 'adjusted' social psychological models of consumer behaviour seek to use this basic idea to go beyond rational choice and unravel the psychological antecedents of consumer preferences.

Figure 12 and 13

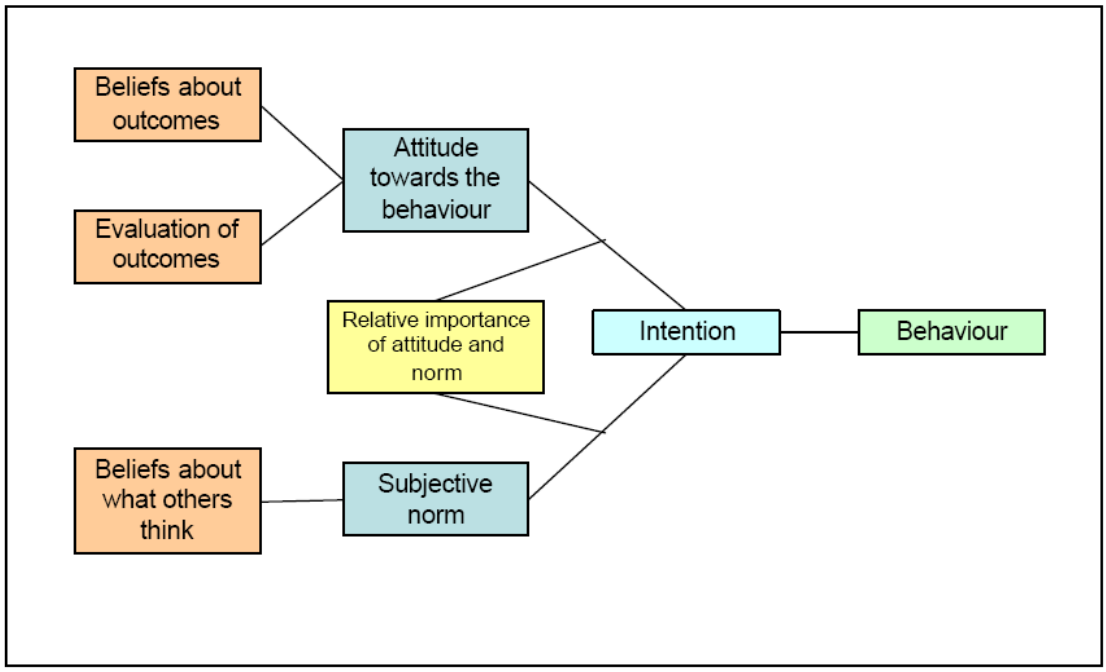


Figure 5: The Theory of Reasoned Action

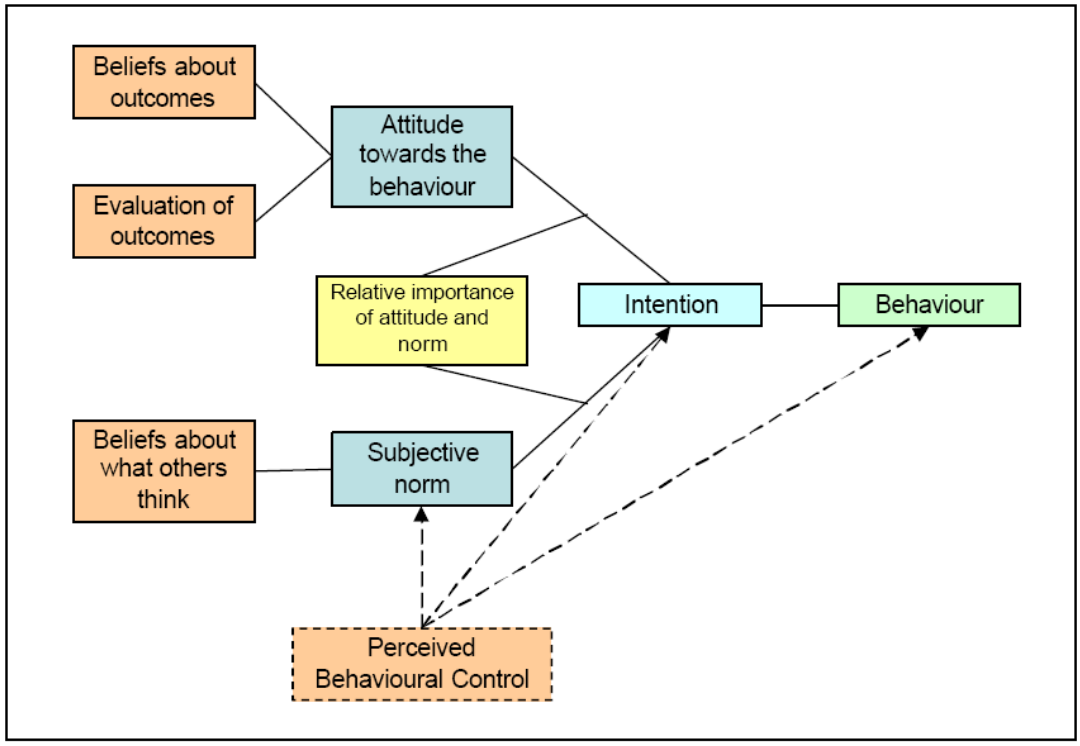


Figure 6: The Theory of Planned Behaviour

Moral and Normative Conduct

Moral and normative considerations are inherent in any discussion of environmentally-significant consumer behaviour. Rational choice models eschew discussion of moral behaviour and assume that it reflects an aspect of self- interest.
But incorporating moral beliefs into adjusted expectancy value models appears to improve their predictive power. Moreover, some authors have made explicit attempts to understand the dimensions and the antecedents of moral or pro-social behaviours. For example, Schwartz's 'Norm-Activation Theory' suggests that moral behaviours are the result of a personal norm to act in a particular way. These norms arise, according to Schwartz, from an awareness of the consequences of one's actions and the ability and willingness to assume responsibility for those consequences.

Figure 14

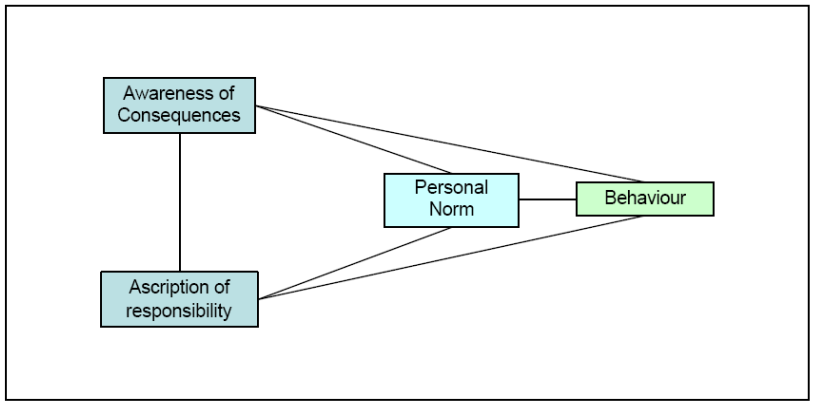


Figure 7 Schwartz's Norm Activation Theory

The most well-known work on the moral dimensions of pro-environmental behaviours is that of Paul Stern and his colleagues. Their Value-Belief-Norm theory attempts to elucidate a chain of influence from people's value sets and beliefs to the emergence of a personal norm to act in a given way. The importance of this work is its insight into the value basis of different behaviours and behavioural intentions.

Figure 15

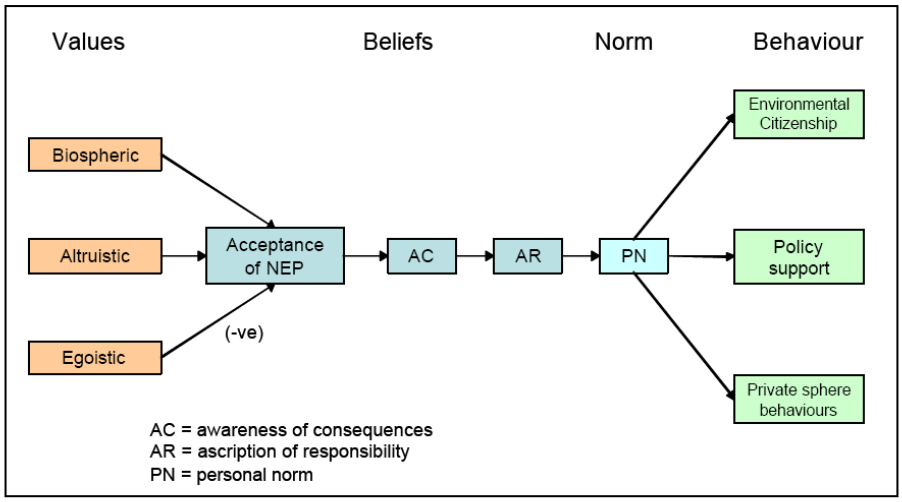


Figure 8: Stern's Value-Belief-Norm Model

Cialdini's Focus Theory of Normative Behaviour also has important ramifications for understanding consumer behaviour. Cialdini suggests that people are continually influenced in their behaviours by social norms which prescribe or proscribe certain behavioural options. The existence of such social norms can be a powerful force both in inhibiting and in encouraging pro-environmental behaviour. At one level, proenvironmental behavioural change can be thought of as a transition in social norms.

The Matter of Habit

Expectancy value models still assume that behaviour is the result of deliberative, cognitive processes. But in practice, many of our ordinary, everyday behaviours are carried out with very little conscious deliberation at all. Cognitive psychology suggests that habits, routines and automaticity play a vital role in the cognitive effort required to function effectively. This ability for efficient cognitive processing becomes increasingly important in a message-dense environment, such as the modern society in which we live.

At the same time, the process of 'routinization' of everyday behaviours makes them less visible to rational deliberation, less obvious to understand, and less accessible to policy intervention. Habitual behaviours often undermine our best intentions to change and are an important structural feature of behavioural 'lock-in'. Habit is one of the key challenges for behavioural change policy since many environmentally significant behaviours have this routine character.

Sociality and Self

Many social-psychological models assume an individual approach to human behaviour. But experience tells us that we are often constrained by what others think, say and do. Some social theories go even further than this and suggest that our behaviours, our attitudes, and even our concepts of self are (at best) socially constructed and (at worst) helplessly mired in a complex 'social logic'. Social identity theory, for example, regards key aspects of our behaviour as being motivated by an evolutionary tendency towards intra-group solidarity and inter-group competition.

These kinds of theories provide a rich evidence base for the social embeddedness of environmentally significant behaviour. They also suggest that behavioural change must occur at the collective, social level. Individual change is neither feasible nor sufficient. The relationship between self and society is mediated by the particular form that social organization takes within a given society. Cultural theory suggests that historically there have been only four main types of social organization: fatalist, hierarchical, individualist/entrepreneurial and egalitarian. Each of these cultural forms has a different view of nature and a different view of how social and environmental goals should be achieved. The dominant cultural model in 21st Century society is individualist. But this is only one form of social organization and there is evidence to suggest that it may not be sufficient to address the complexity of proenvironmental behavioural change.

Figure 16, 17 and 18

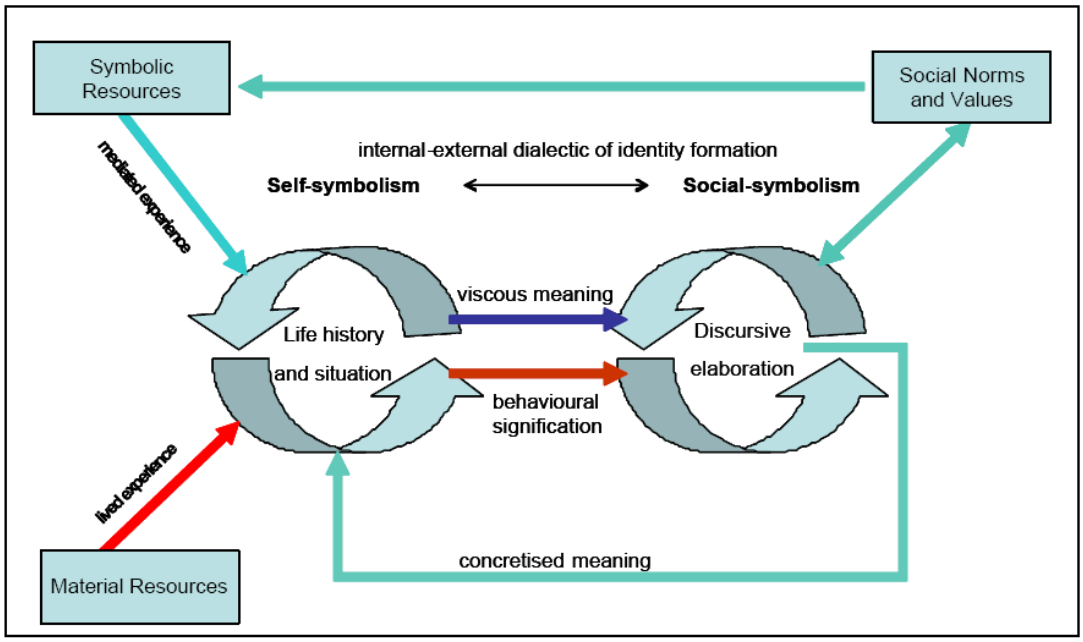


Figure 9: The Symbolic Project of the Self (after Elliott and Wattanasuwan 1998)

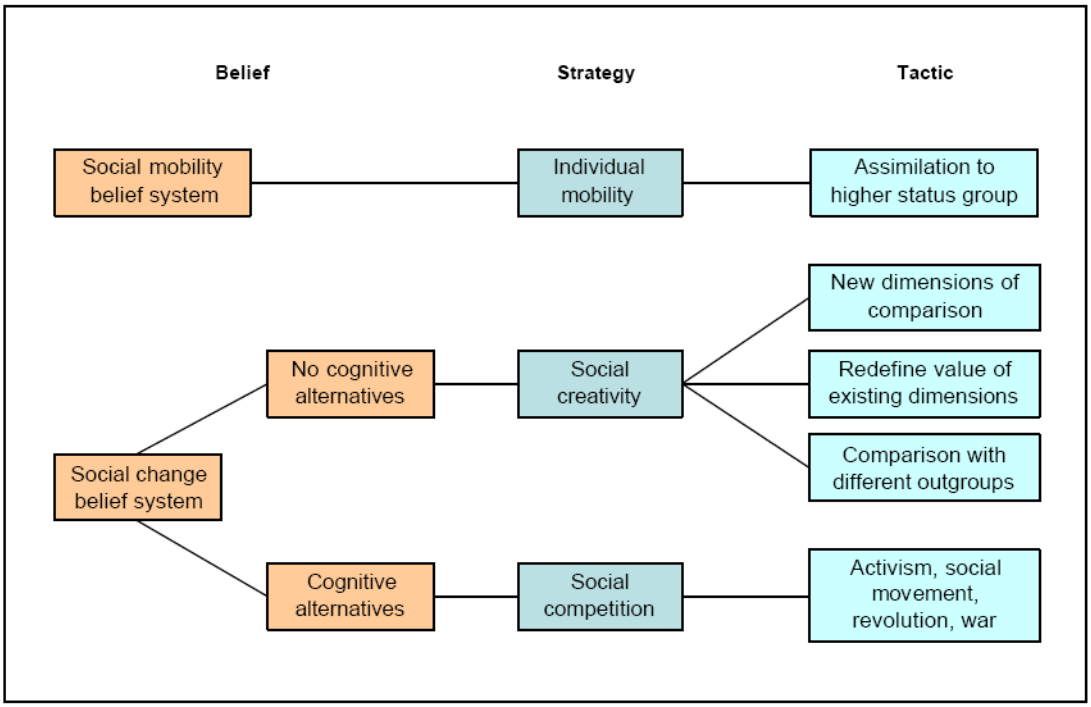


Figure 10: A Social Identity Theory Perspective on Social Change (Hogg and Vaughan 2002)

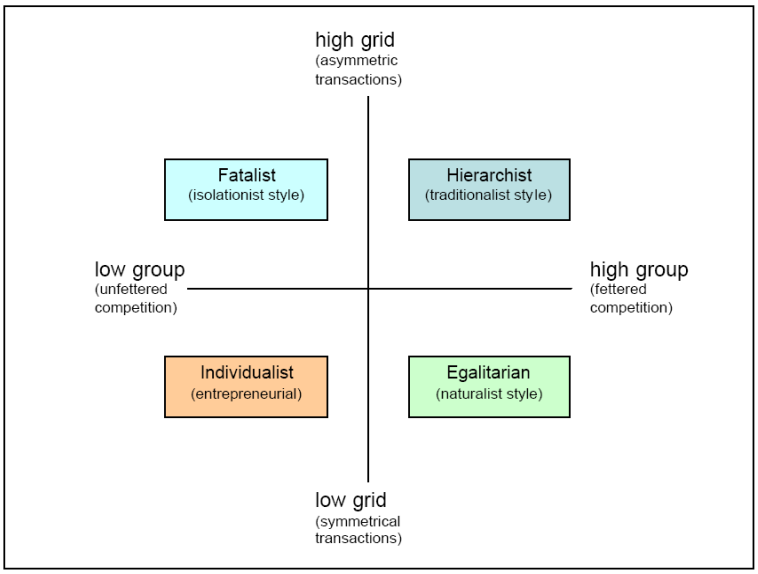


Figure 11: Cultural Theory's Typology of Social Organisation and Cultural Type

Integrative Theories of Consumer Behaviour

Some models of consumer behaviour focus on internal antecedents of behaviour such as values, attitudes and intentions. Others focus more on external factors like incentives, norms and institutional constraints. Some models are good at describing internal (cognitive) aspects of individual decisions but fail to reflect the importance of contextual or situational variables and vice versa.
Making sense of behaviour inevitably requires a multi-dimensional view which incorporates both internal and external elements. In particular, as Stern has noted, a useful model has to account for: motivations, attitudes and values; contextual or situational factors; social influences; personal capabilities; and habits.

Most accurate models include the attempt by Stern (2000) and his colleagues to construct an integrated attitude-behaviour-context (ABC) model capable of describing and predicting proenvironmental consumer behaviour, Triandis' (1977) early theory of interpersonal behaviour, and the recent work of Bagozzi and his colleagues (2002) to build a comprehensive model of consumer action.

Figure 19, 20 and 21

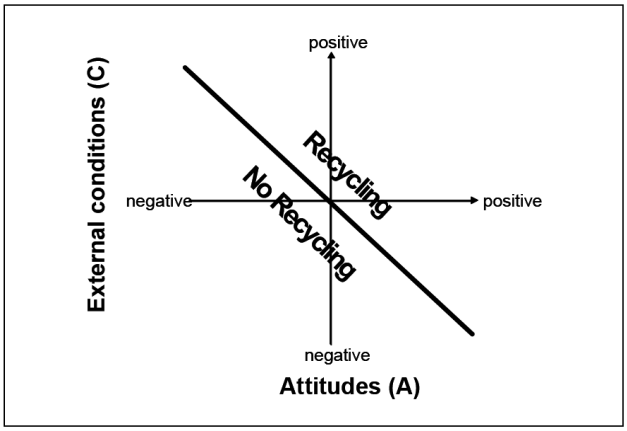


Figure 13: The Attitude-Behaviour-Context Model applied to recycling

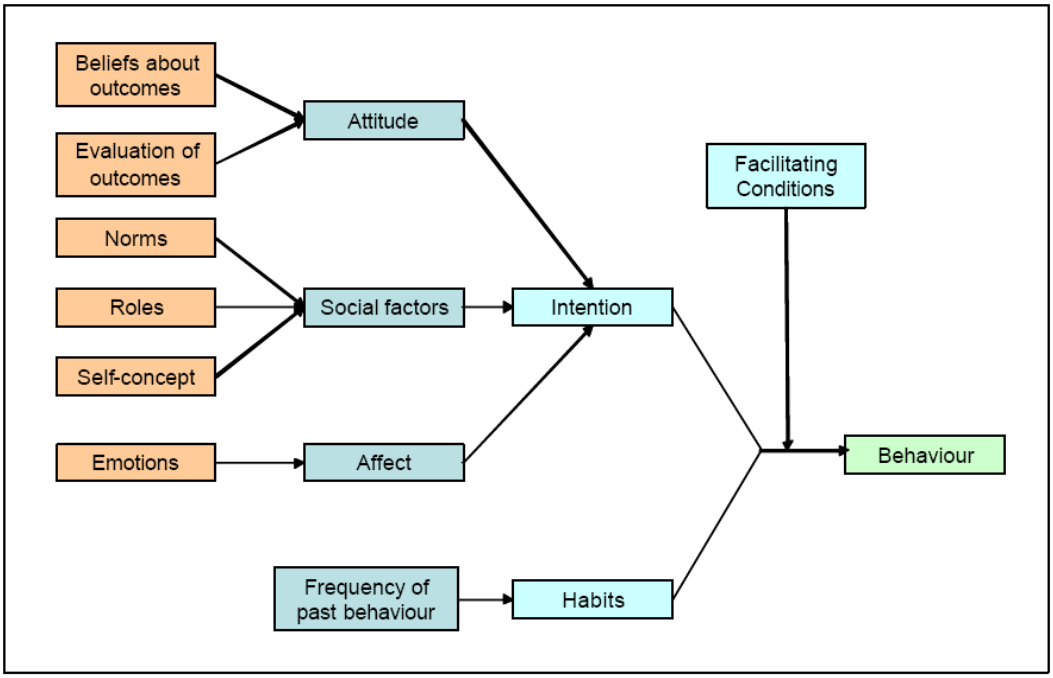


Figure 14: Triandis' Theory of Interpersonal Behaviour

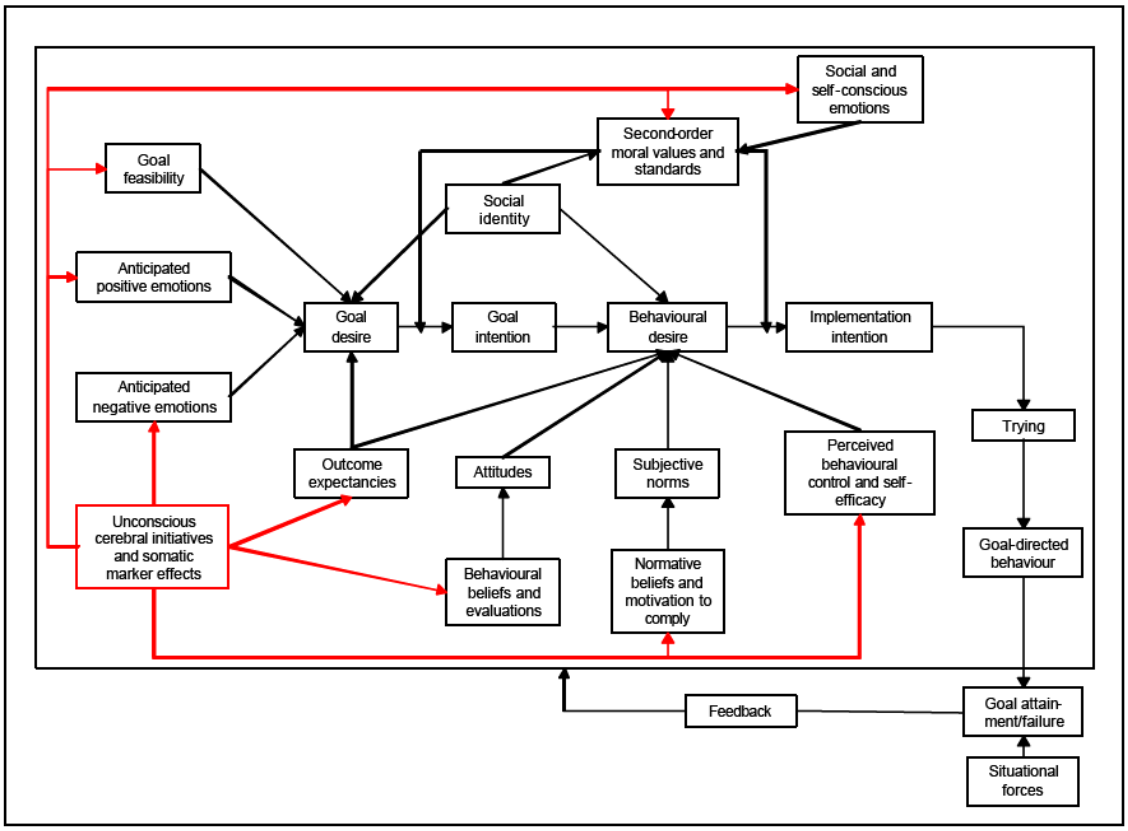


Figure 17: Bagozzi's Comprehensive Model of Consumer Action

The Bagozzi model is perhaps the most elaborate attempt in recent years to incorporate the range of influences on consumer behaviour into a single composite theory of consumer action. What it achieves in terms of heuristic inclusion, however, it lacks in parsimony. Not surprisingly, no attempt has yet been made to apply this theory empirically. Nonetheless, there are a number of studies that test and support many of the individual relations proposed between different variables. Moreover, the model clearly offers a more sophisticated understanding of consumer behaviour than simple expectancy-value theories.

The question of whether consumers are free to make choices about their own actions or whether they are bound by forces outside their control has provoked a long debate in the social sciences. This debate culminated in the development of Giddens' (1984) 'structuration theory' which attempts to show how agency and structure relate to each other. Giddens work has provided the basis for a view of consumption as a set of social practices, influenced on the one hand by social norms and lifestyle choices and on the other by the institutions and structures of society. Giddens' model proposes a key distinction between 'practical' and 'discursive' consciousness. Most everyday, routine action is performed in practical consciousness. But there is evidence to suggest that intentional or goal-oriented behaviours require elaboration in discursive consciousness. This insight is important in devising strategies to change habitual behaviour.

Towards behavioural change

Change, Persuasion and Learning

Behavioural change is fast becoming the 'holy grail' of Sustainable Development policy. But understanding how, why and where behaviours change is an important pre-requisite for making progress here. Information campaigns have been widely used for achieving public interest goals. But they are known to be less effective than other forms of learning. Research suggests that learning by trial and error, observing how others behave and modeling our behaviour on what we see around us provide more effective and more promising avenues for changing behaviours than information and awareness campaigns. Persuasion is particularly difficult in a message-dense environment. Effective persuasion relies on observing a number of basic principles. These include: understanding the target audience; using emotional and imaginative appeal; immediacy and directness; commitments/loyalty schemes; use of 'retrieval cues' to catalyse the new behaviour.

The 'elaboration likelihood model' of Petty and Cacioppo (1981) suggests that lasting behavioural change relies on people consciously engaging with and elaborating on the subject matter of the persuasive message.

'Coping with the demands of everyday life,' argued Bandura (1977), 'would be exceedingly trying if one could arrive at solutions to problems only be actually performing possible options and suffering the consequences.' According to social learning theory, we learn most effectively from models who are attractive to us or influential for us, or from people are simply 'like us'. Sometimes we learn by counter-example. And we learn not to trust people who tell us one thing and do another. Since many environmentally significant behaviours are routine in nature, it is vital for sustainable consumption policy to find ways of addressing and re- negotiating habitual behaviour. Like many psychological processes, habit formation has its own rules and dynamics. A vital ingredient for changing habits is to 'unfreeze' existing behaviour, to raise the behaviour from the level of practical to discursive consciousness. This process is known to be more effective in a supportive, social environment.

Figure 22

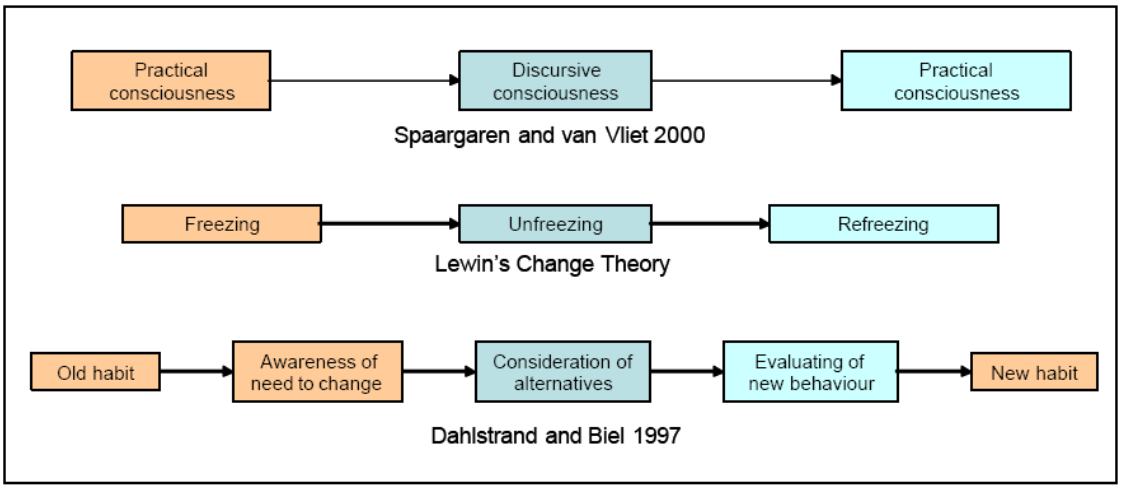


Figure 19: Breaking Bad Habits: some conceptual perspectives

Policy Options and Opportunities

Looking through the lens of consumer behaviour reveals a complex and apparently intractable policy terrain for two (related) reasons. In the first place, as noted, consumption plays a vital role in important social conversations about identity, social cohesion and cultural meaning. Secondly, consumers appear to be locked in to unsustainable patterns of consumption through a mixture of habit, institutional constraints and social norms.

The rhetoric of consumer sovereignty is inaccurate and unhelpful in steering behavioural change in this context, in particular because it regards choice as entirely individualistic and because it fails to unravel the social and psychological influences on behaviour. Clearly some behaviours are motivated by rational, self-interested, and individualistic concerns and are therefore likely to respond to conventional policy interventions such as information provision and fiscal incentives. But these conventional approaches do not exhaust the possibilities for policy intervention in pursuit of behavioural change.

Despite the rhetoric of modern 'hands-off' governance, policy intervenes continually in the behaviour of individuals both directly (through taxes, regulations and incentives) and (more importantly) through its extensive influence over the social and institutional context. A creative approach to behavioural change policy has a number of different avenues to consider. These include the influence of governments on: facilitating conditions and situational factors (access to pro-environmental choice); the institutional context in which choice is framed (including product standards, trading standards and marketing standards); the social and cultural context in which priorities are set and cultural values are determined; business practices and the influence of these on consumers as employees; the initiation and facilitation of community based social change; and its own environmental and social performance.

Changing behaviour is difficult. But in spite of all appearances this complex terrain is not intractable to policy intervention. Policy makers need to proceed with care and to 'consumer proof' policies through careful design, piloting and testing. But this does not suggest that governments should be faint-hearted in its approach to supporting proenvironmental behaviour change. On the contrary a robust effort is clearly needed to motivate sustainable consumption[16].

16 Motivating Sustainable Consumption, a review of evidence on consumer behaviour and behavioural change, a report to the Sustainable Development Research Network, Tim Jackson, Professor of Sustainable Development, Centre for Environmental Strategy, University of Surrey.

Conclusions on the models of consumer's behaviour

Recent understandings of consumer behaviour, and of pro-environmental consumer behaviour in particular, have come a long way from the simple expectancy-value models embedded in the Theory of Reasoned Action. These more recent models also go some way towards answering critiques of the rational choice model.
In particular, social psychological models attempt to account, systematically, for moral, social, symbolic and affective (as well as reasoned) component s of consumer behaviour. They describe the role of descriptive and injunctive social norms on individual action. They show how cognitive processes and unconscious biases impact on goal-directed behaviour. They highlight the importance of habit, both in reducing the cognitive effort associated with goal-directed behaviour, but also in moderating behavioural intentions.
The issue of habit illustrates very clearly the existence of trade-offs between different components of consumer decision-making. Cognitive efficiency – sometimes reinforced by short-run rewards – means that we are often locked into counterintentional habits, in spite of our best intentions. Affective motivations (emotions) often conflict with moral concerns. Social norms interfere with individual preference. Situational conditions interfere with intention. The broad social and cultural context is a powerful influence on attitudes and motivations. Choice, in these circumstances, is never a straightforward process of individual rational deliberation. Intentions and desires are moderated by social, cognitive, situational and cultural limitations.

When it comes to the models used to describe this complex terrain, the simpler models are more readily applicable, and generally speaking have been more frequently applied (and tested) in empirical studies. On the other hand, the ability of these simpler models to offer robust explanations for, or predictions of, different kinds of behaviour is limited.
For example, the explained variance associated with Stern's Value Belief Norm theory was less than 35% (Stern, 1999) in empirical studies.
As the conceptual complexity of the models rise, however, their empirical applicability diminishes. Designing, testing and corroborating a sophisticated multivariable social-psychological model (with feedback) of the type illustrated in the last figure is a daunting empirical task. To date, it has not been carried out.
But does this matter, in terms of developing a policy-relevant understanding of consumer behaviour? Perhaps not. In the first place, there is a fairly robust evidence base in support of each of the individual links proposed in (for example) Bagozzi's Comprehensive Model of Consumer Action. We know that the frequency and recency of past behaviours moderates intentions. We know that affective factors mediate rational choice. We know that normative factors moderate desire. The quantitative and qualitative empirical support for such links is relatively well established. As conceptual models of consumer action, therefore, these more sophisticated models offer policy- makers a fairly robust picture of the factors that shape and constrain consumer choice. They also point to some key areas for further examination in promoting pro-environmental behavioural change. In particular, of course, the importance of habit in consumer action, draws attention to need to understand and to influence the processes of habit formation and change. The moderating effect of external situational factors on consumer intentions highlights the need to improve facilitating conditions in a wide range of environmentally-significant situations. And, perhaps most telling of all, the embeddedness of the individual in a social group points to the vital influence of social and cultural context on consumer behaviour.
On the other hand, of course, deciding on the exact balance of affective, moral, habitual and social motivations and situational conditions in any given situation is no easy task. We cannot necessarily assume that the importance of habit (for example) is as high in one situation, for instance, energy

conservation, as it is in another, say, travel mode choice. Nonetheless, the broad understanding that consumer action is framed by these different components, together with some detailed empirical studies of the strength of specific relationships, can provide useful lessons for policy-makers seeking to encourage pro-environmental behaviour. And this even if it has to be noticed that the sheer complexity inherent in consumer action is frightening from a policy perspective. The last figure is a far cry from the simple consumer preference model illustrated in the first one. In the latter case, there were basically only two possible points of policy intervention: the provision of adequate information to enable informed choice; and the adjustment of private costs and benefits to reflect social externalities.

By contrast, the terrain of Bagozzi's system is much more complex. It suggests a model of consumer choice in which there is a multiplicity of different points of intervention, for example, through influencing the social and institutional conditions that affect moral choice and social identity as well as through addressing the situational conditions associated with specific actions. It also suggests that some attention needs to be paid to the cognitive processes of behavioural change.

Of course, these more complex kinds of intervention also pose some considerable problems and make some considerable demands on policy- makers. But fortunately, there are at least some insights into how these problems can be overcome and these demands can be met.

For example, the long pedigree of persuasion theory has some salutary lessons for conventional public sector information campaigns. But it also provides useful pointers to the design of effective social marketing and behaviour change programmes. One can particularly mention the opportunities for community-based social marketing, social learning, participatory problem-solving and the discursive unfreezing of embedded, routine behaviours, which are all key opportunities for those thinking about behavioural change.

II. Citizen-consumers behaviours towards Climate Change

Introduction: some quantitative datas on citizen-consumers attitudes to Climate Change

The more accurate quantitative study on consumers attitudes to Climate Change is perhaps: Tipping Point Or Turning Point? Social Marketing & Climate Change, by Phil Downing and Joe Ballantyne. As an introduction to this section, it seems pertinent to present here its main results.

1. Attitudes to Climate Change

• There is widespread recognition that the climate, irrespective of the cause, is changing - 88% believe this to be true. Many say they have personally seen evidence of this.
• However, the public is out of step with the IPCC, with 41% believing that Climate Change is being caused by both human activity and natural processes. 46% believe human activity is the main cause.
• Only a small minority reject anthropogenic Climate Change, while almost half (44%) are very concerned. However, there remains a large proportion who are yet to be fully persuaded and hold doubts about the extent of the threat. The public do recognise the notion of environmental limits and acknowledge the need for action, but there is increasing optimism about our ability to address the problem and find solutions.
• There is still a strong appetite among the public for more information, and 63% say they need this to come to a firm view on the issue and what it means for them. While broad understanding of what Climate Change means is increasing – up now to 69% - David Miliband was right, in his final days at Defra, to note that the British public still have a "mixed and confused" idea of the risk posed to the UK. While the debate may be over for some, for others it certainly is not.
• The public continue to externalise Climate Change to other people, places and times. It is increasingly perceived as a major global issue with far-reaching consequences for future generations - 45% say it is the most serious threat facing the World today and 53% believe it will impact significantly on future generations. However, the issue features less prominently nationally and locally, indeed only 9% believe Climate Change will have a significant impact upon them personally.
• Messages questioning Climate Change and/or its anthropogenic causes – for example Channel 4's Great Global Warming Swindle and other voices in the media - are having an impact. Complexity in science and notions of probability do not translate easily to the public who, in the absence of definitive 'proof', search out signs of doubt. 40% question our ability to predict the climate system, while as many as 56% believe that the scientific jury is still out on the causes of Climate Change. Uncertainty in the science is matched by widespread confusion and doubts about what actions to take and which products to buy.
• As well as messages to educate and reinforce, the language deployed and the way the
debate is framed are both very important. Support can shift considerably depending on the nature of the arguments and presentation of the information.

2. Attitudes to actors and agencies

• The public look to Government to orchestrate collective action and prefer decision making authority at the national level rather than through the EU or other supranational bodies. The public agree, in principle, that government has the mandate to lead, although their response to potential interventions is more complex. The nature of the intervention is key and certain measures – particularly fiscal – are contentious, whereas others (e.g. 'editing out' certain consumer choices, like incandescent light bulbs) are widely supported.
• Trust is a key factor impacting on the ability of government to make the case to its electorate about any particular policy measure, and eco-taxation, the Polluter Pays principle and hypothecation all suffer from

the stigma of "stealth" taxation. The (successful) introduction of the policy itself can have one of the most marked impacts on public opinion which enjoyed a considerable surge in support following its introduction.

• Consumers are looking to business to take greater action on Climate Change, and expect greater competition in the next few years around this issue. They want easier choices and more help differentiating environmentally sound products from others. They are also cautious of commercial claims, and businesses face challenges convincing consumers that its efforts are beyond 'spin'. Certain sectors, such as investment, transport and oil, face more scrutiny than others because environmental objectives are perceived to be fundamentally at odds with their modus operandi. However, the public have taken note of the efforts of companies over the past year.

• Local agents are perceived to have the least influence on Climate Change. Local authorities have traditionally focused on local environmental quality but are becoming more involved (e.g. through the planning system to encourage renewables, or the parking regime to target "gas guzzlers"). The public consider the local community and themselves as individuals to be minor actors - only 4% perceive they have a large influence to combat Climate Change, while 33% feel they have none. There is also a mismatch between the size of the problem relative to the actions the public are encouraged to take. Communications often play straight into this disconnect, focusing on the minutiae and steering away from the grand and heroic.

• A sense of collective action is fundamental, particularly in view of concerns over fairness and the potential for 'free riders' to take advantage of individual sacrifices. Indeed, 54% say that they would do more if others did as well[17].

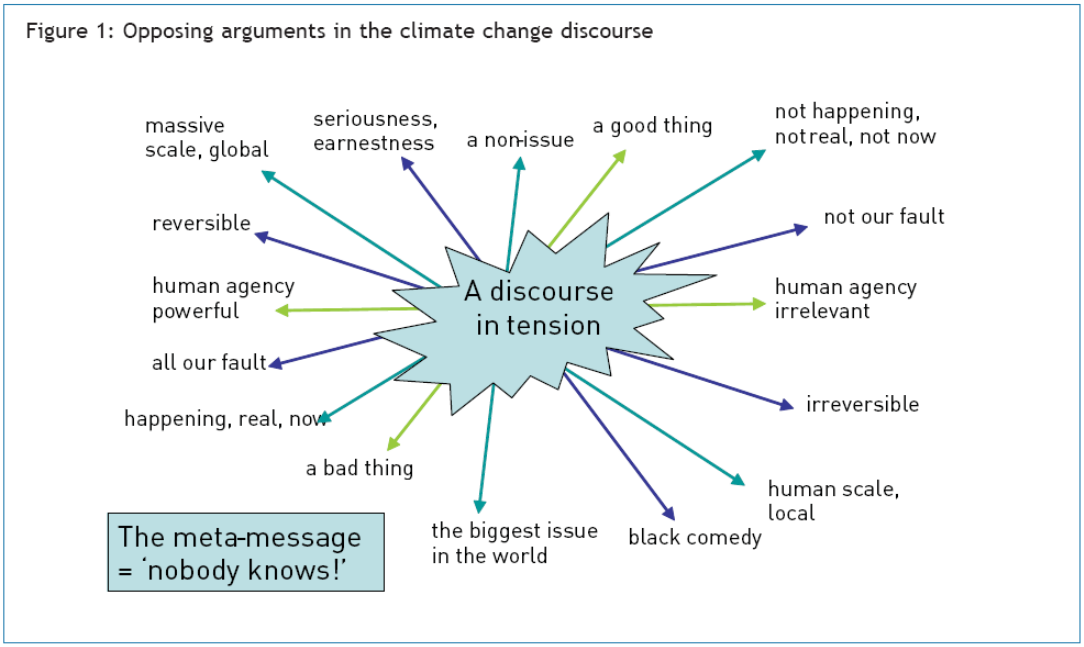
Climate Change: a discourse in tension

Many opposing positions and assertions are evident in the overall Climate Change discourse, and for every argument or perspective, there is a voice declaring its opposite.

This situation is represented in the figure below, which shows a range of different views on the issue. Although there seems a general bias towards the left-hand side of this diagram (where the views are expressed that Climate Change is real, it is caused by humans, and we can bring about change), the conclusion must be that the battle is not totally won yet.

17 Tipping Point Or Turning Point? Social Marketing & Climate Change, by Phil Downing and Joe Ballantyne

Figure 23

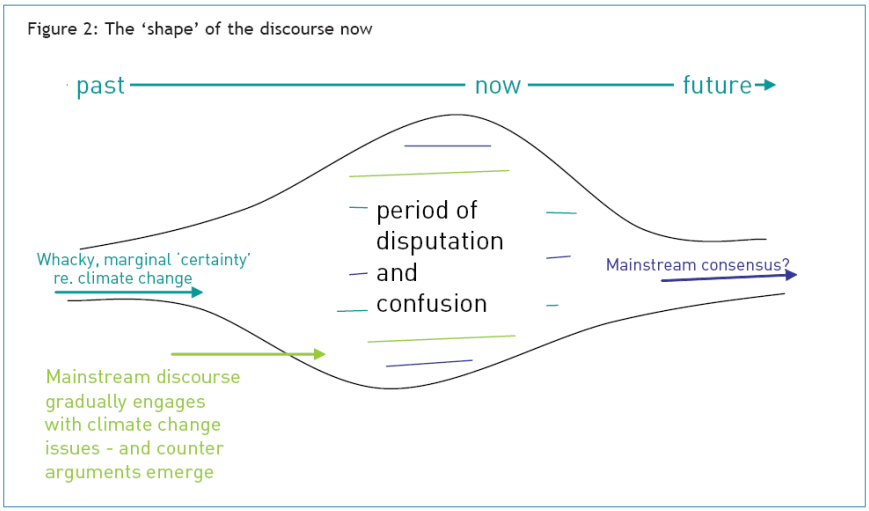


Nevertheless, it seems possible that we are coming towards the end of this period of disputation and uncertainty (see following figure). When Climate Change was first discussed in the 1970s and 1980s, it was talked about only by a fringe minority, but with a large degree of certainty and conviction. As the debate entered the mainstream in the 1990s, opposing views and positions were developed, leading to the fragmentation, chaos and tension. Although the Climate Change discourse is still very unstable and in flux (and traditional political divisions are of no help in making sense of green politics), some streams or themes emerged as dominant and/or stable enough. So perhaps a consensus is in the process of emerging.

The figure below is a representation of the possible evolution of the Climate Change discourse. If it is right, it suggests that there is value in helping to 'quieten' the discourse, taking it out of argumentative mode. As Futerra has suggested, we need to 'forget the Climate Change detractors' (Futerra Sustainability Communications Ltd 2005) and work to establish a new form of common sense. In this new popular consensus, the taken-for-granted nature of Climate Change is treated as being beyond argument. In other words, there is no need to discuss it (we can just get on and do what is required).

This raises some questions, which we will discuss later, about the role of communications in this field, whether the need is to produce yet more 'messages' (implicitly still arguing the case for Climate Change itself) or whether instead we should take a different approach to the issue.

Figure 24



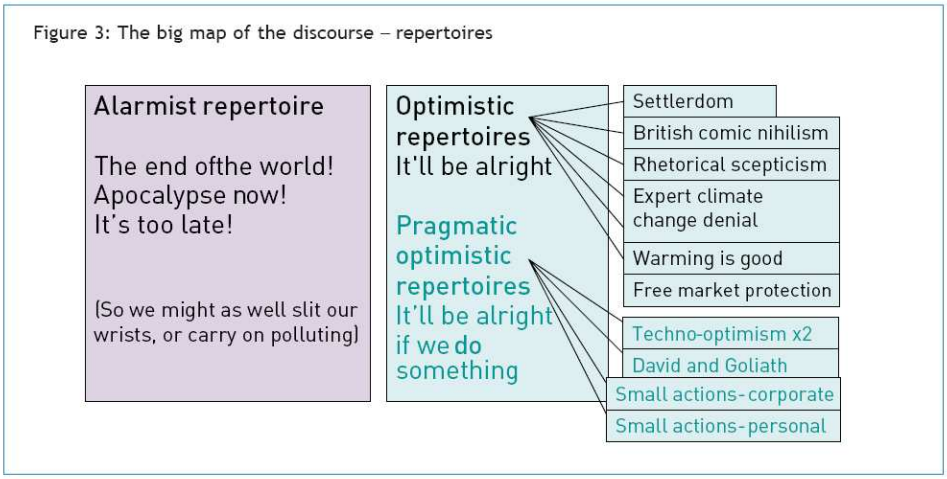
How the discourse looks: linguistic repertoires

Public understanding of Climate Change extends over a vast range of 'levels of knowledge', from the most basic level of recognising phrases such as 'global warming', to understanding simple causal relationships, personal contribution to Climate Change, timescales and the detailed inter-relationships of natural processes.

Linguistic repertoires are important because they are not merely styles or registers, they constitute different versions of what might be considered 'common sense'. They are also known as 'interpretative repertoires' because they are frameworks for inference and for making judgments, such as what things mean, what is right and what is wrong, what is acceptable and not acceptable, and what flows logically from what.

As the next figure from a UK research shows, there are different categories of repertoires on Climate Change: an alarmist repertoire as well as two groups of 'optimistic' repertoires, one which includes repertoires that assume 'it'll be alright' and a more pragmatic set of repertoires that assume 'it'll be alright as long as we do something.' Of those shown in the figure, the alarmist and small actions repertoires appear currently to be dominant.

Figure 25



The alarmist repertoire is typified by an inflated or extreme lexicon. It incorporates an urgent tone and cinematic codes, with images and ways of speaking that are familiar from horror and disaster films. It employs a quasi-religious register of doom, death, judgement, heaven and hell, using words such as 'catastrophe', 'chaos' and 'havoc'. It uses language of acceleration, increase, intractability, irreversibility and momentum. It allows for no complexity or middle ground. Metaphors and omens or predictions of war and violence extend the physical threat into a societal threat: 'the breakdown of civilisation'.
This repertoire is common in campaigning materials (for instance the Stop Climate Chaos website).
The dangers of alarmism include the implicit counsel of despair. Key terms in this repertoire include 'despair', 'hopeless', 'overwhelmed', 'chaos' and 'helpless'.
The sensationalism of alarmism and its connection with the ultimate unreality of movies also serve to create a sense of distance from the issue.
Finally, alarmism potentially positions Climate Change as yet another apocalyptic construction that is perhaps a figment of our cultural imaginations. All of this serves to undermine the ability of this discourse to bring about action.

'Settlerdom' rejects and mocks the alarmist discourse, and with it Climate Change, not through any form of expert discourse or argument but through invoking 'common sense'.
This repertoire is effectively a refusal to engage in the debate. It dismisses Climate Change as beyond human imagination and outside of common sense. Here, any sign of complexity or uncertainty in Climate Change is constructed as internal contradiction or confusion, and again is used to dismiss Climate Change claims as a whole.
The settler discourse on Climate Change is seen most clearly in the broadly right-wing popular press, but is arguably also the stuff of everyday conversational dismissals of Climate Change.
What is significant here is that this discourse is immune to scientific argument, since it is simply constructed in a different way. Its currency is not science but 'common sense'.

Rhetorical scepticism repertoire is distinct from the settler repertoire in its level of engagement; it involves an aggressive campaigning scepticism as opposed to laissez-faire solipsism. The rhetorical sceptic repertoire is a non-expert discourse, but one that attacks the expert discourse as 'bad science'. This repertoire constructs the green movement as irrational, naïve, emasculated and intellectually lightweight, and treats issues such as energy efficiency as 'something only liberals, tree-huggers and sissies believe is possible or necessary' (Friedman 2006). It also constructs scientists warning of the threats of Climate Change as arrogant and absolutist, and dismisses all claims on this basis alone.
This repertoire is highly rhetorical in that it has to build its arguments by form rather than by scientific content. In doing so, of course, it is itself open to attack.

The free-market protection repertoire is not about whether or not Climate Change exists, nor whether it is man made, nor about the possible success of measures to address the problem. Instead, it is concerned with the possible negative effects of measures and actions that may be taken to counteract Climate Change.
This repertoire constructs such measures or actions as being possibly, or probably, destructive to economic prosperity. It characterises efforts to curb emissions as the one thing that might ruin our chances of survival, because the effects on the global marketplace would leave us 'too impoverished to cope with the consequences' of survivable Climate Change. Environmentalism is thus constructed as a form of apocalyptic self-flagellation and self-destruction.

'Expert' denial is a repertoire in which scientists slug the debate out on their own terms. It demonstrates a tendency to typical scientific discourse, with multiple qualifications, long sentences, a less emotive register, and use of numbers. It includes the complaint that the language of Climate Change is becoming 'religious'. The constructions of this repertoire leave little room for inflated registers, other than to negate

or discount them (using terms such as ‘apocalyptic climate myths’). It is also characterised by a tendency to construct Climate Change as being predominantly caused by ‘natural’ (in other words, not man-made) factors. The expected audience for this repertoire is other scientists, or those potentially beaten or impressed by ‘science talk’.
Key words and phrases here include ‘optimistic’, ‘adaptability’, ‘natural Climate Change’ and ‘natural variation’. The verbal structures used here tend to construct a model of continuity and natural cyclicality, as opposed to the dramatic constructions of sudden violent change. The audience is considered to be both the alarmist and the person being oppressed by alarmism.

Concerning techno-optimism, there are two forms of this particular line of talking about Climate Change: ‘establishment’ and ‘nonestablishment’.
The establishment form of this repertoire holds that established technology or business will find the answers. Its starting point is the status quo and its emphasis is on evolution, not revolution. This focuses on developing the apparent oxymorons of ‘green’ fossil fuels and ‘clean’ industry. This Repertoire is highly rhetorical.
The non-establishment form of this repertoire holds that the answer will come from inventive genius and independent interests, existing interests being the obstacle to progress. There is a notable lack of rhetorical devices here; instead an assured techno-speak.
These two repertoires share much. However, they fundamentally differ in that they position government and big business in quite different ways. The first sees these organisations as providing the answer, while the second sees them as part of the problem.

David and Goliath repertoire embodies a residual model of aggressive, oppositional campaigning environmentalism and radical heroism: ‘a small number of people doing large things.’ There is a marked use of the exclusive ‘we’. There is also a tendency to accuse, using neo-Orwellian coinages such as ‘climate criminal’ and ‘climate enemy’. It is characterised by the use of imperatives and an aggressively peremptory syntax. This repertoire conveys the impression of positive action. But it can be used all too easily by others to dismiss the advocates of action as ‘long-haired hippies out to change the world’ or even to dismiss moderate contemporary positions, especially if they are not compelling.

The ‘small actions’ repertoire is the dominant model in campaign communications. This involves asking a large number of people to do small things to counter Climate Change. Again, there are two versions of this repertoire: personal and corporate.
The personal form of this repertoire constructed as motivated by ethics and/or self-interest. This repertoire is clearly a vital one to understand in relation to achieving large-scale behaviour change.
The problem with the personal small actions repertoire is that while it normalises the discourse in the face of movie-code alarmism, it easily lapses into ‘wallpaper’: the domestic, the routine, the boring, the too-easily understood and ignorable. If used alone, it can be rather lacking in energy and may not feel very compelling.
In practice, this domestic repertoire is often placed right alongside alarmism, for example in popular magazine features with typical headlines similar to ‘20 things you can do to save the planet from destruction’ (such as turning down thermostats, not leaving TVs on standby, appropriately filling up kettles and buying efficient light-bulbs). But this very contrast can also be used to deflate, mock and reject alarmism and, with it, the very notion of Climate Change.
The corporate model argues that tackling Climate Change is good for business and the planet (ethics collapsed into self-interest). As one of the currently dominant streams, this repertoire is clearly related to the emergence of a corporate social responsibility discourse. Within this, there is emergent construction of Climate Change as a cost, as opposed to constructing measures that counter Climate Change as a cost.

Which are the dominant repertoires?

Two repertoires vied for dominance, alarmism, and personal or corporate small actions. This is unsurprising to the extent that that they are direct contrapositions or, maybe, two sides of the same coin. In contrast to some of the non-pragmatic optimistic repertoires, both acknowledge the existence and scale of human-induced Climate Change. However, the alarmist repertoire glorifies the scale of Climate Change and diminishes our sense of being able to act: the personal small actions repertoire focuses only on human agency and effectively shuts its eyes to the issue of scale.

We can see this difference in focus or emphasis in the different languages used. The cinematic language and sublime or apocalyptic provenance of the alarmist repertoire constructs a reader who is at once terrified and entertained, but effectively distanced from the problem of Climate Change. In the domestic language used by the small actions repertoire, with references to kettles and cars, ovens and light switches, family activities and walks to work, we see a focus on the small and mundane, but no sense of the scale or urgency of the problem or of the solutions to it.

The rhetorical scepticism and expert climate-change denial repertoires are likely to become increasingly marginal in the face of mounting evidence for the existence of anthropogenic Climate Change. We are clearly assisting to the erosion of meaning from a repertoire that seeks to refute the ever-more irrefutable.

Settlerdom is arguably a more stable repertoire, in that its refusal to engage makes it just about impregnable to rationalist counterargument. It seems impervious to messages and information, no matter how well-informed or argued, because it simply operates on different terms. It remains to be seen whether campaign communications can make a cultural norm of belief in anthropogenic Climate Change, and society's ability to tackle it, to the extent that they will be seen to constitute the commonsensical position, thus destabilising the settler repertoire on its own terms.

In place of these repertoires, which sit at various places on a continuum of scepticism, techno-optimism looks as if it is moving into relative dominance. Again, this is unsurprising, as a techno-optimistic repertoire that places faith in industry initiatives is the natural corollary of the fading salience of skeptical repertoires. A leftist techno-optimistic repertoire, one that suggests individual and small-scale initiative as the solution and industry as an obstacle will, in turn, gain in salience, along with the credibility of the small-actions repertoire[18].

Why Climate Change is a difficult issue to communicate to the public

Policy-makers have identified a number of reasons to explain the absence of uniformly effective community responses to Climate Change policies and these 'barriers' involve communication issues.

Confidence that the community comprehend the scientific basis of the issue appears quite low amongst those involved with Climate Change policy. Climate Change science is complex and involves a distant causal link between an individual's and family's actions and the future global ecological consequences. Environmental problems can often only be understood and managed through science as mediated by experts (Beck, 1995), and Climate Change readily exemplifies this problem.

Translating this specialized knowledge into a language and form accessible to the community becomes as essential as it is difficult. Scientific uncertainties and public controversies brought forward by vested commercial interests may have undermined community willingness 'to take Climate Change seriously'. Energy industry solidarity of opposition has become problematic in recent years, even among the oil and coal corporations. However, the effects of industry campaigns over the legitimacy of Climate Change science and to question the necessity of policy initiatives may linger. In short, many in the policy

18 Warm Words, How are we telling the climate story and can we tell it better? Gill Ereaut and Nat Segnit, Augus 2006

community believe the general community simply does not understand the issue sufficiently well to respond to existing policies or to take individual initiatives.
One should however point out that many people are well informed about some of the causes of Climate Change and there is evidence to suggest that knowledge may be improving. Indeed, some research finds that most people possess quite detailed, although often inconsistent, knowledge of the issue. For instance, the majority of people are able to identify the destruction of forests and the burning of fossil fuels as contributors, but at the same time, only just over half the population tend to recognise emissions from power stations and only a quarter identify the use of gas and electricity in homes. In addition, the prevalence of common misconceptions (such as the belief that the hole in the ozone layer is a cause) points to varying degrees of uncertainty about the causes of Climate Change.
When asked a direct question about 'level of knowledge' people believe themselves to be only a little informed about Climate Change. Nevertheless, there is an apparent keenness to be provided with more information, particularly more advice on what to do as opposed to information on environmental threats and problems. If there is a solid foundation of knowledge on Climate Change being created among the population, significant areas of confusion, ambivalence and potential 'denial' are still worryingly prominent.
So the question will be: what specific information needs to be communicated to inform the public about Climate Change and its implications?"
Relevance is often described as a crucial factor for effective policy: for most of the community there is no apparent immediate link between Climate Change and daily life. As the impacts of Climate Change will be realized in the future and because of the wide variation in vulnerability and impacts across space, the public may discount the need for immediate action on their part[19].
Another part of the explanation might be what is called "the knowledge ignorance paradox". This is a consequence of the "knowledge society" that implies that scientific ignorance among the public is the natural state of affairs.

The whirlwind effect

There has been demonstrated evidence indicating that people learn more from others than from any other source of information (Freudenberg and Pastor, 1991). It is conversational presence, encompassing things like talk radio and informal talk related to mundane practices, rather than media coverage per se, that can put an issue in the air and let it acquire a life of it own.
The greater comprehensibility of the ozone hole would not have mattered if the issue was not caught up in a cultural whirlwind. The attention economy suggests that people are highly selective in the information they take time to process. As a result of timing and luck, ozone depletion gave rise to a series of overlapping concerns that played out in a conversational and practical presence.
A cultural whirlwind involves a rapidly evolving and progressive sequence of unexpected and forceful events that create a vortex that hurls through a variety of arenas with a strong conversational and practical presence. A cultural whirlwind may entail an unpredictable and startling personal threat or it may be more benign, as in the whirlwind that built up around recycling in the late 1980s.
In the UK, the recycling bandwagon acquired replicating lives as it extended from schools through country fairs to talk shows, with communities, corporations and individuals vying to establish their green credentials and extend blue box programs (Ungar, 1998).
At the conversational level, Climate Change seems to engender speech vetoes as complexity and shifting and convoluted predictions-such as hotter and dryer summers accompanied by wetter and colder winters-engender mockery and puzzled questions about what sort of weather is not caused by global warming

19 Signal to Noise: Listening For Democracy and Environment in Climate Change Discourse, Leigh Glover

(Ungar, 1999, 2000). Public understandings are limited to warming, and the colder winters predicted by current models are thought to belie global warming (Kempton, 1995).
Since Climate Change is largely a future-oriented problem, it has little immediacy for both talk and action. While extreme weather events serve as the principle public "sign" of Climate Change, they do not make good candidates for a cultural whirlwind.

To break through the veil of ignorance, scientific knowledge must piggyback on a cultural whirlwind and in the process become motivated. The latter requires not just some public understanding of the processes involved, but a sense that they intrude on and are activated in mundane activities. To have an issue that can be talked about, played with, and acted upon is central to unleashing and sustaining a whirlwind[20].

Which are the barriers to action?

Without pretending to exhaustively, we can try to identify some of the reasons which lead to denial or inaction.
One of the primary reasons is the impact of certain common sense perceptions people have deeply imbedded in their interpretation of the physical world around them which have been derived by and are reinforced by their everyday sensory observations of the physical environment around them. Much of our perceptions of our physical world are derived from visual sources. "Fifty percent of the cortex of the brain is thought to be devoted to processing visual information, indicating a profound, evolutionary commitment to a vision as a means of joining inner and outer conditions"(Sewall, 1995).
The scientists several hundred years ago had the same problem in getting the general population to accept the fact that the Earth was round or that the Earth revolved around the sun. People's physical senses as well as their learned understanding of their environment simply told them otherwise. The same type of sensorybased misperceptions work to discount the message science is telling us about the dangers of global warming.
Moreover, like so many forms of environmental degradation, the paceof Climate Change is so gradual and fragmented that we become acclimated to the changes without being alarmed by them. This reinforces the notion that any changes resulting from global warming will unfold so gradually and be so incremental that adaptation will be easy.
Add to this the human experience that all prior global changes have unfolded over such geologically long time periods as to be imperceptible to humans. Global warming communications need to address two aspects of this misperception: that the rate of change projected, while it seems slow to the unaware observer, is geologically-speaking an extremely accelerated pace of change, and secondly, that nature experiences "thresholds" and is not strictly linear (Houghton, 1997).

Another point is that "warming" just isn't an alarming title that incites the population to take action. After all several really nice things are "warm": soup on a cold day, blankets, hugs, water in the pool and so on. Global warming communications must therefore counter this innocuous title with clear messages that "warming" in this context equals the potential nasty impacts we suspect could result: insect infestations, greater territory for disease exposure, extreme weather events, rising sea levels and market disruptions.

Another interesting theory to analyze here is the well known tragedy-of-the-commons theory, behaviour that makes sense from the individual point of view, when repeated by enough individuals, ultimately proves disastrous to society. Each individual gains, financially or otherwise, by consuming the natural

20 Why Climate Change is not in the air: popular culture and the whirlwind effect; Shelly Ungar

resource. Each, furthermore, sees little harm in doing so since the resource is so huge in size and their impact on it is so small[21].

Furthermore, the attitude-behaviour gap could be described as one of the greatest challenges facing the public Climate Change agenda. This is true of all attempts to influence individual behaviour With respect to influencing lifestyles and closing this gap, the big question is: does it actually matter whether people have a detailed knowledge of the causes and consequences of Climate Change?
It would appear there are two opposing views on the importance of information with respect to its role in closing the attitude-behaviour gap: those that believe if only people are informed and knowledgeable, they will act in accordance with this new knowledge (termed the 'deficit model'); and those that believe information is necessary but not sufficient to encourage individual action. Advocates of this belief recognise the need to understand behaviour change from a number of different perspectives (anthropological, socio-psychological and economic) and at a number of different levels in society and strive for a more civic or deliberative ideal of public engagement.
The evidence review suggests the latter view represents the emerging consensus. Hence, an understanding of the different roles played by knowledge, attitudes and behaviour is required before it is possible to have an appreciation of the factors that inhibit, drive and facilitate behavioural change. In order to fully understand the role of these factors, it is instructive to place them in some of the established socio-psychological models examined above.

Figure 26

Individual Level (concentrate on individual maximisation of utility and the role of beliefs, values, attitudes and norms)	**Interpersonal Level** (account for the role of social factors, habitual, imitative and learned behaviours)	**Community/Network Level** (suggest behaviour change can be more effectively influenced by concentrating on the community/ network level)
1. The deficit model 2. Rational choice theory 3. The theory of planned behaviour 4. Norm activation theory 5. Values-beliefs-norms theory	6. Triandis' theory of interpersonal behaviour 7. Social learning theory	8. Social capital theory 9. Diffusion of innovations

21 Ten Illusions That Must Be Dispelled Before People Will Act On Your Global Warming Message, J. Marshall Gilmore

The evidence shows clearly that no one theory is sufficient, on its own, to explain the links between attitude and behaviour; but all are complementary, each offering a unique insight into the attitude-action gap.
Research centred on the individual usually ignores the interactive relationship of behaviour in its social, cultural and economic dimension, thereby missing the possibility to fully understand crucial determinants of behaviour.
Affective evaluations, social-symbolic motives (self-identity) and habitual behaviours are also keys. Thus extending existing theoretical frameworks; considering social, affective, habitual, imitative and learned determinants of behaviour is crucial[22].

We know that attitudes help a person to mediate between the inner demands of the self and signals arising from the outside world (Pennigton, 1999). These external cues may relate to influences of social networks, and views of the appropriateness of lifestyle and consumption behaviour. Both social norms and cultural norms provide significant biases for such attitudes. But so, too, does personal experience, and the "certainty arrays" of co-ordinated beliefs that are formed to assist in their response to complex, and possibly intimidating, requirements.
From the functions relating to attitude formation, reorganizing knowledge, changing social identification, appealing to self image and enabling constructive adaptation may all have to be involved if attitudes and behaviour towards Climate Change are to resonate in a coherent manner.
Attitudes differ from behaviour for a number of well-known reasons. One explanation is that attitudes to Climate Change can relate to a general societal norm, while behaviour rests with specific individual responsibility. Another, more common interpretation, is that attitudes cover a vast array of cognitive processes and compositions that remain chaotically in conflict for the most part, except when contradictions have to be confronted.
Where behaviour is not routine, values enter (Lantermann and Döring-Seipel, 1990). Such values are selected for consistency and support, namely by coinciding behaviour with underlying moral norms. Such norms shape the justification for action or inaction[23].

If all of the behaviour change theories mentioned above have difficulty examining Climate Change, this is also because Climate Change is somewhat intangible and ambiguous. For instance, is Climate Change conceptualised as 'pollution'? Is it sea level rise? Is it warmer temperatures? Is it local or global? It is difficult to measure attitudes and behavioural response when the attitude 'object' is open to interpretation in this way. This may be one reason why Climate Change has been examined so infrequently using behaviour change theory or otherwise and why it is more common to find studies on general or specific environmental damage which is more readily understood by the public.

Finaly, as we started to observe it earlier, it should be noticed here that denial over the necessity to adjust behaviour and lifestyle patterns is also a function of discourse as it is of more fundamental personal, social and psychological influences that are not readily shifted around by language or by exhortation unless the process of awareness raising is prolonged and set in constructive engagement with a wider array of socially sanctioned moral norms.

22 Review of public attitudes to Climate Change and transport: Summary report

23 Citizens' Perspectives of Climate Change in Europe: Perceived Barriers to Action, Susanne Stoll, Swiss Federal Institute for Environmental Science and Technology

Removing Climate Change from the frame?

If advocates want to move on to changing behaviours and responses, then the 'stories' they generate need to be composed with differences, actions and actors to do with lifestyles, not belief or disbelief in Climate Change. More fundamentally we might need to detach the concept of 'Climate Change' from communications in order to get progress on Climate Change, because each time the communications is about 'Climate Change' (for example homes standards, or car choices) it becomes about science, and that raises doubts and material for blow-back stories.

Another way to disengage communications to achieve change from the [science of] Climate Change frame is to focus on the local or regional, for example communities, cities, towns or villages 'going green'. The difference in the story then becomes the difference between the performance or measures (renewable energy, bus provision) or attitudes in the places concerned, and not disbelief in any aspect of 'Climate Change'.

Until that occurs, 'climate scientists', politicians or campaigners talking about the 'problem' of people not understanding Climate Change, or resisting Climate Change actions, is likely to help keep the issue 'open'. People will notice 'climate scientists' debating, unlikely to pick up the details, and very likely conclude that there must be a debate to be had about 'Climate Change'. If we need to encourage people to change their lightbulbs then climate scientists (or 'climate campaigners') are perhaps not the people to use to do it[24].

First signals toward possible low-carbon behaviours

Despite the recent growth in ethical consumerism, what the OECD refers to as the "infrastructure of consumption" remains intact. Household energy consumption, for example, has actually risen by 40% since 1990. In fact, it seems that many consumers do not perceive a need for a fundamental change in their behaviour in response to Climate Change. Rather, there is a feeling that life can and should continue as it has done, with green issues to be taken into consideration around the margins of day-to-day behaviour.

There is therefore a serious question as to the speed and take up of low carbon behaviours, can these be encouraged as rapidly and systematically as the IPCC believes they need to?

Figure 27

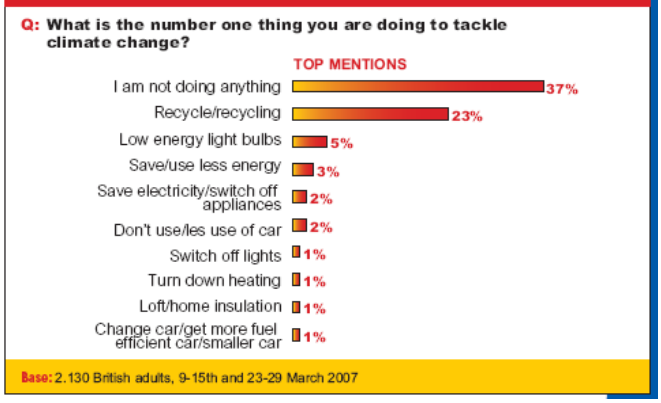
24 Sustaining Disbelief: Media Pollism and Climate Change, Chris Rose Campaign Strategy, August 2007

Trends towards a low carbon lifestyle

- less than 1% of the population has switched to an energy company supplying renewably-sourced electricity;
- under 0.3% has installed a form of renewable micro-generation such as solar PV or thermal panels;
- purchases of highly-efficient cars represent less than 0.2% of new cars sold;
- just 2% of people claim to offset their emissions from flying.

Source: *Positive Energy: Harnessing people power to prevent climate change*, IPPR 2007

Efforts to tackle climate change



The public appear willing to go further to change their behaviour. The majority agree they would personally be prepared to change their behaviour to help limit Climate Change, although agreement for many is not particularly strong.

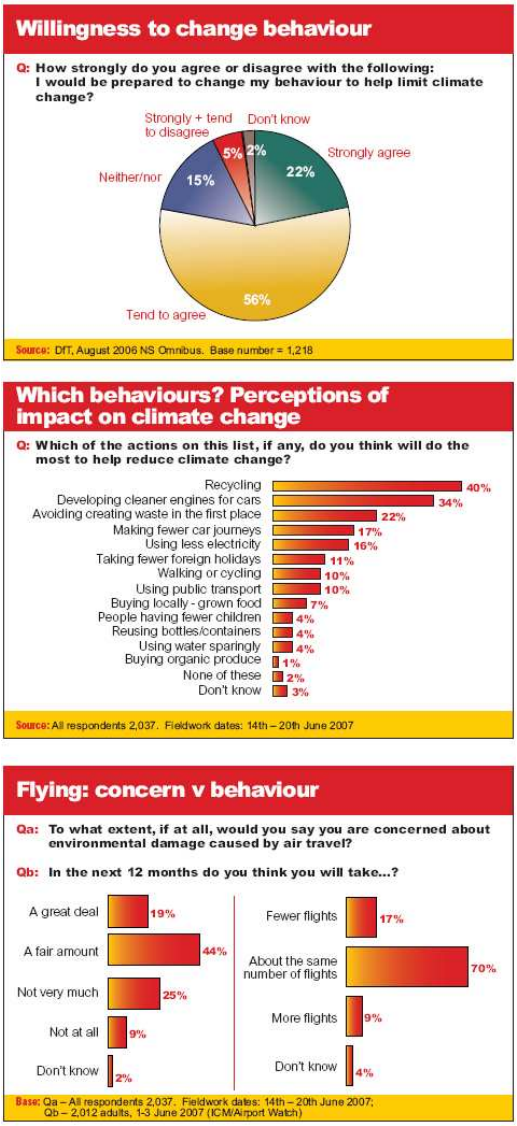
Two challenges are evident. First, the public, when asked to identify what actions they could take that would have the most impact on Climate Change, do not identify those with the larger carbon footprint. So, as the graph above below demonstrates, most identify recycling. In contrast, those behaviours with larger CO2 implications, such as flying on holiday less, are actually at the wrong end of the scale.

It may suggest that individuals may be using recycling as a means of discharging their responsibility to undertake wider changes in lifestyle.

For each individual there is a balance between the behaviour they consider best for the environment and what is acceptable to them in terms of time, effort, money and, perhaps most of all, the restrictions on personal mobility and consumption. The behaviours most jealously guarded are those that provide individuals with a high degree of personal utility or mobility.

As Tara Garnett of the Food and Climate Research Network asserts, the public act "sporadically, inconsistently and when it suits/doesn't inconvenience them". So the idea of giving up cheap foreign holidays, for example, is simply non-negotiable at the current time.

Figure 28



Source of the figures: Turning point or tipping point?

Conclusion

On attitudes we have shown that many have bought into the concept and are concerned about its implications, while for others the debate is far from over and more information and discussion is required.
Turning to behaviour, the environment has long been a litmus issue when it comes to the clash between individualist consumerism and wider world citizenship. The public are keen to protect their own individual lifestyles and choices but, at the same, appreciative and supportive of the need for change. They look to governments and business to act on their behalf, but aren't always so sure when a specific policy or price premium looms into view.
This pattern is evident throughout the Climate Change debate. The public want to avert Climate Change and play their part *but at the same time* they also want to go on holiday, drive to work, own a second (or third or fourth) home and buy the latest electrical products. This Climate Change equivalent of Orwellian *Doublethink*, or cognitive polyphasia, does not mean the public don't care about the environmental

consequences, but rather, for certain behaviours, they don't care enough. They hope for technical innovations or efficiency improvements (such as airplanes and cars that don't emit CO2) rather than contemplate radical changes in lifestyle.
Furthermore, modeling on the basis of semiotics offers an important and insightful method for social marketers to go beyond segmentation by socio-demographics alone. This approach recognises not only that individuals vary from one another in their attitudes and behaviour, but also that they face conflicts within themselves as they shift between, and adapt to, different situations and surroundings. The key battlegrounds here are between the public's citizen and consumer personas, their perceptions about their rights and responsibilities, and their aspirations and values.

This panorama of the existing models and theories of behaviour change will now helps us to better understand which the issues at stake for sustainability communications addressing Climate Change are.

Part 2 – Sustainability communications strategies responding to Climate Change

I. Sustainability communications

The interdependence of the economic, social and environmental dimensions of development also implies the interdependence of actors. Consequently, Sustainable Development has often been seen as having a fourth pillar, frequently designated by the term "governance". The concept is both prescriptive and functional (J.N. Rosenau & E.O. Czempiel 1992; M.C. Smouts 1998), and it is now a strong feature not only of public initiatives but of corporate activities as well. It ascribes a central role to communication and the involvement of a plurality of legitimate actors in environmental and development policy inputs and decision-making. Although it has been defined in many ways, Sustainable Development has a single aim: a shift in the social and environmental practices of development so that this can be framed within a logic of security, balance and continuity, in other words, "sustainability".

Governments are urged to 'deliver a clear message through effective communication', 'provide public incentives', and promote 'an understanding of the consequences of inaction'. Largely, the emphasis is on refining the message and improving its public reception; businesses and environmental groups concerned over the slow pace of reform have openly sought to support and supplement such activity.

Rather than confronting those cultural arrangements that encourage greenhouse gas releases, policy-makers have moved to improve the prospects of success by considering the citizen as a consumer of a product called 'policy'.

Techniques of commerce are also employed for the non-economic policy 'products'. Polling assesses community attitudes in order to improve the effectiveness of policy 'marketing'. Discrete community segments are identified in order to customize the messages for each. Advertising and promotion are employed in broadcast and direct media campaigns, wherein policy-makers work closely with public relations and communication companies. In these approaches, a wide range of experts and professionals are brought forward to advice on effective means to each the community. Climate Change policy has coincided with an era when western governments have taken up market-based policy instruments, and policy-makers at the international and national level have evoked the use of economic tools as additional policy initiatives. Communication of the Climate Change message can be achieved, argue economic rationalists, by creating appropriate markets and enabling the price mechanism to reflect the social allocation of value in manner more effective than government 'command and control' approaches. However, regulatory measures have not been prominent in Climate Change policies. Correspondingly, the failures to reduce emissions are commonly attributed by market rationalists to the policy implementation processes for measures that are largely voluntary. Many of these critiques seeking to promote market-based policies have given little attention to differentiating between success and failure in specific programs.

Improving policy implementation through enhanced communication may well assist in removing genuine impediments between Climate Change policies and a potentially responsive public[25].

Most famous examples of relatively successful international communications to address Sustainable Development are the Agenda 21, the Global Compact. It is certainly to be expected to soon have an international campaign on Climate Change in order to address the challenges described by the IPCC. It is also possible that such an intergovernmental campaign would come from a UNEP initiative, as current

25 Signal to Noise: Listening For Democracy and Environment in Climate Change Discourse, Leigh Glover

internal communication strategies show, maybe around a campaign to be entitled: "Low carbon. Live the high life!"
Finally, among the first initiatives toward carbon neutrality one should also mention UNEP – WBCSD RTCC umbrella (www.rtcc.org) through which financial organizations, manufacturers and other business sectors show their commitment on Climate Change mitigation.

See also UNEP proposal on communication strategy for Climate Change in Annex II – Part 2 on the CD-ROM

Public and private actors: responding to the challenges

Social and political incentives apart, public-sector and business actors have progressively identified the issues of legitimacy and performance associated with the environmental and social conditions of their work. Failure to consider these conditions involves risks that are now the subject of constant attention: for public-sector actors, overlooking Sustainable Development issues can have major political and social consequences. The obligation to lead by example requires institutions to adopt Sustainable Development principles in their projects and operating methods while encouraging citizens and users to take individual responsibility for the environment and society at large. It has also become crucial for these actors to support companies' engagement and progress.
For businesses, the consequences in terms of legitimacy and financial performance can be substantial as well. In the long run, companies whose activities result in destruction of the environment or the social fabric expose themselves to social and commercial risks that can no longer be ignored. This is the case, for example, when the depletion or degradation of natural resources exploited by a business results in additional production costs or, in some cases, major changes in production methods (M. Tsoutsoura 2004).

Integrating Sustainable Development into communications and marketing

The success of Sustainable Development with public opinion and decision-makers has had major implications for social communication in its different forms, from public communication activities intended to reach citizens/users to marketing tools developed by businesses for consumers. Sustainable Development seeks to lay down principles for better management of the communities. It therefore needs to be treated as a genuine political project whose first priority is the informed support and active participation of citizens. Turning principles into practice requires communication and mediation efforts driven by the public authorities: informing, raising awareness, influencing perceptions and behaviour, and relaying and legitimizing the implementation of public policies are all among the objectives for the communication efforts of institutional actors (R. Debray 1993; C. Ollivier-Yaniv 2000).
Although there is still a meaningful distinction between institutional and business communication in terms of actors and aims, methodological borrowings are numerous. Marketing made its appearance in public communication in the 1980s and now has a far-reaching influence on awareness and mobilization campaigns.
Businesses also communicate in many different ways. Administrative, managerial and information and communication sciences are all disciplines that can be mobilized for the purposes of analysis and learning. Marketing, which is both a discipline and a set of practices, is nevertheless rooted very firmly in the fundamental logic of the company as organized in a market economy. What the term denotes, in fact, are all the development and management operations carried out to identify, anticipate and satisfy the expectations of consumers in order to meet the profit targets set by a company.
In a broad sense, marketing can encompass all the commercial and corporate communication measures taken by companies: advertising, sales, public relations, brand image, corporate communication.
When an effective Sustainable Development policy is introduced and applied within a company, the strategies that ensue may vary greatly in terms of communication and marketing. Companies that are

committed and responsible can introduce initiatives that reflect this in order to increase their credibility and legitimacy with consumers.
Some businesses have made Sustainable Development a core part of their identity and the products they develop. This is the case with pioneers in the field such as Natura (1969), Patagonia (1972), The Body Shop (1976) and, more recently, American Apparel (1998). These companies' communications revolve entirely around Sustainable Development and its main fields (the environment, social justice, human rights, etc.).
A company's contribution to Sustainable Development can also be expressed by more selective operations: the adoption of new technologies or production processes, or the development of "green" products. These initiatives can be turned into points of differentiation and competitiveness in corporate communication strategies.
Not all businesses that take measures to reduce the environmental or social impact of their activities choose to communicate them.

Marketing and communication sectors and Sustainable Development

The position they hold and the influence they wield over society give them an undeniable responsibility. The biggest advertising investments are in sectors that represent a large portion of the individual ecological footprint: food, transport, energy. There is always the danger that the professionals who promote products or services in these production and consumption sectors may send out messages that lead to behaviour with substantial adverse consequences for the environment and society. Conversely, they can inspire and orient positive changes in behaviour.
Marketing and communication professionals sometimes find themselves promoting new products that have a strong environmental impact (SUVs, mobile phones), with the risk that they may encourage people to over-consume (mass marketing) or may promote products which consumption is recognized as dangerous for individuals (junk food, tobacco, alcohol, etc.).
Obviously, professionals in the sector also have responsibilities towards clients (businesses and institutions) that have chosen to adapt to the new social demands formulated by citizens and consumers, the public authorities and, indeed, employees and investors as well. The values attached to the idea of Sustainable Development are now deeply rooted in social and regulatory attitudes, and professionals need to help their clients realize this and implement their initiatives in a rational way.

Sustainable Development and its social consequences for communication

The mediators of Sustainable Development: institutions, civil society, business

Institutions, civil society representatives, businesses and the media in general are all in a position to draw society's attention to issues of public concern (P. Favre 1992). This makes them "mediators" whose operating principles, status and objectives need to be clearly identified. Thus, in the field of Sustainable Development; public institutions act as mediators of Sustainable Development issues, particularly when these are part of a particular political agenda, when they result from a dysfunction, or when these institutions are alerted to them by other actors (citizens, NGOs, businesses). Civil society actors play a fundamental role in the public sphere between politics and citizens, and may take measures to raise awareness and exert influence. Businesses can encourage responsible behaviour by consumers, forge partnerships with the stakeholders affected by their activities or provide a warning function by releasing accurate quantitative information on consumption practices (energy, green products, etc.).
Lastly, the media in general and journalists in particular also play a crucial role: they largely control the selection and release of information (environmental disasters, scandals linked to major companies,

responsible initiatives, public policies), act as opinion formers, and control the access of political parties, NGOs and businesses to the mediatized public sphere.

The social demand for communication: a criterion of legitimacy and performance

Many actors are playing a role as mediators of Sustainable Development in a society which is now deeply marked by an attitude of alienation and mistrust towards traditional centres of power (politicians, journalists, businesses) but where information and communication have become important criteria of legitimacy and credibility. This tension, leading to a feeling of mistrust or incomprehension combined with a strong demand for information, partly accounts for the development of strategic communication as a profession.

The democratization of information and communication channels and the development of technologies (the Internet in particular) have meant increased exposure and risk for all political, social and economic actors, with the beneficial effect that they have been forced to show greater transparency and make their actions more consistent with their stated aims. As John Peloza (2005) puts it: "avoiding negative behaviour has become even more important with greater media scrutiny and coverage, advances in communications technology and the use of rapid and widespread communications vehicles such as the Internet by activist groups such as Greenpeace."

The right to communication has been asserted on numerous occasions, particularly by civil society actors as they increasingly seek to level the playing field with advertisers: they have been fighting for several years for the right to purchase advertising space and publicize controversial messages/campaigns.

The centrality of communication and the multiplication of the tools for it should not lead us, however, to ignore the social reality of current practices: the "myth of the communication society" (E. Neveu 2001) tends to mask the diversity of these practices and the inequality of resources, and to reinforce a social belief in the power of words that overlooks the socio-political and cultural conditions under which they are produced and received.

The professionalization of sustainability communications

This is the background, then, for the boom in sustainability communications. These have been an object of interest for university research in several disciplines, and especially for marketing and the information and communication sciences, and numerous articles have been written about the subject in scientific journals. Specialist reviews and journals are also beginning to appear. At the same time, a fully professionalized sector is developing: Sustainable Development and communication are jointly giving birth to specific skills and functions in the information and communication departments of public institutions, in company marketing teams and in traditional advertising, communication and public relations agencies.

Communications consultancies specializing in Sustainable Development have been appearing in Europe and the United States since the late 1980s.

The economic and social context for sustainability communications

CSR and communication: regulation, controls and voluntary initiatives

A variety of different systems of standards have been developed to delimit "corporate social responsibility" (CSR). Between legal constraints and self-regulation, companies have to respond to social and political demands without jeopardizing their competitiveness. The constraints placed on companies by CSR have a large, and strategic, influence on the competition environment they operate in, as they seek to

position themselves in ways that will allow them to build on "legitimate comparative advantages". (WBCSD 2001).
The CSR debate is crystallizing around the idea of constraint. The "legalistic" position, defended by environmental NGOs in particular, is based on the idea that the shift towards more socially responsible behaviour must be legally enforced. The "voluntaristic" conception of CSR, on the other hand, emphasizes the idea of "self-regulation".
There are a variety of oversight and certification procedures involving a greater or lesser degree of constraint and enjoying differing levels of independence and credibility.
A large body of research (P. Utting 2005) has found that there is ultimately a strong correlation between the introduction of parliamentary bills to create legally binding constraints and the voluntary initiatives of companies. In other words, these initiatives often seem to be driven by the need to forestall the application of a law that is at the drafting stage or by the desire to show legislators that businesses are capable of selfregulating their activities.
Some authors believe that the international proliferation of CSR initiatives is the manifestation of a regulatory trend that is only just beginning: "Far from signalling a break with the national regulatory dynamic, international CSR initiatives are harbingers of a worldwide framework of prescriptive regulation" (C. Gendron, A. Lapointe, & M.-F. Turcotte 2004).
P. Utting thus speaks of "articulated regulation" transcending the traditional dichotomy between legalism and voluntarism (P. Utting 2005).

Legal, social or economic constraints and voluntary initiatives: actors and tools

The different constraints or pressures exerted on the activities of businesses to encourage them to display social responsibility can be distinguished by the actors applying them and the tools they have available. They include legal constraints that are part of the regulatory frameworks put in place by governments, social constraints applied by civil society actors and NGOs (chiefly by means of public communication), economic constraints generated by society's demand for sustainability and, lastly, constraints accepted voluntarily by businesses themselves.
Legal constraints can be seen as part of an ongoing effort to raise corporate responsibility standards, but examples are quite limited sofar. o At the national level, there is the case of France and the NRE (New Economic Regulations) law of 15 May 2001 which establishes an obligation for companies listed on the stock market to include in their annual reports information "on how the company takes the social and environmental consequences of its activities into account" (article 16). Although the law does not specify what form the publication of this information may take, Sustainable Development reports have proliferated and are now produced by many unlisted companies as well.
Internationally, the Montreal Protocol, which came into force on 1 January 1989, has the purpose of gradually eliminating numerous ozone-depleting substances from production and consumption chains.
Environmental NGOs are very active in the area of CSR and can exert very strong pressure on businesses, particularly when these are highly visible or play a leadership role in their respective sectors. Leading NGOs include Greenpeace, Friends of the Earth, and the Sierra Club in the United States.. Consumer associations also play an important role, examples being Consumers International (271 members in 123 countries) and the European Consumers' Organisation (BEUC), which has 40 members in Europe.
Citizens can also exercise collective pressure on businesses through class actions, legal proceedings undertaken by groups of people who have suffered individual harm because of the actions of a single perpetrator, in this case a corporation. It is mainly in the United States that class actions have taken place, but they are becoming increasingly common in Europe (Sweden, Norway) and may take indirect forms (France, Germany, Italy and the Netherlands) when there is no specific provision for them in national law.
Businesses may be exposed to these social pressures in different ways, but the basic tools are monitoring, judicial measures and public communications, usually urging a consumer boycott.

Specific constraints for communication and marketing: ethical and operational principles

Legal constraints on communication, marketing or advertising are still few and far between. They concern fundamental aspects of citizen protection in the field of communication: misleading or abusive advertising, the encouragement of dangerous practices, health and discrimination. Voluntary initiatives to promote responsible communication and advertising have also appeared alongside legal controls. Here again, the social pressure exerted by civil society has played a very important role.

Existing national and international regulations for marketing and advertising are there mainly to ensure honesty and transparency and protect the safety of citizens/consumers.

In France, for example, the Consumer Code forbids advertising containing "false or misleading information concerning […] composition and substantial qualities, the results that can be expected from products' use, and the qualities or capabilities of the manufacturer or provider […]" (see Article L121-1 of the French Consumption Code).

In the United States, a number of states have introduced legislation to control environmental marketing activities (N. Kangun & M. Polonsky 1995).

Special (and constantly evolving) rules have been devised for the food sector and the health issues associated with it. The idea is that marketing claims should comply with the regulations governing certain product categories ("organic" products, for example) or should accurately reflect the real nutritional qualities of the food concerned.

In May 2006, the European Parliament adopted regulations on nutrition and health claims. Claims like "fat-free" or "high-fibre" will be monitored and authorized in accordance with the actual composition of products (amounts of salt, fat and sugar) or their nutritional profile.

In addition, environmental regulations, codes of conduct, norms and standards adopted on a voluntary basis sometimes lay down ethical and operational principles for communication and marketing. This is the case, in particular, with the ISO 14020 standard for information on the environmental properties of products and the ISO 14063 standard for company reporting. The International Chamber of Commerce has also drawn up a series of codes dealing specifically with advertising and marketing, including the International Code of Advertising Practice (1997) and the Code of Environmental Advertising (1991). In France, the Bureau de Vérification de la Publicité (a national self-regulation body) issued a specific recommendation entitled "Publicité et développement durable" ("Advertising and Sustainable Development") (11 December 2003).

This recommendation was particularly concerned with advertising that encouraged overconsumption: "Advertising should not provide encouragement, directly or indirectly, for excessive consumption or the wasting of energy and natural resources. It should not suggest or endorse manifestly irresponsible or reckless behaviour", and again, "the advertising message sent out must not play down the consequences of consuming certain products or services that are likely to affect the environment".

It also points out that any CSR initiative must be voluntary to qualify as such, stating: "an advertiser cannot take exclusive credit for particular actions when current regulations make them mandatory for all".

The social pressure exerted by civil society plays a fundamental role in enforcing sustainability principles in communication, marketing and advertising. Indeed, communication in all its forms is one of the practices most closely scrutinized by its members.

Actors concerned with corporate social responsibility pay constant attention to corporate communication activities.

Challenges and opportunities: the issues for communication and marketing

New approaches to "effective" communication: relation marketing and theories of reception

Some authors see Sustainable Development marketing (or "sustainable marketing") as an emerging new paradigm (D.A. Fuller 1999). The approaches and methodologies implemented in both marketing and communication have in fact evolved with social practices and representations. They can also interact to provide a theoretical and methodological background capable of reflecting the complexity of today's social relationships and representations.

A distinction is now made between traditional "transaction" marketing and what has come to be known as "relation marketing", an approach that distances itself from the behaviourist assumptions which have long prevailed in these fields and that is accordingly more targeted, being based on an understanding of the social, economic and cultural context of communication.

Relation marketing has been developed since the 1990s to provide an approach to consumers that is at once more individualized (by contrast with mass marketing) and more comprehensive in respect of the place they occupy in society. Its analysis of the commercial dynamic thus includes ideas of relational complexity, networks and symbolic transactions: "the relationship matters more than the product" (B.Cova 1995).

What sets this approach apart, whether in a "B2C" (business to consumer) or "B2B" (business to business) setting, are its quest for long-term performance and stability, the principle of mutual benefits and recognition between companies and customers, and the integration of these values into management arrangements (P. Hetzel 2004). Relation marketing is therefore not just about communication strategies, but concerns the organizational configuration of businesses.

Marketing research, and practice too, are tending to adopt a transversal approach and engage in a cross-disciplinary dialogue that eschews a strictly mechanistic view of economic transactions: "the 'relation factor' has led to a profound and significant shift in the research programmes of certain researchers in the marketing community, who are now giving greater importance to the systematic study of the phenomena they deal with and looking for theoretical support in related disciplines such as linguistics (particularly semiotics, to understand how meaning emerges), sociology, anthropology and economics" (P. Hetzel 2004).

Reception theories

Changing attitudes in marketing, not least as a result of communicational approaches, may be compared in a way with developments in reception theory since the early twentieth century, when it set out to describe and analyze the influence of communication and the mass media on individuals and their behaviour. Moving from what was still a mechanistic conception of the effects of strategic communication (be this political or commercial) based on ideas of propaganda and manipulation (H. D. Lasswell 1927; S. Tchakhotine 1939) to different theories about "indirect effects" (P.F. Lazarsfeld & E. Katz 1955), to "interpretive communities" and to more recent ideas about the ethnography of reception, these approaches have developed contradictory conceptions of the individual in a debate that shows no signs of ending (S. Proulx & D. Bélanger 2003).

However, it is the network and interaction concepts that, working through "indirect effects" theories, have really shaken the thesis concerning the "direct effects" of mass communication on the behaviour of individuals (the "hypodermic needle" theory) that predominated until the 1960s, according to which socially isolated and vulnerable individuals took in messages in a passive, automatic way.

Thus, P. Lazarsfeld's works (School of Columbia) on the Second World War and his concept of a "twostep flow of communication" first introduced the idea that social "filters" protected individuals from the powerful direct influence of the mass media. This theory posits, in fact, that message selection and interpersonal networks (we now speak of networks of social relationships in a broad sense) are interposed between mass communication and individuals through the action of opinion formers. In the 1960s and

1970s, the "active audience" theory (E. Katz, J.G. Blumber & M. Gurevitch 1974) would become important, with its claim that individuals themselves made selective use of the media as their own psychological needs dictated. Under the influence of "cultural studies" in the United States, the sociocultural groupings to which people belonged took the place of psychological factors as the determinant in the media selection and exposure process and the subsequent interpretation of messages, and the term "interpretive communities" began to be used.
Subsequently, a flurry of works used competing theories to describe and analyse the "indirect effects" of the mass media. Although conflicting theories still abound, pitting contradictory conceptions of the individual and the determinants of individual behaviour (choice, rationality, determinism) against one another, the idea that communication has only "limited effects" on audiences is now dominant. The thinking behind this is that the interpretation of messages and their effects on individuals are the outcome of a multitude of factors (membership of a social class, a cultural community or networks, personal expectations and motivations, etc.). And indeed, it is precisely because the interpretation of messages is differentiated, rooted in social and cultural factors yet individual at the same time, that marketing is tending to emphasize the "relationship", particularly in its communicational aspect.

II. Public campaigning

Information and participation: challenges and opportunities for public institutions

Using communication to help achieve sustainability objectives in the field of consumption is also both a challenge and an opportunity for public institutions. What Sustainable Development sets out to do is lay down the principles for better collective management of the communities, and the first requirement is the informed support and participation of citizens. With the active engagement of the public authorities, this entails communication and mediation efforts by institutions capable of embodying the different aspects of this project and acting as tools for its realization. Informing, sensitizing, influencing perceptions and behaviour, mobilizing, relaying and legitimizing the implementation of public policies are all necessary objectives of institutional communication and Sustainable Development.
Public sustainability communications are also an opportunity for institutions, allowing them to create new forms of solidarity (fair trade for example) and responsibility (consumption), or to support public policies that introduce elements of coercion into their programme (road safety).

Education and participatory democracy are often prominent issues in communication practices: the French campaign "Energy savings. Hurry up, its getting warmer!" ("Economies d'énergie. Faisons vite, ça chauffe!"), run by ADEME between 2004 and 2006, has relied on a policy of partnerships, rolling measures and proximity in conjunction with a large-scale media operation (television, radio, press). A multitude of more localized actions have brought the campaign message directly to the public: for example, 300,000 individual CLIMAcT tests (which assess energy consumption in terms of environmental impact) were distributed in cinemas when the film The Day after Tomorrow came out (directed by Roland Emmerich in 2004, this movie shows the consequences of a violent world climate on nature and humanity).
The Swedish climate campaign (2002-2003) also combined national and local measures, media campaigns and partnerships, in an approach that favoured decentralized forms of communication.

The risks associated with sustainability communications

The conditions of "risk"

Certain practices are not only inconsistent with corporate social responsibility and Sustainable Development but involve legal and reputation risks, and may even create social or environmental hazards. Inadequate information and misleading claims are now heavily condemned by society. The actors that monitor developments in this field consistently challenge abusive or incomplete communication practices: environmental NGOs, consumer associations, antiadvertising movements, investors and shareholders too. The information withheld usually concerns environmental or health risks that the production and consumption of certain products might entail. Communication is also considered abusive when companies use ethical arguments that are not justified by any freely chosen policy on their part (greenwashing).

Besides practices that run counter to the fundamental principles of responsible communication, a number of factors come into play in determining the risk run by companies when they choose to communicate on Sustainable Development or Climate Change. The proliferation of these factors has led to a need for transparent, rational and rigorous communication strategies: multinational enterprises and major groups are the most exposed to the vigilance of civil society. Their leadership status and visibility can be said to carry with them a duty and a constraint requiring them to set an example: "The higher the profile of a company or brand, the greater the scrutiny of its activities and the higher the potential for it to become a target for pressure group action." (Arthur D. Little).
Companies that make public commitments, say, by engaging with an institution (joining the Global Compact, for example) or undertaking specific communication activities (public relations, advertising, sustainability report, etc.), also need to accept that their statements will be checked and evaluated.
Sectors that directly impinge upon the well-being of individuals and societies (food, pharmaceuticals, tobacco, alcohol) or that have large ecological footprint and carbon emissions (energy, cars, textiles) are more exposed to the risks associated with sustainability communications.
Where public debate exists, nuclear, GMOs, Kyoto Protocol, the companies concerned are placed under a spotlight and brought face to face with their responsibilities towards the general interest. In this context, companies whose lobbying activities are inconsistent with their public communications risk losing credibility (R. Cox 2006).
Certain elements in the establishment of a sustainability communication strategy can lead to setbacks; for example: mobilization of green or social arguments that are unjustified or irrelevant to the products concerned, exaggeration of social or environmental benefits, creation of labelling of the company's own design that is not certified by an independent body.

The nature of the risks: penalties, reputation, "rebound effect"

Legal risk consists in the penalties to which companies expose themselves by conducting communication and marketing operations that are abusive, misleading or even but rarely hazardous in nature. While such penalties are still infrequent, their consequences can be very substantial: withdrawal of the campaign, fines for misleading advertising, and prison terms in the worst cases.
In the United States, and increasingly in Europe, the growth of class actions is posing major financial and reputation risks for businesses.
Reputation risk is undoubtedly the greatest constraint on companies. At once a safeguard and a major check on sustainability communication, it imposes new constraints (F. Fatoux 2005) and creates the need for a rational, transparent approach. The risk is that the public will become disillusioned with the company and its brands, perhaps ultimately leading to a boycott. Reputation risk can have long-term consequences, not only in terms of commercial results but also financially (a lower share price for instance).
Campaigns of condemnation mounted in response to corporate communication/advertising operations often highlight some inconsistency between the ethical commitment claimed in these operations and the reality of the company's business. In these circumstances, subvertising is a common practice that aims to undermine the company's credibility, bring its real motivations to light and harm its reputation.

Reputation risk is not confined to instances of abusive communication or greenwashing. Some crisis situations are brought about by the existence of a social conflict which crystallizes around a campaign.
There is also a risk associated with the advance of scientific knowledge about the environment: for example, the aerosol industry replaced CFCs (gases which destroy the ozone layer) with HFCs, which were later identified as greenhouse gases (Polonsky 1994). Communicating on technological innovations can therefore be risky at times, as their consequences for the environment are not always identified immediately.
The constant risk associated with sustainability communication is that of social or economic ineffectiveness. It can also happen, though, that an initiative or campaign proves counter-productive and engenders behaviour that actually runs counter to the original goals. This is what is generally known as the "rebound effect": for example, the use of low-energy light bulbs provides an excuse to leave lights on more often, promoting public transport encourages people to take the bus instead of walking, etc.

The special case of "greenwashing"

The term "greenwashing" is a portmanteau word, now grown familiar, that describes communication operations designed to display social or environmental commitment "despite the absence of actions to match this communication" (Utopies). "Greenwashing" is perceived as an attempt to minimize or conceal the social or environmental consequences of the main activities of the companies engaging in this practice. In short, the term is used when a firm tries to construct a responsible image in an artificial or abusive way by instrumentalizing ethical arguments and principles.
Specifically, greenwashing refers to opaque and illegitimate communication practices in the form of misleading or deceitful advertising, the concealment of practices that are contrary to international rules and standards, the flaunting by the firm of good practices that are often minor in comparison with its main activities, or the instrumentalization of a legitimate third party.
The concept of "bluewashing" has been constructed on the same model. The term derives from the colour of the United Nations flag and is used to describe companies that have signed up to the Global Compact but do not respect the CSR principles that compliance with it entails. Shell, Nike and Nestlé are often cited.
Active promotion of voluntary approaches for the purpose of forestalling legal measures is sometimes termed "deep greenwashing".
Not only is there no lack of ethical arguments to condemn greenwashing practices; they are also incompatible with economic theories according to which market equilibrium depends on the circulation of information. By conveying a misleading image of a company or brand, "greenwashing" disrupts the flow of information that individuals use to make rational choices and thus tends to undermine market equilibrium.
The risk of losing ground or being attacked for greenwashing can be particularly high, especially in the sectors that have the greatest environmental or social impact (polluting industries, energy, cars, etc.) and for powerful companies and brands that have a ubiquitous public presence.
Certain environmental and activist organizations have developed tools to evaluate corporate communications when these are based on ethical arguments or claim a commitment to responsible behaviour: Greenpeace has developed a greenwashing detection kit that uses a number of evaluation criteria: core business "unsustainable" but not acknowledged as such, publicization of good practices and concealment of unresolved problems, lack of investment in environmentally friendly technologies, lobbying for voluntary initiatives and against regulation.

Risk management

For professionals, there are several determinants of effective communication from both a marketing and a social point of view.
For communications to be at once legitimate and relevant, respect for the fundamental requirements of sincerity and transparency is crucial. It is of a piece with respect for legal standards (applying to advertising, for example) and for voluntary standards when the communicating company has undertaken to apply these.
The idea, then, is to avoid any instrumentalization of sustainability-related ethical arguments and positions in marketing and communication; and indeed, such instrumentalization is often punished severely by citizen-consumers or by organized civil society. Communication operations that propel their authors into crisis are rarely productive.
Effective communication also rests on a principle of consistency. This means a company undertaking initiatives that match the reality of its business and the image it conveys.
Consistency also encompasses the idea of commitment, which implies a proactive rather than reactive approach to sustainability issues. Communication is more likely to be effective when it anticipates and proposes than when it merely responds to a crisis situation which threatens the interests of the company. Ultimately, there has to be a thread of consistency tying together all the company's positions, wherever or however expressed (internal training, public relations, lobbying, advertising, etc.).
Upstream, knowledge of target audiences' perceptions and behaviour usually provides a solid basis for communication operations. It allows a company, for example, to identify any obstacles to the adoption of a green product in the form of negative preconceptions of the category it belongs to (price, quality) or its position in a sector whose symbolic status rests on values that prevail over social or environmental benefits. This analysis also makes it possible to determine the degree of legitimacy ascribed to the communicating organization (company or public institution) in relation to a given set of issues and a specific practice (advertising, social marketing, green marketing, etc.).
The credibility of a communication or marketing action is constructed at several levels: an integrated sustainability strategy at the operational level that matches the messages sent out by the business or institution; partnerships with legitimate and independent organizations (NGOs, international organizations): use of labels awarded by independent bodies or reference to specific codes of conduct, particularly in a green marketing context.

Efficient strategies to communicate sustainability and risk

Opinion studies and marketing audits provide a way of getting to know audiences and "targets" and of understanding perceptions and behaviour and the symbolic status of an issue, a sector or a product. In the case of green marketing, it is also necessary to understand market levers and segmentation, the social, economic, political, cultural and technological tendencies that structure the market.
Among the best existing communication strategies one should mention the following: construct a message that is attuned to sustainability; avoiding angelism; inform and educate, concentrating on facts and simple ideas and avoiding jargon; be clear about the social or environmental issues involved in the subject of the communication; provide evidence (charts, illustrations); favour personal messages in marketing and advertising; show the benefits and outcomes, both individual and collective; emphasize what will be lost by not acting; balance shock messages with concrete advice; be realistic and active; stay humble and do not arouse unrealistic expectations; admit to mistakes and show how the company or its products can improve; be proactive and innovative; establish partnerships with specialist NGOs, other companies, institutions or research groups; in the context of public relations: develop community programmes that involve the company and its sector of activity, involve scientists and experts in discussions with the media and not just communication specialists, prepare and manage information; make more information available (website, sustainability report, etc.); avoid idealized images of nature; create surprises and confound expectations, while providing a concrete response: shock and out-ofcontext images, humorous tone, etc.

And more specifically regarding green marketing: deal with sensitive points/obstacles; provide reassurance on traditional buying criteria (safety, quality, price, convenience, etc.) and product performance; mention any new instructions/changes in product use on packaging or in advertising/say when there has been no change; offer links to independent comparative studies; to forestall fears about the effectiveness of the product, offer samples or introduce launch/promotional offers; provide a response to one or more issues associated with the sector or category when offering products or services; associate sustainability values with those of the sector or category[26].

One of the hardest jobs in raising awareness of Climate Change is overcoming the barrier between immediacy (dealing with pressing problems that affect sustenance and sustainability today) and recognition of larger-scale background processes that are mediating those processes and which require longer term thought and planning. To most people, Climate Change is a remote and difficult concept to grasp. Most people do not understand the nuances between weather, which is tangible because it is visible and happens in 'real time', and climate which is a more intangible set of processes that is difficult to see, involves more than just weather and implies longer timeframes in order to be realistically perceived. There is a proverb which goes 'seeing is believing'. The job of the communicator is to bring forward, into visibility and comprehensibility, the background, longer timeframe dynamics of Climate Change. This can be done using historical data and experiential information people have provided themselves to produce a scenario that can be compared to earlier periods that people may have forgotten or simply not be aware of. Thus, we appeal to memory and imaginations to create perceivable differences in the way we live now compared to the past and in the possible future[27].

Climate Change is not only complex, uncertain and extremely politically charged, but it is frightening. The idea that the very way in which we have structured society and live our lives from day-to-day could be affecting the actual climate of the planet is scary. And the list of potential consequences of Climate Change, that reads somewhat like a list of biblical plagues, does not help. The underlying message of this communication strategy is, therefore, efficacy. The extended parallel process model (EPPM) is a theory of fear appeals (defined as "messages that evoke fear by focusing on severe and probable threats in order to induce adherence to recommended courses of action") (Witte, 1995). Fear appeals tend to work like this: the receiver of the message is told that there is a serious threat; that the threat could very well happen to the receiver; that the receiver can do something about the threat; and that the recommended course of action will in fact work. These stages of perceived threat, probability of the threat, self-efficacy and response efficacy initiate one of two reactions: danger control or fear control and it is efficacy that dictates which reaction "kicks in" (with the degree of threat dictating how strong response is). And this is the key: danger control causes people to heed risk message recommendations and fear control causes rejection. Therefore, "risk messages must not only depict the threat as severe and probable; to promote danger control responses, they must offer specific solutions that the public can easily carry out with a minimum of complexity and labour" (Witte, 1995)[28].
Recent research finds that "people are fed up with the unfulfilled 'fear' message". Evidence shows that fear often produces apathy, a feeling that nothing can be done.
It is also unproductive to attack home or family in the course of communications. In the Australian Handbook of Motivating Home Energy Action, Shipworth reports that middle-class North Americans closely associate their home with family life. Therefore, "an attack on the integrity of the house is easily translated emotionally into an oblique and indirect attack on the solidarity of the family".

26 UNEP Toolkit on sustainability communications. Resources for Education in Marketing and Advertising, July 2006.
27 Risk Communications on Climate Change and Variability; Preliminary guidance for ACCCA teams; July 2007, Dakar. Dr. Lawrence Flint, ENDA TM

28 The Case Study of Climate Change: The Nature of Risk and the Risk of Nature.

Appealing to survival instincts may also not yield the expected results. Human fight or flight instincts are not programmed to respond to vague, uncertain threats such as Climate Change. Indeed, linking Sustainable Development issues to our survival is likely to simply make people afraid, and hence apathetic.
"Messages from governments, exhorting people to drive their cars less or admonishing them for buying products that cause environmental damage, appear not to be working. People are simply not listening. Making people feel guilty about their lifestyles and purchasing habits is achieving only limited success." (Klaus Töpfer, UNEP Executive Director)[29].

Other research (Dorsey, 1999) has shown that the role of self-efficacy is key in the reduction of risk. The theory of reasoned action can also be seen as adding to the above concept of what might motivate people in response to information about risk. Ajzen (1988) offers that the theory of reasoned action "is based on the assumption that human beings usually behave in a sensible manner; that they take account of available information and implicitly or explicitly consider the implications for their actions" (Griffin, 1995). Further, people are more likely to behave in a manner that they perceive as positive and that they perceive "significant others" will view as being positive.
So, the individual needs to understand that there is a risk, that there are actions that can be undertaken to alleviate the risk, and that the actions are positive and will be perceived as such. However, as has been talked about above, people are social creatures and this is key to the understanding and communication of risk. Risks are "created," comprehended and communicated within social settings.
Therefore, in addition to the importance of self-efficacy and reasoned action, it is important to develop a communication campaign that consciously embraces this reality. "Receipt of information about risk will vary from community to community, among various publics within any community and through time" (Fessenden, 1987). Communities, and the individuals making up the communities, have histories and experiences that make them unique.
"Threshold models of collective behaviour postulate that an individual engages in a behaviour based on the proportion of people in the social system already engaged in the behaviour" (Valente 1995). Besides, once enough people are engaged in a behaviour, in general, the politicians will follow. Threshold theory goes on to postulate that it is not so much the absolute number of people engaged in the behaviour that affects another person's likelihood to adopt the behaviour, but the percentage of relevant people who have engaged. Relevant people (people with some sort of influence: money, community profile, etc.) wield more influence and so often might have to be the first to be "targeted".
As risk communication issues go, Climate Change contains some very interesting ingredients. The scale and complexity of the issue are perhaps unprecedented. There is every reason for the risk to be downplayed. And yet there is every reason to proceed with addressing the risk as the alternative energy solutions and the promotion of sustainable lifestyles stand to not only address the reality of Climate Change, but the quality of our lives as well.
The experience of Climate Change is both unknowable and as intimate as essence of the world in which we live. And the communication of Climate Change is both full of opportunities and challenges. The concept of the social construction of science and risk is alive and well in Climate Change[30].
It is tempting to think that any communication about Sustainable Development must be good and worthwhile. In fact, badly planned and misplaced communications will, at best, not work (wasting time and money); at worst they can have negative consequences. Success is always easier to achieve when policy and communications work together.
Getting the message heard is not always easy; the competition is tough. It is estimated that the average American is exposed to more than 3,000 marketing messages every day. Even if you get your target audience to hear or see your message, how do you know they will remember it, let alone absorb it deeply

29 UNEP Toolkit on sustainability communications. Resources for Education in Marketing and Advertising, July 2006
30 The Case Study of Climate Change: The Nature of Risk and the Risk of Nature.

enough to change their thoughts or behaviour? After all, recent studies show that over 80% of evening TV viewers cannot name a brand or product advertised in a programme they have just seen.
In today's information-overloaded world, people are getting good at screening out messages. That's why communicators have to stay one step ahead, and be smart about how they communicate with different audiences. This means looking beyond the established mainstream techniques such as advertising and direct mail[31].

From the processes of behaviour changes described in the concumers behaviour theory of the first section, we can deduce that communications campaigns should always have one or more of the following three objectives: raise awareness: improve people's knowledge of an issue or creating new knowledge. If what we are really seeking is public engagement for Sustainable Development, then attitude or behaviour change are often more appropriate targets. Change attitudes: change the way people think and feel about an issue. While attitude change can be a precursor to behaviour change, it does not guarantee it. Attitude change does, however, have an important role to play in preparing for new policy initiatives. It can help to ensure compliance with new legislation, such as the compulsory wearing of seatbelts. Change behaviour: influence people's actions relating to an issue. This is where efforts should be concentrated if we are to reach our Sustainable Development goals. However, it is a long-term approach, sometimes taking an entire generation to come into effect[32].
We live in a culture in which celebrity rules supreme, and in which half of the population is 'outer-directed'. That is, they have esteem-driven needs, seeking success, recognition and status through acquiring and displaying the 'right' brands, fashionable lifestyles and other goods, services and experiences (Rose, 2005). People like this want to feel special, and are accustomed to achieving this feeling through what they do and what they buy, rather than what they do not do or do not buy[33].

Providing information can raise awareness, but it is unlikely to lead to either attitude or behaviour change. McKenzie-Mohr gives two pieces of evidence to support this: "Householders who were interested in enhancing the energy efficiency of their homes participated in a comprehensive workshop on residential energy conservation. Despite significant changes in knowledge and attitudes, behaviour did not change" (Geller, 1981).
" When 500 people were interviewed regarding their personal responsibility for picking up litter, 94% acknowledged responsibility. When leaving the interview, however, only 2% picked up litter that had been 'planted' by the researcher" (Bickman, 1972).
Accepting that the public does not neatly respond to information does not mean we should sit back in resignation. Rather, we need to look to other disciplines for tools. For example, branding experts have been building up emotional relationships between consumers and product brands for many years. It may not be rational, but it works[34].

Different types of people have widely differing opinions. Each audience will respond to different tones of voice or different media. For this reason it is important to word messages and choose communication channels carefully. For example, the Internet may not be the best way to communicate with older people. The most successful communications campaigns are the ones which tightly define their target audiences.
Defining your message is also essential. It is not necessary to communicate the entire concept of Sustainable Development in order to bring about change. Often it is more effective to focus on a single issue, such as energy efficiency or buying ethical products.

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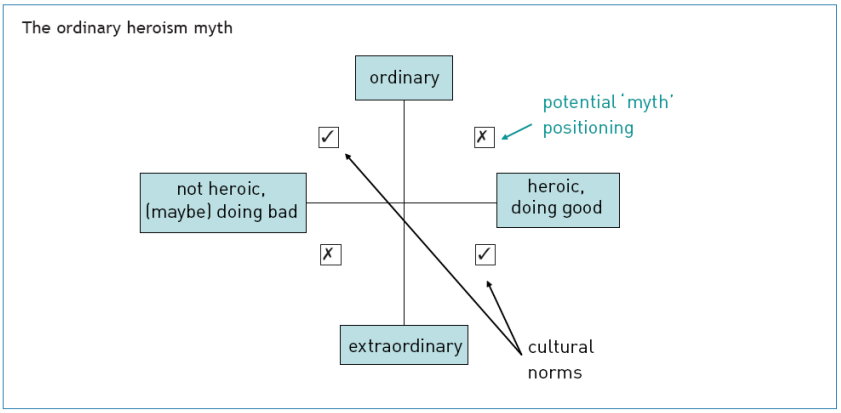
31 UNEP Toolkit on sustainability communications. Resources for Education in Marketing and Advertising, July 2006

32 The Case Study of Climate Change: The Nature of Risk and the Risk of Nature.
33 Warm Words, How are we telling the climate story and can we tell it better? Gill Ereaut and Nat Segnit, AUGUST 2006 © ippr.
34 The Case Study of Climate Change: The Nature of Risk and the Risk of Nature.

Sustainable Development and Climate Change issues also need to be linked very closely to an inspiring aim.
"If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language, that goes to his heart." (Nelson Mandela, Former President of South Africa) Understanding what motivates an audience is the first step in knowing how to talk to them. Psychology teaches us some valuable lessons here: "people are motivated: to know and understand what is going on: they hate being disorientated or confused; to learn, discover and explore: they prefer acquiring information at their own pace and answering their own questions; to participate and play a role in what is going on around them: they hate feeling incompetent or helpless."
The real skill in communicating lies in translating the big vision into messages that are both personal to the audience and practical in terms of inspiring a response[35].

Much of the noise in the Climate Change discourse comes from argument and counter-argument and one can suggest that at least for popular communications, interested agencies now need to treat the argument as having been won. This means simply behaving as if Climate Change exists and is real, and that individual actions are effective. This must be done by stepping away from the 'advocates debate' described earlier, rather than by stating and re-stating these things as fact. The 'facts' need to be treated as being so taken-for-granted that they need not be spoken.
Where science is invoked, it now needs to be as 'lay science', offering lay explanations for what is being treated as a simple established scientific fact, just as the earth's rotation or the water cycle are considered.
The 'problem' of disparity of scale, between the enormous problem (depicted in alarmism) and small individual actions, is potentially the opportunity. It is currently the source of wry juxtapositions: 'Unplug your TV, save the planet'. With the right approach, one could properly harness this disparity by using myth to inject the discourse with energy (a 'myth', in this sense, reconciles seemingly irreconcilable cultural truths).
Opposing the enormous forces of Climate Change requires something superhuman or heroic. Science is not enough, what is needed is something more magical, more mythical. Many strong and successful brands have a kind of myth at their core, they appear to reconcile things that are normally impossible to reconcile It seems that the key powerful myth for action on Climate Change is 'ordinary heroism'.

Figure 29



More broadly, it is not enough simply to produce yet more messages to convince people of the reality of Climate Change and urge them to act. Climate-friendly actions need to be made to feel attractive and

35 UNEP Toolkit on sustainability communications. Resources for Education in Marketing and Advertising, July 2006

compelling in terms that make sense to people today. Doing so means working within the cultural norms, value systems and communication contexts that are meaningful to large sections of the population.
Making desired behaviours attractive and compelling to ordinary people means using metaphor as well as more rationalistic approaches, to enable them to emotionally engage with the desired action, rather than emotionally disengaging with the problem through fear overload. We should not present 'messages', with the implication of rational argument and top-down persuasion. Instead, we need to work in a more shrewd and contemporary way, using subtle techniques of engagement.
We live in a culture where top-down authority is being increasingly replaced by bottom-up or horizontal authority. This has huge implications for the way Climate Change needs to be tackled. Communications that emanate from authority sources and that continue to instruct, or even cajole, are likely to be less successful than those that work with this emerging dynamic.
How can we change what constitutes 'common sense'? The challenge is to make climate-friendly behaviours feel normal, natural, right and 'ours' to large numbers of people who are currently unengaged, and on whose emotional radar the issue does not figure. The answer is not to try to change their radar (though it is possible through education as we will examine it later) but to change the issue, so it becomes something they willingly pick up, because it means something valuable in their own terms.
Inevitably, these conclusions lead us to treat climate-change communications in the same way as brand communications: we have to approach positive climate behaviours in the same way as marketers approach acts of buying and consuming. It amounts to treating climate-friendly everyday activity as a brand that can be sold. This is not necessarily a familiar or comfortable proposition for those engaged in campaigning or public sector work, but it is certainly the route to mass behaviour change[36].

Finally, on can suggest that issues that impact on human development should not be treated as only mere commercial commodities or political constituencies; in fact they should attract even more importance in effective communication. Meanwhile, the position on awareness is differential with most knowledge and information, and therefore awareness of climate risks for lives and livelihoods, being concentrated in the developed countries of the North. This is an ironic situation given that the regions most vulnerable to the negative impacts of Climate Change and variability have the least adaptive capacity, in terms of knowledge, information, skills, infrastructure and financial resources[37].

Community-Based Social Marketing (CBSM)

Community-based social marketing is an attractive alternative to traditional information-based campaigns. It is based upon the research in the social sciences that demonstrates that behaviour change is most effectively achieved through initiatives delivered at the community level which focus on removing barriers to an activity while simultaneously enhancing the activities benefits.
Community-based social marketing involves four steps: identifying the barriers and benefits to an activity, developing a strategy that utilizes "tools" that have been shown to be effective in changing behaviour, piloting the strategy, and evaluating the strategy once it has been implemented across a community[38].

The first step involves identifying a set of behaviours relevant to a particular environmental goal. For example, in attempting to reduce greenhouse gas emissions from the home we might identify a number of behaviours including: switching to lowflow showerhead, turning out lights, installing additional insulation

36 Warm Words, How are we telling the climate story and can we tell it better? Gill Ereaut and Nat Segnit, AUGUST 2006 © ippr
37 Risk Communications on Climate Change and Variability; Preliminary guidance for ACCCA teams; July 2007, Dakar. Dr. Lawrence Flint, ENDA TM
38 Quick Reference: Community-Based Social Marketing; By Doug McKenzie-Mohr, Ph.D.; Environmental Psychologist

and so on. Rather than attempting to promote all of these behaviours, the aim of the first step is to identify the barriers that each such behaviour faces and then selecting a specific behaviour to promote.
The idea of the first step is to identify behaviours where a change could have a significant pro-environmental benefit, but where the barriers to change would not demand under resource investments. One of the key issues here is whether the behavioural change in question is a one-off behaviour (purchase of an energy efficient appliance, for example) or involves shifting routine behaviours (such as turning off lights). Generally speaking, as we have remarked, effecting a lasting change in habitual or routine behaviours is much more difficult than influencing one-off behaviours.
The design stage must aim to construct a strategy which removes as many of the barriers to the selected behaviour as possible within a limited allocation of resources. It is in this stage, that the importance of social-psychological insights comes into play. For example, community-based social marketing might draw on the use of a variety of social-psychological devices in order to motivate change. For example, the use of 'commitments' to reinforce people's intentions to engage in pro-environmental behaviour, 'prompts' designed to increase the salience of behavioural norms and remind people to behave in certain ways, and 'signals' to reinforce descriptive and injunctive social norms, have all proved useful in reinforcing pro-environmental behaviours. The important aspect of the design stage is to target interventions very specifically towards the identified barriers, drawing on social-psychological insights into the nature of those barriers and the way in which people's behaviours are motivated and constrained in order to devise ways of overcoming the barriers and promoting the desired behaviours.
A key element in successful social marketing strategies is an adequate piloting and testing stage. Typically, a small-scale pilot of community-based social marketing strategy is rigorously tested and evaluated before proceeding to a wider implementation programme[39].

CBSM has been shown to be more effective than both mass marketing and social marketing (certainly per dollar invested) because it "actually provides consumers with the means, either psychological or material, to overcome barriers in initiating and sustaining behavioural change". Research in the United States has shown the difference between promoting recycling by making use of community volunteers, and by simply distributing flyers: "28% of the homes visited by block leaders recycled weekly, compared to only 12% for those who just received a flyer; furthermore, over 58% of those homes visited by block leaders continued to recycle, compared to only 38% of those homes that just received the flyer" (McKenzie-Mohr, 1996).
Research sponsored by the Climate Change Secretariat (1998) has also shown that: "Attempts to change specific behaviours were most effective when there was direct contact with the individual and when changing the behaviour was made as easy as possible, including on-site demonstrations and provision of materials".
Such research has shown promising results with CBSM when it comes to socially desirable activities that require little change in behaviour and for which barriers can be easily identified and reduced, if not eliminated.
Although community based organizations have been making substantial contributions to society for many years, their use of social marketing has only recently been recognized for its low-cost ability to change attitudes towards all sorts of issues, including drinking and driving, smoking, exercise and fitness, and recycling. It draws heavily on research in social psychology which indicates that initiatives to promote behavioural change are often most effective when they are carried out at the community level and involve direct contact with people (McKenzie-Mohr, 1999).
It helps when that communication is made through someone, in a position of trust, who is able to extract some level of commitment (oral, written, or even public) from the participants to take specific actions.

39 Motivating Sustainable Consumption; a review of evidence on consumer behaviour and behavioural change; a report to the Sustainable Development Research Network; Tim Jackson; Professor of Sustainable Development; Centre for Environmental Strategy; University of Surrey

Motivated people also tend to spread the word to family, friends, and neighbours (Kassirer and McKenzie-Mohr, 1997).
Prompts are an important component of the CBSM toolkit because they remind people about their commitment to do something as opposed to simply exhorting them to do something. It helps if the prompt is attractive and or novel and relates specifically, in time and space, to the task and audience involved. Slogans and nonspecific reminders "generally have very little effect on actual behaviour" (Gardner and Stern, 1996).
CBSM campaigns depend heavily on information and education. People must recognize an issue as a problem that needs solving, understand how they are directly connected to the problem, and how a change in their behaviour can affect them and their family in a positive way[40].

Key obstacles faced by public campaigners

National and local authorities face particular obstacles to effective communications. Not all of these can be overcome, but being aware of them enables better planning. The UNEP/Futerra survey identified the following obstacles arising from both the political process (external issues) and the nature of the governing body (internal issues): changes in administration can change priorities for communication; changes in political administration can lead to less support and fewer resources for Sustainable Development communications. But the best communications campaigns are those which are sustained over a period of time; an inconsistent message can confuse people and inhibit action.
Building the business case for the campaign may help.
Consistency between words and action is key, Sustainable Development messages must be simple and clear, but also credible. Communications must, therefore, be consistent with policy. But national and local authorities face challenges in two respects: the public often wants opposing things and different departments often put out conflicting messages.
The public often demands conflicting policy responses for example, high public spending at the same time as low taxes. In the absence of clear demand from the electorate, it can be difficult for governing bodies to show leadership. Attitude change campaigns can shift public opinion; this is an easier target than behaviour change and can provide the appetite for radical policy change.
Due to varying demands from the public, Sustainable Development messages can sometimes conflict with promises made by other government bodies. This inconsistency can make people sceptical of government's commitment to Sustainable Development. Even within one government department, it may be hard to ensure consistent messages without support from staff. Internal communications campaigns can ensure that staff are motivated and understand the relevance of Sustainable Development to their own department.
Using jargon is a particular barrier to successful government communications. We must guard against Sustainable Development appearing to be an exclusive club for those in the know.

One of the truer old saws is that 'do as we do' is more powerful than 'do as we say', and 'do as we say not do as we do' is to be avoided at all costs. A case in point is air traveland NGOs. It's no longer enough, if NGOs (or governments or businesses) wish to be successful in 'securing a step change in public environmental action', to act like the chantry movement and allow donations to absolve supporters of the need to change themselves. Nor is it enough to argue that the vital work to be undertaken justifies the means, without, in a case like air travel and climate, showing serious efforts to reduce the impact of the means. Every business can argue that its flying is vital for its priorities.

NGOs are expected to innovate, set an example, prove that the impossible is possible, and to challenge not pursue business as usual, including flights to international gatherings to 'network' or negotiate about

40 Walking the Talk in Ottawa Through Community-Based Social Marketing; Dana Silk

Climate Change. They cannot hope to succeed in persuading other actors that they should change their business patterns to use much less air travel if they do not do this themselves. If the obstacles to achieving this are partly the failure of 'markets' to develop and commercialise technologies, or for governments to regulate to require them, then maybe that is where, for instance, the climate campaign effort should go. So long as business continues as usual, the signal that this really is an emergency, is never sent. Saying so doesn't do it[41].

The role of education in changing behaviours

Considering that Global warming and hence Climate Change are the consequences of how man has used and interacted with the environment, Environmental Education and training would have to face the challenge of designing an education process that will empower man to positively interact with nature. The main challenge for educationalist around the world would therefore be: how do we educate for change?
This challenge has been underscored by Gro Harlem Brundtland many years ago in the preface to the Our Common Future (1986) "Unless we are able to translate our words into a language that can reach the minds and hearts of people young and old, we shall not be able to undertake the extensive social changes needed to correct the course of development.
Environmental Education (EE) has been defined as the process of helping people, through formal and non-formal/informal education, to acquire understanding, skills and values that will enable them to participate as active and informed citizens in the development of an ecologically sustainable and socially just society. It aims to promote through these knowledge and skills the preservation, conservation and utilization of the environment in a sustainable manner for the present and future generations. It also involves learning how to employ new technologies, increase productivity, avoid environmental disasters, alleviate poverty, utilize new opportunities and make wise decisions (UNEP-ROAP, 1999). According to Lars Emmelin, "the need for a sufficiently sophisticated understanding of the functioning of the environment must be one of the requisites for coping with both those environmental problems generated by industrialization and technological development on the one hand and those created by underdevelopment on the other." (UNESCO,1977)
UNEP's GEO3 report (2002) sadly concludes that "the level of awareness and action has not been commensurate with the state of the global environment today; it continues to deteriorate." The earlier GEO2000 report echoes this by recognising that "the general public's knowledge of the environment is the foundation on which environmental policies build. This knowledge is often seriously deficient." It also goes to recommend that "education and public awareness programmes can change attitudes and produce more environment-friendly and sustainable life styles, at the same time encouraging public participation and action on environmental issues. Formal and non-formal education on the environment is therefore critically important. Public participation in environmental management could be improved by: making environmental education an integral part of the standard educational curriculum; including regional and global issues and perspectives in environmental education syllabi; expanding public awareness and education programmes to target more groups in society, especially engineers and economists."[42]
The United Nations Decade of Education for Sustainable Development 2005 – 2014 is a crystallization of the consensus amongst the international community that education is fundamental to the achievement of Sustainable Development. Education was given a prominent role in the Stockholm Conference's Plan of Action for addressing global environmental challenges. However the central role of education was particularly given prominence at the Rio summit. Chapter 36 of Agenda 21 states amongst others that "Education, raising of public awareness and training are linked to virtually all areas in Agenda 21, and even more closely to the ones on meeting basic needs, capacity-building, data and information, science,

41 How do we secure a step change in public environmental action? Notes expanding on comments by Chris Rose given at the second Green Alliance 'soap box series' of autumn debates 16 October 2006, Royal College of Surgeons, London.
42 http://www.unep.org/geo2000/english/0244.htm

and the role of major groups." The UNESCO sponsored Jomtien World Conference on Education for all (1990), The Earth Charter, the UN Millennium Development Goals, The Dakar Framework for Action (2000), and the NEPAD Environment Initiative (2001), are just some of the other examples of international consensus on the central role of education for Sustainable Development.
The focus on education for Sustainable Development is important because education is essential in allowing people to make informed and wise choices. The bulk of a Nation's future leaders shape their ideology and beliefs from the kind of education they get.
Chapter 36 of Agenda 21 identifies four main focal areas of education for Sustainable Development. These are promoting access to and improvement of quality of basic education, reorienting education towards Sustainable Development, increasing public awareness, and promoting training. Education for Sustainable Development therefore "is a dynamic concept that utilizes all aspects of public awareness, education and training to enhance an understanding of the linkages among issues of Sustainable Development and to develop the knowledge, skills, perspectives and values which will empower people of all ages to assume responsibility for creating and enjoying a sustainable future."
As Chapter 36.3 of Agenda 21 states, "Both formal and non-formal education are indispensable to changing people's attitudes so that they have the capacity to assess and address their Sustainable Development concerns. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with Sustainable Development and for effective public participation in decision-making."
Education and training play an important role in enabling the integration of the principles of Sustainable Development into international, national and local policies and programmes for the environment and for education. They also influence how the three pillars of Sustainable Development are understood and implemented. This requires a reorientation of educational systems, policies and practices to provide citizens with appropriate knowledge, skills and ethical commitment to engage critically in decision-making and action on current and emerging environmental and development problems.

In conclusion, learning in a changing world would involve: improved planning for environmental education within educational structures; life long and continuous learning rather than confined to a specific period: multi-sourced and accessed rather than top down, controlled, and orchestrated; empowering rather than socializing (indoctrinating); global and yet local specific; capacity building to build abilities for critical thinking and problem solving; multi-disciplinary approach as opposed to a single new discipline; Sensitivities to gender, diversity, promotion of Indigenous knowledge; participatory and based on learning with peers; reflection, visioning and sharing are the crucial elements of ESD; it will involve innovation, creativity and long term commitment As the Secretary General of the United Nations, Kofi Annan said "our biggest challenge in this new century is to take an idea that sounds abstracts, Sustainable Development, and turn it into reality." The international community has endorsed education for Sustainable Development as a key tool for transforming this idea, this goal into reality. Humanity is suffering.[43]

The role of NGOs in promoting Climate Change in Europe

Environmental NGOs world-wide have taken a diverse approach in promoting various environmental issues influenced by the political, social and economic structure of each region. The European Union (EU) is of particular interest as it has been the lobbying ground of many international environmental NGOs and it has set itself a strong environmental policy addressing issues such as Climate Change and the integration of the environment within other policies.

43 What are the Challenges for Education and Training Around The World?

The majority of large environmental NGOs, such as WWF, Friends of the Earth and Greenpeace, have established European Units in order to influence directly the member states of the EU and the environmental activities of the EU as a whole.
Environmental NGOs within the EU realm have tried to introduce the topic of Climate Change to the public and the decision-making bodies in order to gain their support. Their more successful methods have been the distribution of regular press releases to the media and the publication of articles by academics that have been contracted by the NGOs to provide well-supported and objective evidence. NGOs have extensively lobbied the governing authorities of the EU hoping to influence the positions of the decision-makers on issues directly linked to Climate Change.
Neverthess it appears to be a lack of communication between the NGO sector and the media, academia and governing authorities.
But according to the Entente International Communication report 'Putting the pressure on', 70% of leading businesses are targeted directly by pressure groups and the majority of them are directly involved in dealing with pressure groups and operate under legislation that the groups helped create. While the percentage is high for countries like Belgium, Germany and Austria, the UK and the southern European countries are less inclined to co-operate with pressure groups (Trapp, 1997). The success of NGO pressure should be indicated on a long-term basis. It's fair to say that the environmental message has been heard over the past 25 years, and since its start, there have been a lot of successes.[44]

III. Corporate communication addressing Climate Change

Business and Sustainable Development

Unquestionably, citizens are more aware now than ever before of the social responsibility of businesses. Opinions on corporate social commitments are often marked by mistrust and scepticism, however. Nonetheless, respect for the environment and social engagement are not perceived as necessarily incompatible with the profit motive.
Consumers claim to be highly alerted to the way businesses behave towards society and the environment. Thus, it does seem that CSR can become a genuine purchasing criterion: 74% of those questioned for an international study (MORI 2003) stated that having more information on the social, environmental and ethical behaviour of companies would influence their purchasing decisions. In France, similarly, 38% claim to take companies' behaviour as "citizens" into account when buying a product (Credoc 2003). In the United Kingdom, 70% of the population claim to be very interested in the methods companies employ to express their social responsibility. The figure is 90% in Mexico and the Philippines and 78% in Brazil (AccountAbility – NCC 2006).
Consumer awareness of social responsibility initiatives focuses on certain production sectors in particular: in France, the product categories for which it is important for businesses to show civic commitment are food (47%), clothing (17%), pharmaceuticals (11%), energy (6%) and hygiene products (4%). These responses are dictated by the personal preoccupations of respondents and do not always coincide with the real impact of sectors on the environment: energy is mentioned by only 6% of respondents (Credoc 2003).

Good practice and market development

While the figures for socially responsible markets provide us with information on the evolving state of consumer behaviour, it is very difficult to observe or measure the day-to-day habits of individuals: water,

44 The role of NGOs in promoting Climate Change: an European perspective; Daphne Biliouri

electricity, car use, etc. The data available mainly derive from people's own declarations about their behaviour.
Nonetheless, it would be wrong to say that the evolution of ideas and representations concerning responsible consumption has no bearing on any economic or social reality. The fact is that the emergence of ethical concerns does seem to have had a real impact on the actual behaviour of citizens and consumers in several specific cases. Thus, as Nyborg et al. (2003) demonstrate, markets for ivory (R. Heltberg, 2001), tuna (M.F. Teisl, 2002), organic produce (W. Moon, 2002) and responsible investment (J. Cullis, 1992) have had to cope with (or, conversely, have benefited from) the emergence of new consumer choices in which ethical motivations play a crucial role.
While the market for green or socially responsible products still represents only about 2% of the total, it has experienced exponential and very significant growth in certain sectors. In the United Kingdom, the growth rate of the overall green products market is 22% since 1999 (15% in 2004). Many companies that have built their identity, development and communications around the theme of responsible production and consumption have been extremely successful in different sectors (food, clothing, cosmetics).

A contradictory and still very constricted market

For all the professions of principle and despite progress in sustainability markets in numerous fields, consistently responsible consumption is still the preserve of a very small minority. Given that the total sustainability market still averages only 2% of the overall market, optimism can sometimes seem overdone. Green products still account for only 1% to 4% of the market. Average spending on fair trade products by the French, for example, is only 1.13 euros a year.

The motivations and commitments of economic actors

Many domestic and multinational companies now devote a significant part of their efforts to Sustainable Development. This is accounted for in various ways. A utilitarian interpretation of Sustainable Development initiatives sees them as being principally intended to serve companies' economic and commercial interests in a social setting that is highly sensitive to their values. In corporate communication, Sustainable Development thus becomes a "marketing tool" like any other, the main aim being to increase market share by appealing to the "responsible consumer" niche (M. Friedman 1970; M.T. Jones 1996; R. Cox 2006) or to diversify product ranges. It should be remembered, though, that not all "Sustainable Development" initiatives are systematically publicized.
A second interpretation, which places companies' intentions in a markedly less critical light, is that economic actors are now having to respond to new branding imperatives by showing a commitment to Sustainable Development (J. Himmelstein 1997; E. Champion: 2003). These initiatives are thus seen as a response to the social pressure on businesses, whose fundamental objective is to secure and consolidate a legitimate place in society. They are a manifestation, it is argued, of a more cooperative attitude towards the public authorities, who are liable to bring in restrictive regulations, but also towards civil society actors (associations, NGOs, pressure groups).
Some authors (J. Brabet 2003; C. Gendron, A. Lapointe & M-F. Turcotte 2004) view corporate Sustainable Development initiatives as examples of the kind of self-regulation that is needed in the economic sphere in the absence of institutions with real authority at the level of the globalized world economy.

The social and environmental role of business

While the public authorities are undertaking more and more Sustainable Development initiatives, society at large has been aware for many years now of the influence that business has on natural resource use,

technological development, modes of production and consumption, and lifestyles. This influence implies major responsibilities for these actors in their development, management, marketing and communication activities, especially in sectors that produce a major social and environmental impact (energy, cars, textiles, food). For example, the development of any sustainable product/service needs to meet new evaluation standards and take into account the environmental, social and economic effects it will produce over its whole life cycle: the impact of manufacturing in terms of natural and human resources, the specific characteristics of the product/service (polluting? reusable? recyclable? etc.), methods of use, and whether it encourages rational consumption.
In this context, governments and civil societies recognize the importance of concretely supporting and helping companies to engage on the path towards Sustainable Development. Some businesses have been quick to introduce environmental management and rationalization procedures into their activities. This was the case in the food industry in the late 1980s following complaints about tuna fishing methods and their dramatic consequences for dolphin populations. Likewise, it was in response to the breadth of concerns expressed about the production of polystyrene and the destruction of the ozone layer in the early 1990s that McDonald's took the initiative of using new materials in the manufacture of its packaging (B. Gifford 1991; S. Hume 1991; M.J. Polonsky 1994).

The "business case": challenges and opportunities for companies

Marketing and communication approaches develop through contact with the practices and expectations of economic actors. CSR principles and the question of how to communicate them represent a challenge for businesses, responding to pressures from political or social actors in the areas of sustainability and communication, attuning themselves to consumer concerns and expectations, but also an opportunity, as they can potentially increase the financial worth of companies very significantly. The "business case" for sustainability is now constantly voiced by major companies around the world and by the organizations that represent them.

The value of a business depends not only on its commercial performance, but also on its reputation. Globally, it is estimated that 35% of a company's financial value is now determined by reputation (J.F. Keefe 2002). In a report devoted to CSR issues, Arthur D. Little cites a study according to which the proportion of a company's value deriving from its intangible assets rose from 17% in 1981 to 71% in 1998 (A.D. Little).
Numerous studies have also shown that consumers attach great importance to company reputations. Reputation is liable to influence their behaviour, whether positively or negatively, in all sorts of cases. Protecting or enhancing reputation has thus become a corporate priority. In this context, it represents a real competitive advantage while at the same time protecting those on whom a company's prospects of long-term survival depend. As John Peloza (2005) suggests, many economic decisionmakers develop their CSR initiatives from this standpoint: "[…] in addition to action as a source of new competitive advantage these investments also serve to protect existing competitive advantage through the reputation mechanism." Reputation thus provides an "insurance policy" (J. Peloza 2005; J. Klein & H. Dawar 2004) against adverse events and the consequences of the crises that can sometimes strike firms. An insurance policy, but not a remedy, since CSR initiatives that constitute just one response to a crisis situation can backfire badly. The benefits of reputation also come into play when a CSR policy enables an enterprise to maintain good relations with its stakeholders. When they are based on trust, these relationships offset the risks (of boycott, for example). What is more, they seem to play a positive role in companies' economic and social results.
Of course, there is also the challenge posed by shifts in consumer representations and expectations concerning the environment, Climate Change and social environmental responsibility, for all their apparent passivity. This is a major commercial issue, and one that will become further-reaching as the

main constraints on ethical consumption disappear. Thus, J. Ottman points out that, in certain sectors, green products are already perceived as being of better quality than traditional ones.

The benefits of Sustainable Development for business

The benefits of a CSR policy and appropriate communication are manifold: strategic, economic, social and policial, they underpin the activities of many companies. The strategic benefits of CSR and its communication are analysed in terms of differentiation and protection of a company's market position. The success of firms that were pioneers in Sustainable Development is based on an important differentiation factor: their very identity, and that of their products/services, rests wholly on sustainability values and principles.

While such companies are still only a small minority, sustainability is tending to become a necessity for many, a genuine competitive advantage on which the maintenance of a firm's market position may depend: "We may be seeing the beginning of a new virtuous circle in which the only brands capable of innovating are going to seek to differentiate themselves in the eyes of consumers and are going to try to do this by devoting a growing share of their development and marketing efforts to the environment and Sustainable Development. Not only out of philanthropy, not only out of a concern for social responsibility (which has been the case for a long time now) but because this is increasingly what consumers want and so brands will have a reason to develop…" (Marc Alias, Director of External Relations, Procter & Gamble, in Ethicity / Carat Media Marketing report 2005).

Numerous academics posit the existence of a link between companies' social initiatives and their financial performance (J. B. McGuire et al. 1988; M. L. Pava & J. Krause 1996; M. Tsoutsoura 2004). This link is supposed to be manifested at several levels: commercial results, investment, financial value, the development of new markets, and lower operating costs. Companies whose identity and products/services rely on sustainability values often achieve very significant commercial successes:. Natura became the market leader for cosmetics in South America with a 19% market share and a sales increase of 32% between 2002 and 2004. In the case of American Apparel, turnover increased by 900% between 2000 et 2004 (as against a decline of 12.9% in the United States clothing market and increases of only 40% for Gap and 76% for H&M, the market leaders).

Although they still account for only a small share of the market by comparison with traditional investments, socially responsible investments are becoming more and more substantial. A study conducted by Business in the Community shows that a third of all financial analysts now believe environmental issues are affecting the value of their investments (Arthur D. Little). The performance of specific financial indexes such as the Dow Jones Sustainability Index (DJSI), a stock-exchange index that ranks the leading companies in Sustainable Development, compared to the traditional ones, such as the Dow Jones Global Index (DJGI), illustrates this phenomenon: "During the five years before August 2001 the Dow Jones Sustainability Index (DJSI) clearly outperformed the Dow Jones Global Index (DJGI). While the DJSI had an annualized return of 15.8% the DJGI increased by 12.5% in that period" (WBCSD 2001).

Envisaging Sustainable Development as a financial opportunity also means taking a different, longterm approach to value, particularly as regards capital, and this demands a steady progression through numerous production and sales cycles.

Social demand for Sustainable Development may cause new markets to emerge and stimulate industrial innovations (recycling, waste management, processing of reusable raw materials, transport, etc.).

Contrary to received opinion, these practices often lead to major savings in companies' operating costs. A.D. Little cites, for example, the case of a recycled paper manufacturer in the United States which, by increasing the fibre recovery rate, was able to save on the equivalent of 20,000 tonnes of paper waste and achieve the lowest production costs in the market. While numerous studies have sought to show a firm link between CSR and financial performance, others reject the idea (M. Friedman 1970) on the grounds that there are too many variables at work for this to be established.

Corporate sustainability initiatives improve a company's image in ways that have a positive internal effect. It seems not only that responsible companies are better placed to attract and retain high-quality human resources, but also that morale is better and productivity consequently higher as well.
In many sectors (especially energy, transport and food), CSR initiatives yield benefits of a more political nature, as they provide a way of forestalling restrictive regulations.

Product communication and sustainability: "green marketing" objectives and tools

To begin with, it is interesting to note that the sectors with the largest ecological footprint (transport, food, energy) are also among the ones that communicate the most.
Sensitive sectors, particularly the petrochemical and automobile industries, invest a great deal in advertising. In certain sectors, furthermore, just one or a handful of companies sometimes account for more than half of all advertising.
The forms and methods used for sustainability communication are manifold. In the case of company communications, at least four areas of practice can be distinguished, differing mainly in terms of strategic objectives: corporate communication (development of a company/brand image or reputation) intended to convey a responsible or civic image of the company, green marketing (product communication), social marketing (encouraging consumers to behave responsibly) and responsible marketing (codes of conduct for communication). While these distinctions have the advantage of providing an organized overview of practices, the boundaries are often blurred: any company deciding to launch and promote a green product will also be hoping that its reputation will benefit.
Again, this is not the only possible classification. According to R. Cox (2006), businesses establish their public presence in the following three ways: "(1) the practice of green marketing, or the construction of an environmental identity for corporate products, images and behaviours; (2) industry advocacy campaigns aimed at influencing environmental legislation, agency rules, and public opinion, and (3) tactics to discredit or intimidate environmental critics." (R. Cox 2006).
"Green marketing" encompasses all communication operations undertaken to promote a product on the basis of its environmental properties, or of its social qualities: it is about "selling products on an ethical platform" (Utopies). The commercial dimension and the reference to values, giving consumers the feeling that they are acting in a civic, responsible manner by making the purchase, are the distinctive features of green marketing.
In practice, ethical arguments can be included at any stage in the development of a marketing concept, the platform upon which a product is positioned, the "insight" (formulation of a problem or specific expectation to which the product is designed to respond), the practical or symbolic benefits of the product and the description of its intrinsic properties to show that it really can live up to expectations and to endow it with credibility ("reason to believe"). This definition restricts green marketing to its communicational and promotional dimension. Some authors dislike the way it is so often perceived as a procedure that consists simply in coming up with clever formulas and seductive arguments (J.M. Polonsky 1994; Fuller 1996). In a broader sense, green marketing can refer to all development and marketing operations that are upstream of communication and provide the justification for it. Its use is not confined to consumer products, but extends to services and industrial production as well, for example in a B2B (Business to Business) environment. Thus, "green or environmental marketing consists of all activities designed to generate and facilitate any exchanges intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment" (Polonsky 1994).
By extension, green marketing also encompasses commercial activities designed to be socially and economically effective in meeting sustainability requirements.
In its communicational aspect, green marketing involves the development of messages based on ethical arguments that express the material or symbolic qualities of a product. These arguments encompass the

way the product is manufactured, its intrinsic properties ("phosphate-free") and the environmental benefits that using it brings ("recyclable", lower CO2 emissions).
Some campaigns are ambiguous, however, when they ostensibly set out to raise public awareness while having as their main object the promotion of a product or brand. This is not green marketing as such, because the product or brand does not present any appropriate environmental or social characteristics, but commercial objectives are explicitly associated with ethical arguments.
The main tools for green marketing are advertising, packaging and in-store communication.
The use of responsible labelling or certification methods is common in green marketing. Whether based on international systems (ISO), sectoral standards (Forest Stewardship Council) or internal programmes created by companies themselves, they can greatly enhance corporate credibility if they are overseen by independent bodies. Nonetheless, a distinction needs to be drawn between official ecolabels developed and assigned by independent bodies or institutions and companies' own ecolabelling. The right to use the former is granted on the basis of transparent assessment scales developed for different sectors and product groups. Conversely, in-house labels are developed by companies using criteria decided upon by them alone and apply only to their own activities. On the whole, ecolabels awarded by an outside body are more reliable for consumers than companies' own ecolabels. However, they can sometimes create confusion in consumers' minds as a result of proliferation (too many labels kill the label).
Over the last twenty years, many countries, especially in Europe, have developed national certification systems and labelling on the basis of sectoral standards. The European Union launched its own label in 1992. For each type of product, standards are developed in cooperation with producers, environmental NGOs and consumer associations. The European Ecolabel certifies that a product is more environmentally friendly than alternatives intended for the same purpose, whilst being equally functional and effective.
The European Union Energy Label: this label has to be displayed on certain types of household electrical appliances to show their energy consumption.

Corporate communication in regards of social, environmental and responsible marketing

Corporate communication includes all communication operations undertaken to enhance the status of a business or organization and not, directly, its products or services. Within the context of CSR, the aim is to construct and convey the image of a responsible and/or civic-minded enterprise. The communication measures that may be taken for this purpose are very varied and largely depend on the audience being addressed (public opinion, consumers, wage-earners, shareholders, legislators, etc.).
Two types of approach can be distinguished: a "cause branding" approach: one-off marketing/communication operation associated with a "good cause"; a CSR communication approach: long-term communication strategy focusing on the social and environmental practices of the company or on dialogue with stakeholders.
Sectors with a major environmental impact sometimes choose to invest heavily in corporate communication to bolster their respectability and increase consumer trust. Examples include the petrochemical industry (BP's "Beyond Petroleum", Total's "Our energy is your energy").

Social marketing encompasses all communication operations undertaken to encourage consumers to behave responsibly or sustainably. Companies adopt an educative or even didactic approach, displaying their own commitment as they appeal to consumers' civic conscience. Thus, social marketing can also be envisaged as a form of corporate communication. Depending on whose viewpoint is consulted, this educative approach either supplements or aims to replace awareness-raising measures by the public authorities.
It is the inherently uncommercial character of social marketing that sets it apart. Communication measures of this kind aim to promote not a product but responsible behaviour and practices. They sometimes set out to help consumers understand products and grasp the environmental or social consequences of consuming them.

In social marketing, communication activities may also be designed to gain consumer support for a corporate policy: "These campaigns often seek to encourage consumers to behave responsibly and are usually the work of companies which, having incorporated social responsibility into the products or services they supply, require a matching commitment from their customers for their actions to be really effective" (Utopies).
Social marketing campaigns are akin to information and awareness campaigns. They play a crucial role in the way companies manage and develop their image or reputation in terms of legitimacy and respectability.
They are undertaken especially in the sectors that are most closely involved with the major issues, namely health (tobacco, alcohol, and also food, now that the subjects of "healthy eating" and obesity have come to prominence), the environment, where messages centre on the depletion of natural resources and global warming (water, energy, cars), or over consumption and its incompatibility with Sustainable Development (major retailers). The proliferation of campaigns of this type in the sectors most heavily involved with these issues has given them a higher profile in civil society. They are sometimes targeted by protest campaigns (employing subvertising, for example) whose purpose is to expose cases of greenwashing or to undermine the credibility of CSR initiatives by companies whose main activities are deemed to run counter to sustainability.
Most of such campaigns are used by companies to alert public opinion to issues of general interest that they consider important in their markets. There are many examples of campaigns that have been well received by the public and civil society while also achieving concrete results.
Social marketing campaigns can also set out to shift perceptions and behaviour in areas unconnected to the company's activity.
Some information or awareness campaigns are ambiguous in their strategic objectives. Such ambiguity results from inconsistency between the nature of the message conveyed and the overall (commercial) development policy followed by the company. On occasion, awareness campaigns are violently attacked when their sincerity is called into question.
Such campaigns are often a response to a crisis situation in which the company has become directly embroiled because of its activities or indeed its communication strategy. Perceived as manipulation or "camouflage" operations, they are subjected to veritable campaigns of criticism.
Use of the mass media (television, radio, print publications) is very common in social marketing operations, as are poster campaigns.
More novel communication tools have also been developed to reflect corporate objectives and target audiences: interactive and educational methods are often mobilized.
Internet use has also become very widespread, with campaigns being carried either on the company web site or on a dedicated site (Dove, Danone, Leclerc, Carrefour, Kia Motors, Patagonia, etc.).
Communication campaigns of this type are often conducted in partnership with outside organizations which lend their support and credibility to campaign messages. For example, the 2004 campaign by Danone in France on healthy eating for children was run in partnership with the Ministry of Health, and the Leclerc campaign on the environmental impact of plastic bags was supported by the French Agency for Environment and Energy Management (ADEME) (France 2003).

The term "responsible marketing" refers to all operations undertaken to develop and promote corporate responsibility in the area of communication. The aim is to "prevent marketing excesses" (Utopies) by putting specific management systems or codes of conduct in place. Another objective is to give substance to this commitment by publishing information on companies' communication/marketing policies and on their social and environmental activities. Many companies have equipped themselves with specific marketing principles, but policies are not followed up systematically and results are rarely published.
The subject of communication management covers all policies and procedures put in place by a company in order to conduct its marketing, communication and advertising activities in a responsible fashion. Responsible communication management operates at several levels: the formulation of a specific policy or

adherence to existing standards (International Chamber of Commerce, ISO), application of this policy within the company (internal communication, training), follow-up and publication of the results. Communication management has become an important issue, especially for health-related sectors.
Responsible marketing relies chiefly on the development of specific codes of conduct and the procedures for implementing them. The main tools are internal communication or training and their purpose is to ensure that these codes of conduct are applied within the company.
Responsible marketing also refers to initiatives taken by businesses to display their commitment to responsible communication and transparency. Thus, all reporting activities (annual report, sustainability report, institutional sites) can be seen as forming part of this, including the "reporting of communication". Overall, the most exposed sectors invest heavily in the reporting of communication to give credibility and legitimacy to the information they release[45].

Leading up to the Kyoto Conference, the issue of Climate Change was hotly debated among business. But it is interesting to observe in which manner. In particular, the Global Climate Coalition (GCC), a powerful coalition of corporations and private sector associations, actively engaged in marketing activities to undermine the proposed Kyoto Agreement within the United States. In general, such campaigns attempted to influence public attitudes by using fear and discrediting the ability of scientists to speak in favor of the Kyoto agreement by calling for scientific "certainty" before regulatory action. During this debate, the Global Climate Information Project (GCIP) launched a $13 million national advertising campaign in 1997 and again in 1998. The objective of the marketing campaign was to reduce public support for Kyoto and to further private sector interests. The ads made a variety of anti-Kyoto claims such as "It's not global and it won't work." The campaign also used fear-based tactics to reduce public support by suggesting that "Americans will pay the price... 50 cents more for every gallon of gasoline." An underlying theme of GCIP's approach was to convey the idea that until scientific "certainty" about Climate Change was reached, there should be no international regulatory action. Overall, the GCIP credits its marketing campaign with "energizing and shaping the public debate regarding Climate Change leading up to the Kyoto Conference."

Similarly and conversely, a shift to sustainable corporate and consumer behaviour can be seen as a high-involvement choice, one that will also require sustained marketing effort over the long run. Although different in goal and level of complexity, social and environmental marketing share the same fundamentals as the marketing of consumer packaged goods: identify clear marketing objectives, possibly using a pilot project as a test case; identify key target audiences and gather pertinent information (e.g., current attitudes, expectations, behaviour); develop marketing strategies to communicate and influence target audience; identify/create impactful communication vehicles; execute plan; measure marketing impact (How many people were effectively reached? How have attitudes, expectations or behaviour changed?).

Environmental marketers recognize that people (consumers, corporate actors, and policy makers) do not simply enact behaviour based on accessible information. Attitudes, feelings, and beliefs about behavioural control all influence consumer and corporate action. Consequently, educational efforts cannot, by themselves, be expected to make behaviour sustainable because they only impact awareness. Education will not necessarily change attitudes, feelings, or behavioural control. Instead, marketing efforts that identify and capitalize on behavioural levers stand the best chance of success (Andreasen 1995).

There is a common misconception that marketing is the tool of the snake-oil salesman, that it is used to make weak messages credible. Or that it smacks of crash commercialism. In some cases, this is undoubtedly true. But the persuasive ability of marketing as a technology does not necessarily limit itself

45 Toolkit on sustainability communications. UNEP 2006

to these applications. If marketing can turn "lead into gold," then it has the potential to make strong science-based messages even more appealing[46].

Profiles of leading brands are shifting

Evidence from the Young Brand Assests Valuation shows that the anatomy of today's leading brands is changing. While reliability, trustworthiness, leadership, distinctiveness, authenticity, originality and charm are still important, performance, innovation and "sociability" are increasingly significant[47].

Figure 30

↓ Declining	The same	Growing ↑
Best brand	Reliable	High Performance
Straightforward	Trustworthy	Down to earth
Kind	Leader	Cares about customers
Worth more	Distinctive	Socially responsible
High quality	Authentic	Friendly
Up to date	Original	Social
Good value	Charming	Innovative

For those companies placed to play an active role in developing products and services that will form the building blocks of a low-carbon economy, the opportunities are potentially great. The Climate Group's report, *In the Black: the Growth of the Low Carbon Economy*, showcases the rapid growth already experienced. Data gathered from four countries (Germany, Japan, United Kingdom and United States) and four key areas (low-carbon power, energy-smart products, low-carbon vehicle technologies and low-carbon financing/carbon markets) provide a growing body of evidence of the increase in revenue, profits and jobs being generated by companies taking the lead in providing Climate Change solutions. This generates exciting interest from investors and financial institutions that recognize the companies' growing need for capital and opportunities for value creation. For example, the market capitalization of the 85 largest renewable energy companies reached $50 billion in 2005, double that of 2004. In 2006, investments in renewable power reached $71 billion, up almost 50 per cent from the previous year. With the worldwide market for wind, solar, geothermal and fuel cell energy estimated at $200 billion in 2020, it is no surprise that dynamic companies are looking to establish themselves in this field.

Finally, increasing public awareness about Climate Change also creates a significant and growing opportunity for consumer companies, supporting a potentially much larger market than for organics or fairtrade products when they first took off.
Over the next 20 years, companies taking a lead on Climate Change will not only make a direct contribution to emissions reduction, but will have the credibility and standing to invite staff, customers and suppliers to follow them, based on what they do, what they have pioneered, or the products and services they offer[48].

46 Sustainability for the Planet: A Marketing Perspective; Gail Whiteman
47 Let them eat cake. Satisfying the new consumer appetite for responsible brands Anthony Kleanthous & Jules Peck
48 Business And Climate Change; Rising Public Awareness Creates Significant Opportunity; By Steve Howard and Sophy Bristow

IV. Media and advertising addressing Climate Change

The role of the media in framing Climate Change and changing behaviours

Media dependency theory was born of this notion that we come to "know" people, issues and realities that we have not directly experienced or about which we are unable to directly communicate with those around us. "Because of their social differentiation, people in urban-industrial societies have fewer effective word-of-mouth channels based on deeply-established networks of social ties…Therefore, people in urban-industrial societies become dependent on mass communications for information needed to make many kinds of decisions" (DeFleur & Dennis, 1998). So, what does the media tell us, and what do we learn about the environment? Content analyses of environmental news coverage (Murch, 1971; Funkhouser, 1973; Greenberg, 1989; Stocking & Leonard, 1990; Daley & OnNeill, 1991; Hester & Gonzenbach, 1995) have shown an increase in environmental news reporting over the last thirty or so years and brought about critiques of how news, in its attempt to gain audience share and sell advertising, has sensationalized environmental stories and misrepresented environmental risks (Hester & Gozenbach, 1995). In content analysis of prime-time non-news programming (Shanahan & McComas, 1997) environmental issues are shown to have a low profile. "[T]his analysis highlights that nature themes are not considered important in television programs which explore the human-centered themes which dominate [television] programming" (Shanahan & McComas, 1997). And, unlike environmental news stories, nature as a theme in prime time programming has declined over the years and even when attention is paid, it is sporadic. When the environment is present in prime-time programming, it is associated with "issues" (politics, religion). As Shanahan and McComas point out, "The fact that television programs apparently make a very distinct separation between issues and lifestyles is of great significance for the environment, especially if viewers make a similar separation in their own minds" (Shanahan & McComas, 1997).

Of course, what is going on in the minds of mass media consumers is the other piece of the equation. Early media exposure and environmental attitude research (Ostman & Parker, 1987; Novic & Sandman, 1974) showed a negative relationship between mass media exposure and "environmentalism". Shanahan et al. (1997) explored this phenomenon from the perspective of cultivation ("Cultivation is concerned with the long-term, cumulative contribution of consistent and largely inescapable [mass mediated, usually television] message patterns" Shanahan, 1997) and found that the relationship between media exposure and environmental attitudes is complex. While there was certainly evidence to support the notion that heavy viewers of television are less knowledgeable about environmental issues, there was also evidence that heavy viewers were distrustful of science and technology, which the researchers had hypothesized would be an indicator of environmentalism.

Shanahan concluded that "environmental attitudes are not only personal constructs, but are influenced by very important social institutional forces. …environmentalism is a complex phenomenon, and media institutions do not exert complete control over these issues in unidimensional ways" (Shanahan et al., 1997).

Another mass media perspective, that of agenda setting (the theory, first developed by McCombs and Shaw in 1972, that the media do not tell us what to think but rather what to think about) can provide an additional perspective on how people process mediated environmental messages. Environmental issues were initially used in agenda setting research because it was felt that they were "unobtrusive" issues, issues with which people would not have direct experience. And in 1985, Atwater, like others, found that there was a relationship between the media's environmental agenda and the public's environmental priorities.

Interestingly, in direct contrast to environmental agenda-setting research that either theorized that the environment is an unobtrusive issue (Atwater et al., 1985), or actually tested that the environment was

unobtrusive (Ader, 1995; Hester, 1995), later environmental agenda setting research (Gooch, 1996) pointed out that environmental issues could in fact be quite obtrusive[49].

The communication of Climate Change through the media

The mass media have played a major role in shaping perceptions and awareness of environmental issues since the 1960s. Together with government officials, environmental activists, scientists, and industrialists, journalists and broadcasters have set the agenda for environmental discourse and decision-making for more than thirty years. Before that time, business and industry dominated discussions concerning the effects of economic development on the natural environment. But the publication of Rachel Carson's *Silent Spring* in 1962 changed the frame of environmental discourse among scientists, activists, and government officials, and the rise of television as a national and international medium greatly increased the visibility of environmental issues.
The term 'global warming' entered the lexicon of the mass media in the 1970s[50].

It is not clear whether we should think of Climate Change as an obtrusive or unobtrusive issue. The climate is certainly obtrusive and we "interact" with it (temperature, rainfall, etc.) but is Climate Change obtrusive? Probably not. We have to be told what Climate Change is, how it manifests itself, and so on.
"When it comes to Climate Change, the facts completely escape common experience for it is only by communication that the issue is given meaning (as opposed to a daily occurrence such as a road accident, which ordinary experience has several ways of interpreting)" (Mormont & Dasnoy, 1995). And, if the facts completely escape common experience, it is from the media that we garner those facts.
Given that Climate Change is a relatively recent phenomenon (gaining "prominence" in the late 1980s), a fair bit of research has been done on the subject of how the media communicate the issue (McComas & Shanahan, 1999; Shanahan & Trumbo, 1998; Mormont & Dasnoy, 1995; Trumbo, 1995; Wilson, 1995; Bell, 1994; Wilkins, 1993; Clark et al., in press). And one of the themes that comes through in this research, loud and clear, is that the media messages about Climate Change are confusing.
Several of the researchers point to the fact that even what to call this phenomenon is confusing and somewhat "loaded."
What serves as a catalyst for Climate Change stories also has the potential to add to this Climate Change confusion. Wilkins (1993) found that just over 50 percent of Climate Change stories are related to a specific political event: international meeting, passage of an act, allocation of funds, etc. But what happens when there are no "events" to cover; does Climate Change "disappear"? And while Climate Change has in fact not disappeared but been a remarkably "steady" news story over the years, coverage has shown definite waxing and waning. McComas and Shanahan looked at the coverage of Climate Change in the Washington Post and New York Times from 1980 to 1995 and applied the concept of narratives to the coverage. "We argue that news media actively construct narratives about environmental issues like global warming and that these constructions are driven primarily by narrative considerations" (McComas & Shanahan, 1999). The implication is that narrative considerations are what drive the story such that there are three stages, waxing, maintenance and waning, and each stage "dictates" the aspects of Climate Change that are highlighted: consequences of Climate Change in the waxing stage and controversies among the scientists about the causes and impacts of Climate Change during the maintenance and waning stages. The conclusion is that the media storytelling structure has been constructed to sell stories and the story of Climate Change has simply been fit into that structure. Researchers (Wilkins, 1993; Shanahan & Good, in press) have also found that there's a relationship between hot days (whether in an absolute or relative context) and increased Climate Change coverage. Wilkins's research showed that more than half of Climate Change stories appeared between April and

49 The Case Study of Climate Change: The Nature of Risk and the Risk of Nature

50 The Role of Mass Media in Shaping Perceptions and Awareness of Environmental Issues, David Sachsman

August. Shanahan and Good's research demonstrated that on "unusual" days (when the temperature was greater than 15 degrees above normal) there were significantly more words written in the New York Times than on more "usual" days.

These findings raise questions of whether an association is being made by journalists between daily local weather and long-term global climate (and whether such an association would then be passed along to readers) and what happens to coverage in periods of cooler weather, or in parts of the world less temperately affected by Climate Change?

Wilkins takes this analysis of the coverage of Climate Change a step further by going beyond what is contained in Climate Change articles and looking at what is not there. Wilkins draws attention to the fact that science, while presented to us as being somehow objective, is in fact "far from being value-neutral [and] is the expression of particular sets of values." (Wilkins, 1993) And the same can be said of "objective news."

For example, Wilkins points out that Climate Change stories often have "firsts" (discovery, progress) as their news pegs. "Progress, in these stories was often linked to a technological fix, and to a technocratic elite that would first develop and then control the solutions." (Wilkins, 1993) The symptoms, therefore, rather than the causes, were explored. So, according to the research, what we learn about Climate Change from the media complicates and confuses what is an already complex story. But the studies also show that all media are not created equal. For instance, Clark, et al. (in press) found that those who obtain their information about Climate Change from newspapers, magazines, public radio and books have a higher level of awareness about Climate Change than do those who receive their information via other media (television had no impact on level of awareness). And while the authors do not make claims about direction of causality, they offer that "the media do appear to be making some difference in public understandings of, and engagement with, global warming." (Clark et al., in press).

Wilson (1995) found that students who felt that their primary source of information about Climate Change was the classroom had the highest level of correct Climate Change knowledge while those who felt that television was their primary source had significantly fewer correct answers and more "don't know" answers. "[T]he media," Wilson concludes, "especially television, are an integral source of knowledge [albeit incorrect] about global warming" (Wilson, 1995). And yet when asked if they felt informed enough to participate as "informed citizens" in discussions about Climate Change, only 57 percent of the students in Wilson's study said yes (Wilson, 1995).

As has been explored above, the media have not done a particularly good job at conveying the issue of Climate Change. Certainly some of this reality has to do with the way in which the media have evolved to tell stories and the collision of the long timeline and complex uncertain science of Climate Change with the fastmoving simplistic mass media. However, some of it may also have to do with the fact that those crafting the stories do not have easy access to recent, straightforward, Climate Change information from reputable broadbased science organizations like the IPCC.

The vast majority of creators of media messages are not scientists and, therefore, they need Climate Change information in the same way that members of the public do. They need a forum where they can easily ask questions and get background information apart from the formal interviews that they conduct. Addressing facts and figures but also concepts like the "balance phenomenon" in the coverage of Climate Change (to explicitly talk about the problem of creating balance by having an equal number of Climate Change "proponents" and "naysayers") would be key.

The best way to convey this information is via the Internet. The Internet is easy and fast to access, lends itself to regular updates, can include email and on-line chat for feedback and questions. Some of the evaluation could be done by the media people and scientists via the activity and feedback on the Internet. It would also be possible to track accuracy in reporting by tracking who is using the site (with their consent) and subsequent media products.

Evolution of media attention to Climate Change

Nowadays, the science and consequences of global warming is a topic of frequent discussion in the media. But it has to be noticed that the coverage is not permanently sustained. We can first try to explain this phenomenon through the hypothesis offered by Downs: that issues are naturally covered cyclically, especially environmental issues. Thus, issues first attract "alarmed" attention because they're new; as people get used to them, and also realize that there may be costs to solving the issue, attention fades. But there is much that is controversial about Downs' hypothesis. As McComas and Shanahan (1999) noted Downs' model is a "natural history" approach. They argue that rather than moving linearly from one stage to the next, social problems can exist "simultaneously" in many stages of development. The authors contend that Downs ignores the interactions between coexisting problems that help to define problems as meaningful and argue that a problem's life cycle relates less to public attention than to the problem's construction in public forums, such as in the media (Hilgartner and Bosk, 1988). Rather than a "natural" decline in attention, institutional factors, such as "carrying capacities," competition for space, and need for sustained drama, influence attention decline. Furthermore, media do tend to construct problems linearly: one of the jobs of narrative is to frame issues as having beginnings, middles, and ends in a generally one-directional temporal fashion.

Other explanations looked at the "reinforcing" effect of media coverage. Trumbo (1994) dealt with "intermedia" agenda-setting relationships in news media coverage of global Climate Change from 1985 to 1992. He found that among the various media, the decision to cover global Climate Change occurred almost simultaneously. Clearly, a kind of critical mass can develop among media institutions for major issues; once that mass is surpassed, the issue will get attention across the media spectrum. Trumbo's study shows that intermedia cooperation is necessary to frame a story as having narrative importance. But as Gandy (1982) points out, the media will always rely on information providers (sometimes scientists) to provide grist for their mill.

Ungar (1992) argued that "real-world events" attracted social attention. He also argues that the cycle dies because one can't maintain the level of dramatic crisis over the environmental issue. Ungar also argued (1995) that global warming would not regain attention and concern without new "novelty and drama".

Trumbo (1996) offers another recent perspective on cycles of news media attention to Climate Change relative to Downs' hypothesis. He argues that media attention to global warming can be seen in terms of the claims of sources quoted in the coverage. His content analysis showed that scientists were quoted as sources most often about the causes and problems of global warming; in comparison, politicians and special interest groups were quoted most often about judgements or remedies. He also observed a change in story emphasis: the percentage of scientists quoted in the media decreased while that of politicians and interest groups increased across the decade sampled.

All these studies, and others, despite their disagreements, seemed to be in accord on one point: that the coverage did behave according to cyclical patterns identified by Downs (1972), where after a spate of alarmed coverage the issue would recede more or less into obscurity, as society had marshalled its resources to deal with the problem. Yet recent years have seen the resurgence of a new cycle. It brings much more frequent coverage than even the peak years of the first cycle, raising the question: what motivated journalistic attention the second time around? One can assume that the Stern report, the publication of the results of the third IPCC report, and the role of political actors (Al Gore, Nicolas Hulot), and celebrities (Leonardo Di Caprio) have here been key factors together with the increase of natural catastrophes (Tsunami in Indonesia, Hurricane in New Orleans, etc.)[51]

Opportunities for a proactive advertising sector

51 Cycles upon Cycles: The Evolution of Media Attention to Global Climate Change; James Shanahan

" Brand image is heavily influenced by your social image - one of the most important challenges business is facing. Brands will be important in setting social and political issues as traditional government fails. Any good advertising agency giving advise to a company has to include ecological issues because customers are demanding more active stands on social and environmental issues. "

Pierre Huppert, Advertising Consultant, Netherlands -

The advertising profession has unique communication talents and in-depth knowledge of consumer behaviour. Such talent and knowledge has been missing from Sustainable Development efforts to date (with a few exceptions, such as the Netherlands where extensive research on the role of persuasive communication in shaping attitudes and behaviour towards environmental issues has been put into use). This provides a window of opportunity for the advertising sector to quickly become a major player in Sustainable Development. Opportunities for advertising agencies to stimulate the development of sustainable products and services are increasing. Advertising is about building bridges between consumer needs or wants and a company's products or services. Advertising agencies able to advise clients about how to integrate sustainability into the company's public image and 'brand equity' will become increasingly valuable to corporate clients.

Environmental initiatives by the advertising sector and other stakeholders already exist. Some may benefit simply from getting wider recognition, being updated or consolidated (industry guidelines or codes of conduct). Others may reveal important lessons and past experiences that would be useful for a broader mobilisation of the advertising community. A wide range of ongoing initiatives include: self-regulatory advertising initiatives and codes of conduct. They can demonstrate industry intentions and promote environmental awareness, although many stakeholders frequently see actual implementation as weak; consumer watchdog activities. Although frequently under-resourced, they are widely seen as useful in helping to identify any advertising practices that mislead consumers and hurt the public image and credibility of the industry as a whole: government-sponsored television advertisements; internet forums; awards in best practice environmental management, marketing and advertising; independent ecolabelling schemes[52].

52 Unep international expert meeting; Advertising and sustainable consumption; Paris, 21-22 January 1999

Examples of greenwashing in advertising

Source: report on advertising and the environment; BVP-Alliance pour la Planete; 2007.

For further examples of bad practices and greenwasing in green advertising, see the report in Annexes II – Part 2 on the CD-ROM

For examples of good practices, see UNEP Creative Gallery on Sustainability Communications

General conclusions

This systemically-built research on consumer-citizens sustainable behaviours toward Climate Change and on sustainability communications strategies to address the issue, in regards to our main hypotheses, allow us to draw the following main conclusions.

The principal day-to-day influence people have on the environment relates to the buying, using and disposing of products, and to their consumption of services. Studies of families who have tried to adopt 'green' lifestyles show that in practice it is relatively easy to reduce energy consumption and the amount of waste produced, slightly harder to effect big reductions in water consumption, and very difficult to cut down on car use and to alter shopping habits. Consumers in general are only paying lip service to CSR issues and are more concerned about things like price, quality, convenience and status. Consumers just do not have the time to evaluate all the information available to them and are put off by the complexity and disputed nature of many sustainability issues. It is not lack of information that prevents consumers acting but habits and cultural norms; role models and word-of-mouth communication has not been fully utilised yet to overcome consumer inertia and scepticism. Public debate about sustainability issues remains dominated by one-sided arguments, scare-mongering, spin and incomprehensible jargon from all sides: consumers do not know whom to trust.

Coming to behaviour change, the frequency and recency of past behaviours moderates intentions. We know that affective factors mediate rational choice. We know that normative factors moderate desire. The quantitative and qualitative empirical support for such links is relatively well established.

On the other hand, of course, deciding on the exact balance of affective, moral, habitual and social motivations and situational conditions in any given situation is no easy task.

The long pedigree of persuasion theory has some salutary lessons for conventional public sector information campaigns. But it also provides useful pointers to the design of effective social marketing and behaviour change programmes. One can particularly mention the opportunities for community-based social marketing, social learning, participatory problem-solving and the discursive unfreezing of embedded, routine behaviours, which are all key opportunities for those thinking about behavioural change.

The dangers of alarmism include the implicit counsel of despair. The 'small actions' repertoire is one of the dominant model in campaign communications.

Alarmism and personal or corporate small actions. are direct contrapositions or, maybe, two sides of the same coin.

Where behaviour is not routine, values enter. Finaly, denial over the necessity to adjust behaviour and lifestyle patterns is also a function of discourse as it is of more fundamental personal, social and psychological influences that are not readily shifted around by language or by exhortation unless the process of awareness raising is prolonged and set in constructive engagement with a wider array of socially sanctioned moral norms. The key battlegrounds here are between the public's citizen and consumer personas.

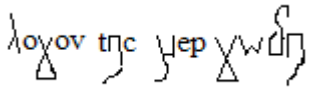
Sustainable Development has often been seen as having a fourth pillar, frequently designated by the term "governance".

Governments are urged to 'deliver a clear message through effective communication', 'provide public incentives', and promote 'an understanding of the consequences of inaction'. Largely, the emphasis is on refining the message and improving its public reception; businesses and environmental groups concerned over the slow pace of reform have openly sought to support and supplement such activity.

Communications campaigns should always have one or more of the following three objectives: raise awareness: improve people's knowledge of an issue or creating new knowledge. If what we are really

seeking is public engagement for Sustainable Development, then attitude or behaviour change are often more appropriate targets. While attitude change can be a precursor to behaviour change, it does not guarantee it. Attitude change does, however, have an important role to play in preparing for new policy initiatives. It can help to ensure compliance with new legislation, such as the compulsory wearing of seatbelts. Change behaviour is where efforts should be concentrated if we are to reach our Sustainable Development goals. However, it is a long-term approach, sometimes taking an entire generation to come into effect[53].

Finally I would like to conclude in raising two limits of this research. The first one is that our attempt to include cultural diversity of consumer profiles has been undermine by the fact that very poor information and studies already exist on the topic. But it has to be recognize that though our approach was to some extent "West"-centered, developing countries are now increasingly adopting our consumption and production modes, especially for example China, and thus this (non-) choice might be justifiable.
Secondly, one of the main limit is that the economic argumentary still much prevails on the ecological one (which often appear as complementary) in consumers purchasing. If consumers attitudes notably toward climate recently deeply evaluated, this is still not the case for behaviours. But here lays the interest of sustainability communications, with all its new evolutions, in order to address one of the biggest challenges Humanity has ever faced.



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UNEP; "*What are the Challenges for Education and Training Around The World?"*

Ungar Shelly, *"Why Climate Change is not in the air: popular culture and the whirlwind effect"*; available online.

Whiteman Gail , "*Sustainability for the Planet: A Marketing Perspective*"; available online

Working Group III contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report Climate Change 2007: "*Mitigation of Climate Change*". Summary for Policymakers

An indicative bibliography is also available in Annexes II on the CD-ROM

Summary

Sustainability, Climate Change adaptation and mitigation are expressions of the issues that production and consumption patterns will have to address to build a society where individuals and the environment are respected. Numerous public and private actors have already committed themselves to this path. For them, the issues of sustainability are also issues of communication. From corporate communication to public awareness campaigns, from (notably "community-based") marketing to advertising, the messages of sustainability are embodied in practices that are increasingly well-established.
Integrating Sustainable Development and low carbon principles into producer and consumer behaviour entails an acceptance that businesses and consumers (in their capacity as economic agents) have a responsibility for, and an active role to play in, the realization of the common good. What was once the exclusive preserve of the private domain is now seen as closely tied to social, political and environmental considerations. But reintegrating the economy into the social and environmental world is also a task for consumers, who express their civic commitment in their purchasing and consumption decisions. The issue here is not necessary to consume less (though it could also be) but to consume better; and to adopt more sustainable and carbon neural lifestyles through behaviour changes. Thus any analysis of the evolution, strategies and good/bad practices in the field of sustainability communications and social environmental marketing would not be fully completed without prior to it an analysis of what motivates consumer-citizens changes in knowledge, attitudes and behaviours.

Développement durable et changement climatique sont aujourd'hui deux thématiques cruciales que l'on ne peut plus négliger si l'on souhaite construire une société ou les individus et l'environnement sont respectés ; et qui impliquent de nécessaires changements dans nos modes de production et de consommation. De nombreux acteurs publics et privés sont déjà sur la voie et pour eux ces questions sont aussi des questions de communication. De la communication « coporate » aux campagnes publiques de sensibilisation, du marketing à la publicité, les messages sur le développement durable sont le fait de pratiques en perpétuelles évolutions.
Internaliser les principes de développement durable et de neutralité carbone dans les comportements des consommateurs citoyens impliquent une claire responsabilité à la fois des entreprises et des consommateurs qui ont un rôle actif à jouer dans la réalisation du bien commun. Réintégrer la sphère économique aux sphères sociale et environnementale est également un défit pour les consommateurs qui expriment leur responsabilité civique dans leurs actes de consommation et d'achats. La question n'est pas nécessairement de consommer moins, mais de consommer mieux, et d'adopter des modes de vie plus durables en changeant nos comportements. Ainsi, nulle analyse des évolutions, stratégies et (plus ou moins bonnes) pratiques dans le secteur des communications sur le développement durable et du marketing social et environnemental ne saurait être tout à fait complète sans une analyse préliminaire de ce qui motive les changements chez les consommateurs en terme de connaissance, d'attitudes et de comportements.

Annexes

- Annex – The role of UNEP, DTIE and SCP. Priorities and strategies
- Annex – Internship report
- Annex – Part 1
- Annex – Part 2

For the following annexes please contact Dr Stéphane Labranche or myself.

Annexes II – CD- ROM
- DG reports on efficient light bulbs and sustainable fashion
- UNEP communication and marketing projects
- Speech by A. Steiner, ED, “a sustain systemic change”.
- Framing and UNEP politics
- More on Part 1
- More on Part 2
- Indicative bibliography

- UNEP Toolkit on sustainability communication, 2007

Annex – The role of UNEP, DTIE and SCP. Priorities and strategies

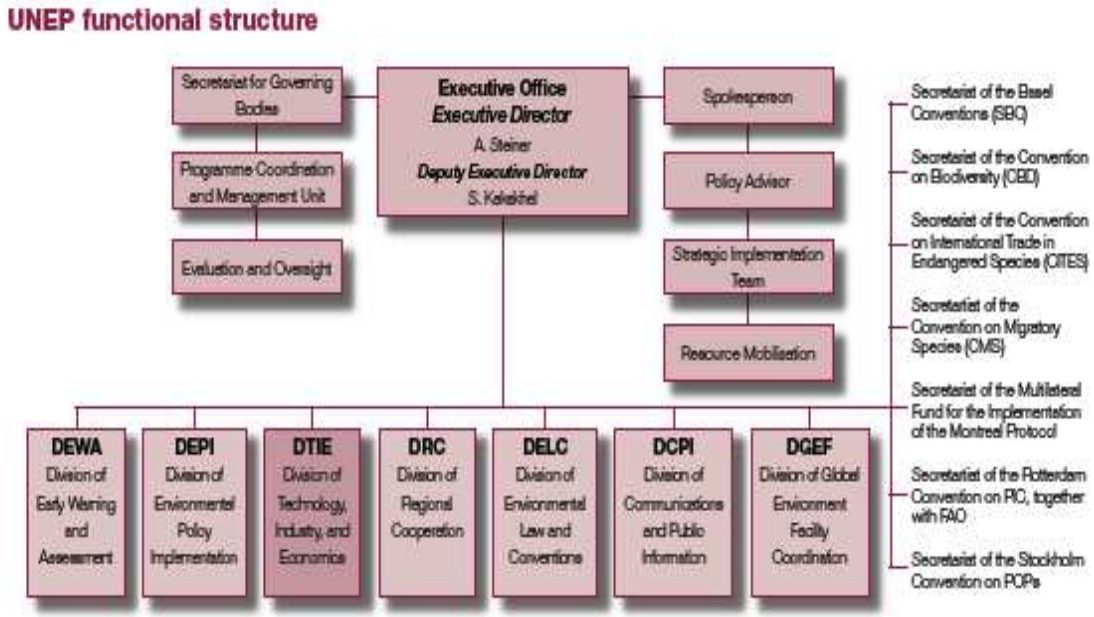
UNEP's priorities should revolve around exercising leadership on the following issues:

- Climate change response – mitigation, adaptation and inter-linkages.
- Ecosystem management/systems/restoration – terrestrial (land and freshwater) and marine.
- Environmentally hazardous substances – including pollution issues.
- Resource efficiency – including sustainable production and consumption.
- Natural disasters and post conflict response.

The collective view is that these priorities need to be addressed in the context of:

- Being responsive to regional and country needs.
- Strengthening the capacity of Governments of developing countries as well as countries with economies in transition.
- Mainstreaming environment into development and trade.
- Providing leadership in scientific assessment and monitoring the state of the Global environment.
- Enhancing cooperation and coordination of environmental issues within the UN system.
- Working in partnership across the UN system, with the private sector and civil society.
- Ensuring effective outreach and communications[54].

Figure 5.



Towards UNEO?

[54] Message to All UNEP Staff from the Executive Director; SENIOR MANAGEMENT TEAM RETREAT: 9-10 July 2007, Nairobi

A 'Group of Friends of the United Nations Environment Organisation (UNEO)' has been formed to support the upgrade of UNEP into a UNEO in the context of reform at the United Nations. Two meetings of the group had taken place already: one, in Paris in February 2007, and the second, in Marrakech in April 2007. A third meeting is planned in Costa Rica for September 2007. At present, the group is composed of 53 governments – 26 of which are from the South. It is hoped that civil society can become a more active player in the group as the process moves ahead, possibly beginning with a more active role at the upcoming meeting in Costa Rica. It was reported that there may be a formal process established within the General Assembly (GA) to take the process forward. The report of the recent General Assembly informal consultations on the environment, led by the Ambassadors of Switzerland and Mexico, is soon expected. It is likely that the report will shed some light on ideas regarding strengthening UNEP and the possibility of a UNEO. It was explained that the release of this report will mark the end of this informal GA consultation process. At which point, a new informal open-ended working group on a potential UNEO could be established in the next session of the GA (62nd Session).[55]

UNEP Division of Technology, Industry and Economics (DTIE)

Throughout its history, DTIE has worked with business, industry and others to protect the natural resource base of our planet, underlining the business case for sustainable development. DTIE's mission is to encourage decision makers to integrate environment into their decisions and to promote policies, business models and practices that demonstrate concern for humans and the environment.
DTIE's activities focus on awareness raising, improving the transfer of knowledge and information, fostering technological cooperation and partnerships, and implementing international conventions and agreements.
These activities are carried out by branches working in the areas of corporate responsibility; production and consumption; environmentally sound technologies; chemicals; energy; ozone; economics, trade and finance.
Companies and businesses face several sustainable development challenges that affect their operations at international and regional levels. For those seeking guidance and support on such issues, UNEP DTIE provides access to practice-oriented initiatives and pilot projects that meet current public and market demands. DTIE helps to advance informed leadership by establishing and facilitating dialogue between high-level political leaders and those from business and civil society. The Division has wide experience in pooling resources with leading centres of excellence, business organisations and UN agencies to produce training materials and develop the capacities of both employees and management. It is thus able to make a major contribution to UNEP's ongoing efforts on learning and capacity building. UNEP DTIE is deeply involved in the advancement and introduction of new strategies and technologies to deliver processes and innovation that result in sustainable business operations as well as products and services that enable sustainable lifestyles.
The Division's activities include the creation of multistakeholder platforms where representatives of companies, associations and labour unions join representatives of non-governmental organisations, consumer groups and others in open and frank dialogue. DTIE also works with financial institutions and private sector partners in supporting entrepreneurs to set up new partnerships to advance sustainable development goals at the local level.
Other activities include working alongside public authorities, business, research and other organisations to advance awareness, prevention and preparedness for industrial and natural disasters, both on sites that represent a risk and with local communities.

DTIE's core competences:

[55] UNEO: A Champion for environment in the 21st Century, but what role for stakeholders? a multi-stakeholder conversation co-organized by the United Nations Non-Governmental Liaison Service (NGLS), Stakeholder Forum and ANPED

- Climate change, including energy
- Engaging with multiple stakeholders including the private sector, UN, consumer and research groups in order to influence behavioural change with regard to resource efficiency and safe production (this includes life cycle approach, waste and sanitation issues in a fast urbanising environment)
- Economics – mainstreaming environmental issues into economic decision making in governments and industry, and assessing impacts of trade and globalisation
- Facilitating the creation of markets for environmentally sound technologies – encouraging enabling government policies and developing innovative finance mechanisms
- Addressing the negative impacts of environmentally harmful substances and chemicals management
- Strong regional presence – Industry officers and CAP teams in the regional offices and work in a wide variety of targeted priority countries

DTIE competences today - by issue at a glance[56]

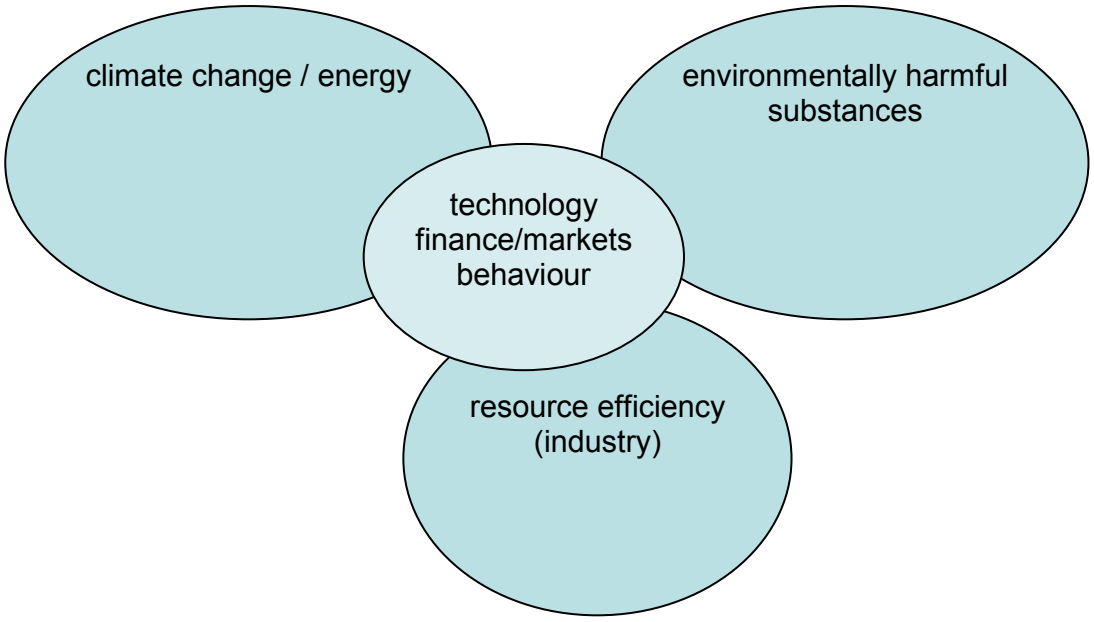


Figure 6: DTIE's structure[57]:

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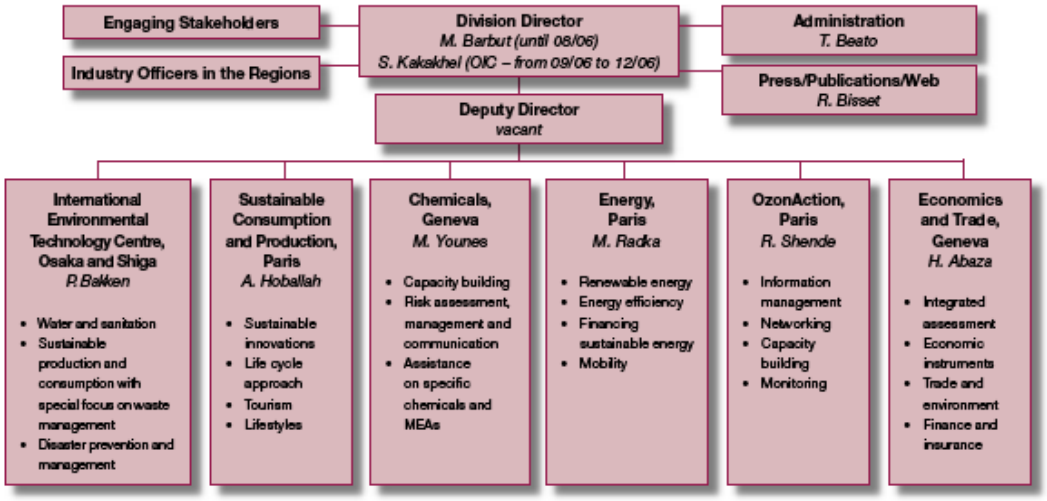
[57] Figure 5 and 6 are extract from UNEP ACTIVITIES REPORT 2006



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International Environmental Technology Centre
Implements integrated waste, water and disaster management programmes, focusing in particular on Asia.

Sustainable Consumption and Production Branch
Promotes sustainable consumption and production patterns to contribute to human development through the market.

Chemicals Branch
Promotes sustainable development by catalysing global actions for the sound management of chemicals worldwide.

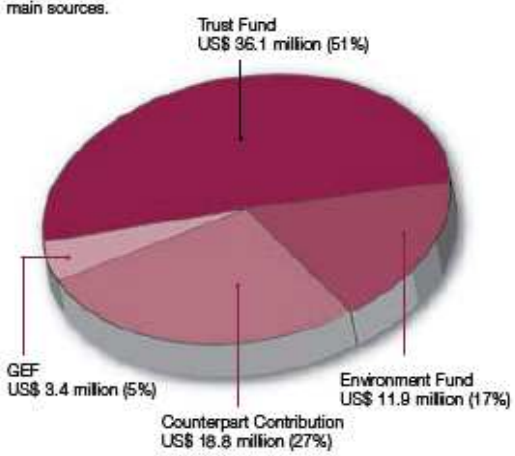
Energy Branch
Promotes energy and transport policies for sustainable development.

OzonAction Branch
Supports the phase out of ozone-depleting substances (ODS) in developing countries and countries with economies in transition to ensure implementation of the Montreal Protocol.

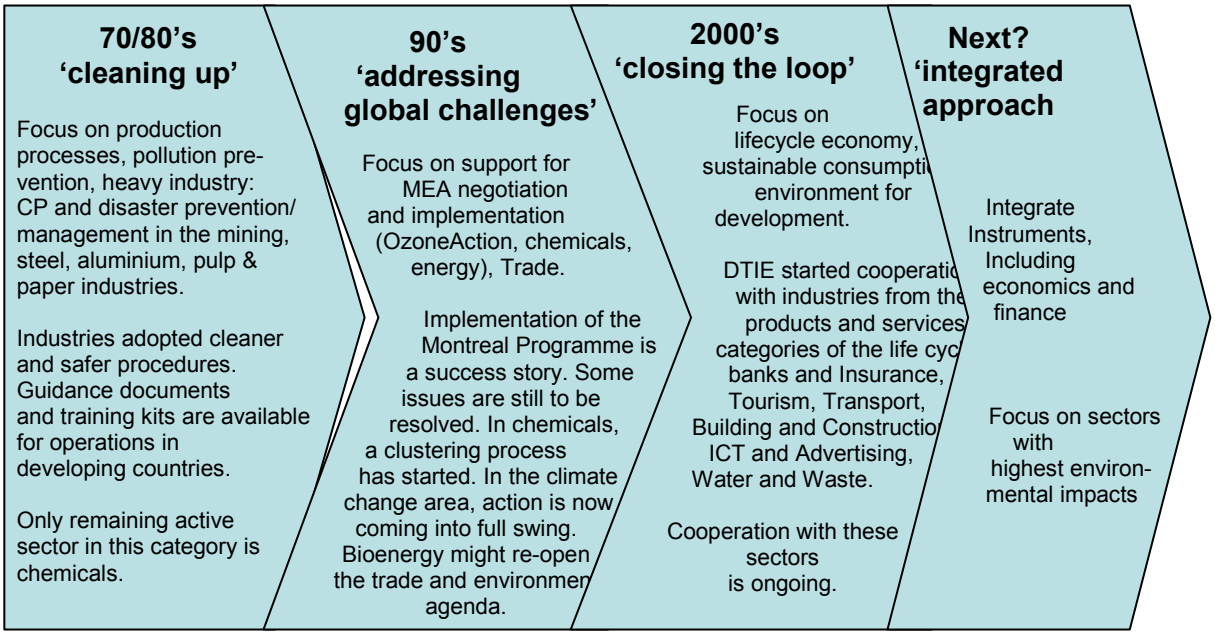
Economics and Trade Branch
Enhances the capacities of countries to integrate environmental considerations into economic and trade policies.

Funding

DTIE's funding, which exceeds US$ 70.3 million, comes from four main sources.



DTIE's progression since its creation



Sustainable Consumption and Production Branch:

'Sustainable consumption is not about consuming less, it is about consuming differently, consuming efficiently, and having an improved quality of life. It also means sharing between the rich and the poor.'

Jacqueline Aloisi de Larderel UNEP Assistant Executive Director

Overall objectives:

- To promote SCP patterns to contribute to human development through the market
- To integrate and mainstream cleaner production: environmental protection, resource efficiency, savings, SMEs;
- To stimulate sustainable consumption: consumer awareness, private sector in new markets, supporting delivery of sustainable products;
- Adapt traditional environment tools to SCP approach: from production processes to products and services, or link CP financing with CSR;
- Strengthen delivery by supporting regional and global networks;
- Support industry sectors and partners to solve common environmental problems;
- Develop more sustainable supply chains, addressing the impacts of the full life cycle of products, and promoting trade in sustainable products.
- Dev tools & approaches to influence behavior of SMEs.
- Work with retailers and consumers;

This is operationalised through 3 UNITS: Integrated Resources Management Unit; Goods and Services; Business and Industry.

World consumption expenditures, private and public, have expanded at an unprecedented pace, doubling in real terms in 25 years to reach $US24 trillion in 1998. This expansion has propelled considerable advances in human development. Unfortunately, however, the negative impacts have been similarly resounding. The problems include unequal distribution of consumption, environmental damage

(deforestation, soil degradation, desertification, water stress and loss of biodiversity) and social impacts that deepen inequalities and social exclusion.

Sustainable consumption and production first secured international prominence at the Rio Earth Summit (UNCED) in 1992. At the 1992 United Nations Conference on the Environment and Development (UNCED) in Rio de Janeiro, the Agenda 21 action plan was adopted. Agenda 21 is a collection of detailed goals and policies aimed at making sustainable development a reality by eliminating poverty and by eradicating the serious threats to our global and local environment. Chapter 4 of this groundbreaking document, 'Changing consumption patterns', highlights the need for reorienting consumption patterns towards sustainability, and presents strategies for achieving the goals.

Chapter 4 of Agenda 21 recognised that 'the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialised countries' and called for action to promote patterns of consumption and production that reduce environmental stress and will meet the basic needs of humanity'. It also encourages the implementation of national policies, including the utilisation of economic instruments, such as taxes and deposit/refund systems that can influence consumer behaviour towards sustainability. Government procurement is outlined as a critical requirement, as was the need for environmental labelling schemes.

In 1995, the United Nations Commission on Sustainable Development officially adopted the working definition of sustainable consumption as: 'The use of services and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle so as not to jeopardise the needs of future generations.'

Other important elements that need to be addressed through sustainable consumption include decoupling economic growth from environmental degradation and the theme of 'common but differentiated responsibility'.

Annex – Internship report

Main responsibilities and achievements:

- Drafting of two reports on efficient light bulbs and ethical fashion to provide UNEP with necessary background information to produce campaigns in these fields.

- Development of the advertising brief and the terms of reference for a campaign on fashion and climate change.

- Research and compilation of Web-based public communication strategies promoting climate change and sustainable lifestyles.

- Participation in the dissemination and follow-up of UNEP CD-ROM on Sustainability Communications. I notably designed a flyer providing an overview of the CD-ROM in English and French for distribution in international conferences. I also developed evaluation tools to assess the impact and actual use of the CD among universities and communication professionals.

- Research on the Web and in the media to gather international examples of public and corporate advertisements for regular update of the UNEP online Creative Gallery on Sustainability Communications.

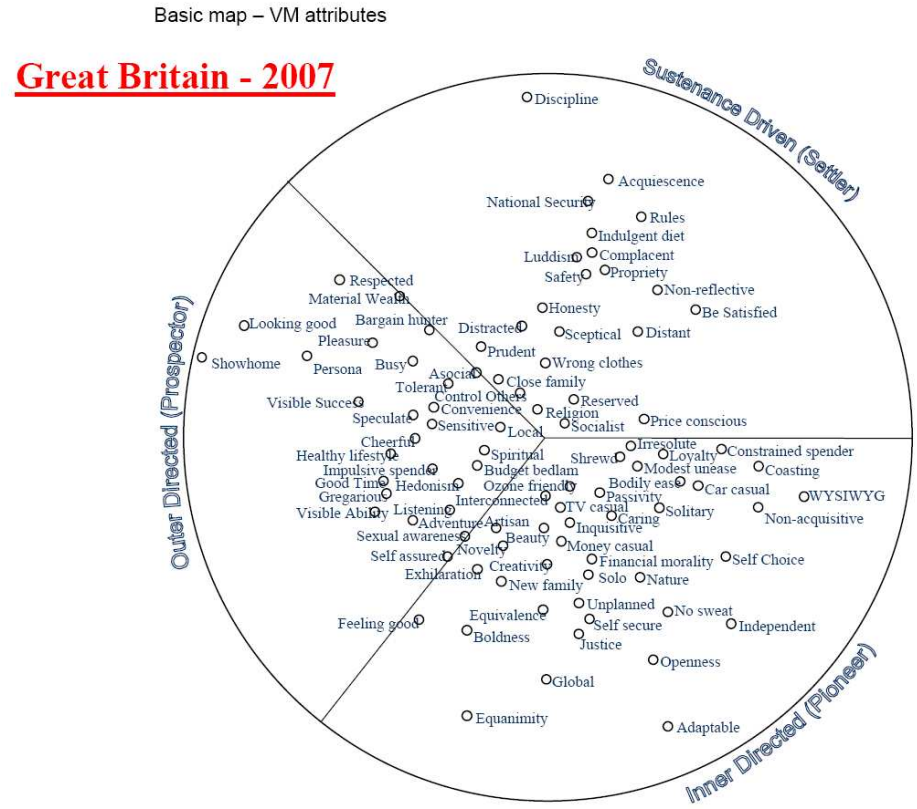
- Update of the communication/marketing database of contacts to ensure greater visibility of UNEP activities in the communication/advertising/marketing fields among various target audiences (media, national and local authorities, companies, NGOs, consumer associations, academics).

Main participations in internal/external meetings and brainstorming sessions - Chronology:

10/05 – Unity (Good and Services) meeting. First presentation of the ongoing projects.
05 – Meeting on campaign projects: ethical fashion and fair trade - sustainable coffee.
05 – Meeting with Sylvie Lemmet, UNEP DTIE ED.
23/05 – Unity meeting.
24/05 – Unity meeting.
25 -05 – Interview with the Senior Legal Officer from Nairobi.
28/05 – Interview with M. Pierre Quiblier.
30/05 – Presentation on eco-labels.
01/06 – Meeting with the NGO "Planet 2025".
04/06 – Unity Meeting
08/06 – Finale of SUEZ – BNP Paris-Bas "Challenge 3D" in BNP headquarters.
20/06 – Conference by Ahkim Steiner, ED.
22/06 – Meeting with the agency "Adviser".
26/06 – Meeting with "Comite 21", Marketing and Sustainable Development Group, at ADETEM, Pole Universitaire L. de Vinci, La Defense. I presented here the UNEP toolkit on sustainability communications.
29/06 – Conference by Pr. Ogunlade R. Davidson, AR4 of the IPCC, Mitigation.
03/07 – Meeting on sustainable holidays and eco-tourism
07/07 – Meeting with the organizators of the European Festival of Responsible Business.
10/07 – Meeting on a communication campaign of the Marrakech Process.
21/07 – Presentation of UNEP AREED project.
24/07- Unity Meeting.

31/7 – Meeting with the agency "J. Walter Thompson".
04-08 – Visioconference with A. Steiner, ED, from Nairobi together with all UNEP divisions. See his speech: "a sustain systemic change" in Annexes – II on the CD-ROM (mp3 file).
28/08 – Unity Meeting
29/08 – Meeting on ethical fashion
30/08 – SCP Branch Meeting
25/09 – Presentation on CSR

Annex – Part 1



Source: Research Into Motivating Prospectors, Settlers and Pioneers To Change Behaviors That Affect Climate Emissions, Chris Rose (Campaign Strategy) with Pat Dade (Cultural Dynamics) and John Scott (KSBR)

Table 1: Social-Psychological Theories of Behaviour and Change
(**bold type** in the description refers to another entry in the table)

Social Psychological Theory	Key References	Description
Attitude-Behaviour-Context (ABC) Theory	Stern and Oskamp 1987, Stern 2000	A kind of **field theory** for environmentally significant behaviour. Behaviour (B) is an interactive product of 'internal' attitudinal variables (A) and 'external' contextual factors (C)
Cognitive Dissonance Theory	Festinger 1957	Argues that people are motivated to avoid internally inconsistent (dissonant) beliefs, attitudes and values.
Cultural Theory	Thompson et al 1990	Hypothesises a four-fold typology of cultural 'types' with different conceptions of governance and the good life: hierarchists, egalitarians, individualists, and fatalists.
Elaboration-Likelihood Model	Petty 1977, Petty and Cacciope 1981	A **persuasion** model which predicts that the long-term success of a persuasive message depends on how much mental processing or 'elaboration' of the message is undertaken by the subject (target).
Expectancy-Value Theory	Fishbein 1973, Ajzen and Fishbein 1980 eg	A broad class of theories (of which **rational choice** theory is one) based on the idea that behaviour is motivated by the expectations we have about the consequences of our behaviour and the values we attach to those outcomes.
Field Theory	Lewin 1951	Influential early social-psychological theory positing behaviour as a function of a dynamic 'field' of internal and external influences. Behavioural change relies on unfreezing (existing behaviours), shifting to a new level, and then refreezing.
Interpersonal Behaviour (TIB)	Triandis 1977	Like the **Theory of Reasoned Action** the Theory of Interpersonal Behaviour (TIB) includes both **expectancy-value** and normative belief constructs. However, TIB also includes the role of habitual, social and affective influences on behaviour.

Normative Conduct	Cialdini, Kallgren and Reno 1991	Cialdini's Focus Theory of Normative Conduct proposes that behaviour is guided by social norms which are either descriptive (what is done) or injunctive (what should be done) in nature. The strength or 'salience' of these different kinds of norm in a given context depends on a variety of dispositional and situational factors.
Motivation-Ability-Opportunity model	Ölander and Thøgersen 1995	An integrated behavioural model that combines both internal motivational variables – usually based on the **Theory of Reasoned Action** - with external contextual variables of ability (including habit and task knowledge) and opportunity.
Means End Chain Theory	Gutman 1982, Reynolds and Olson 2001	A qualitative form of **expectancy-value theory** which posits that preferences are based on a 'laddered' relationship between attributes, consequences and values.
Norm Activation Theory	Schwartz 1977, 1992	One of the most well-known attempts to model pro-social or altruistic behaviours: a personal norm (PN) to behavour in a pro-social way is activated by awareness of the consequences (AC) of one's actions and the ascription of personal responsibility for them (AR).
Persuasion Theory	Hovland et al 1953, Petty et al 2002.	A set of theoretical approaches to the 'art of persuasion' that usually identifies (1) the credibility of the source, (2) the message or argument, and (3) the thoughts and feelings of the receiver as the three critical structural elements in the success of persuasion strategies.
Rational Choice Theory	Elster 1986, Homans 1961 etc	The underlying basis of most economic theories of consumer preference and several other social-psychological theories of behaviour. Suggests that behaviour is the outcome of rational deliberations in which individuals seek to maximise their own expected 'utility'.

Self-Descrepancy Theory	Higgins 1987	Suggests that people are motivated to act according to feelings aroused by the perceived gap between their actual and 'ideal' selves.
Self-Perception Theory	Bem 1972	Proposes that people infer their attitudes by observing their own behaviour.
Subjective Expected Utility (SEU)	Ajzen and Fishbein 1980, Eagly and Chaiken 1993	A form of **expectancy value** theory closely related to the **rational choice** model, SEU theory suggests that behaviour is a function of the expected outcomes of the behaviour and the value assigned to those outcomes.
Structuration Theory	Giddens 1984	Attempts to provide a model of the relationship between agency (how people act) and structure (the social and institutional context). Giddens structuration theory relies on a distinction between 'practical' and 'discursive' consciousness.
Symbolic Interactionism	Blumer 1969, Mead 1934	Argues that people interact with things (artefacts, institutions, others) on the basis of the symbolic meanings those things have for them.
Symbolic Self-Completion Theory	Wicklund and Gollwitzer 1982	A **symbolic interactionist** theory which suggests that people create their sense of identity through the appropriation of symbolic resources to complete the 'self-image'.
Theory of Planned Behaviour (TPA)	Ajzen 1991	Adjusts the **Theory of Reasoned Action** to incorporate the actor's perceived control over the outcomes of his or her behaviour.
Theory of Reasoned Action (TRA)	Ajzen and Fishbein 1980	Perhaps the best-known social-psychological attitude-behaviour model, the Theory of Reasoned Action adjusts **expectancy value theory** to incorporate normative social influences on behavioural intention.
Value-Belief-Norm Theory	Stern et al 1999, Stern 2000	An attempt to adjust Schwartz's **Norm Activation** theory to incorporate a more sophisticated relationship between values, beliefs, attitudes and norms.

Question : Aujourd'hui, pensez-vous que la façon dont vous consommez a un impact très, plutôt, plutôt pas ou pas du tout négatif sur l'environnement ?

Base : A tous

	Ensemble	Sexe		Age		Proximité politique		
	%	Homme %	Femme %	Moins de 35 ans %	35 ans et plus %	Gauche parle-mentaire %	Droite parle-mentaire %	Verts %
• Très négatif	**9**	7	10	8	9	10	5	10
• Plutôt négatif	**44**	46	43	46	44	46	48	43
S/T Négatif	**53**	**53**	**53**	**54**	**53**	**56**	**53**	**53**
• Plutôt pas négatif	**32**	31	32	38	29	30	33	33
• Pas du tout négatif	**11**	13	10	8	13	11	11	13
S/T Pas négatif	**43**	**44**	**42**	**46**	**42**	**41**	**44**	**46**
• Ne se prononce pas	**4**	3	5	-	5	3	3	1
	100	100	100	100	100	100	100	100

Question : La « consommation durable » est un mode de consommation qui vise à privilégier des produits plus respectueux de l'environnement, et des conditions de travail. Pour chacun des acteurs suivants, dites-moi si selon vous, il favorise aujourd'hui la « consommation durable » par ses actions ?

Base : A Tous

	Ensemble %	Sexe		Age		Proximité politique		
		Homme %	Femme %	Moins de 35 ans %	35 ans et plus	Gauche parle-mentaire %	Droite parle-mentaire %	Verts %
• **Les associations**								
– Oui, tout à fait	**20**	23	18	18	21	24	21	25
– Oui, plutôt	**51**	50	51	59	48	51	55	53
S/T Oui	**71**	**73**	**69**	**77**	**68**	**75**	**76**	**78**
– Non, plutôt pas	**15**	15	15	15	15	13	12	12
– Non, pas du tout	**8**	8	9	5	10	7	8	6
S/T Non	**23**	**23**	**24**	**20**	**25**	**20**	**20**	**18**
– Ne se prononce pas	**6**	4	7	3	6	5	4	4
	100	100	100	100	100	100	100	100
• **Les scientifiques**								
– Oui, tout à fait	**19**	19	19	19	18	18	19	16
– Oui, plutôt	**41**	44	39	48	39	41	48	39
S/T Oui	**60**	**63**	**58**	**67**	**57**	**59**	**67**	**55**
– Non, plutôt pas	**21**	22	21	21	22	24	18	27
– Non, pas du tout	**11**	10	11	8	12	9	8	9
S/T Non	**32**	**32**	**32**	**29**	**34**	**33**	**26**	**36**
– Ne se prononce pas	**8**	5	10	4	9	8	7	9
	100	100	100	100	100	100	100	100
• **Les enseignes de grande distribution**								
– Oui, tout à fait	**12**	11	14	12	13	12	11	11
– Oui, plutôt	**31**	29	31	36	28	31	28	34
S/T Oui	**43**	**40**	**45**	**48**	**41**	**43**	**39**	**45**
– Non, plutôt pas	**33**	36	31	35	32	32	40	32
– Non, pas du tout	**20**	22	18	16	22	22	17	21
S/T Non	**53**	**58**	**49**	**51**	**54**	**54**	**57**	**53**
– Ne se prononce pas	**4**	2	6	1	5	3	4	2
	100	100	100	100	100	100	100	100