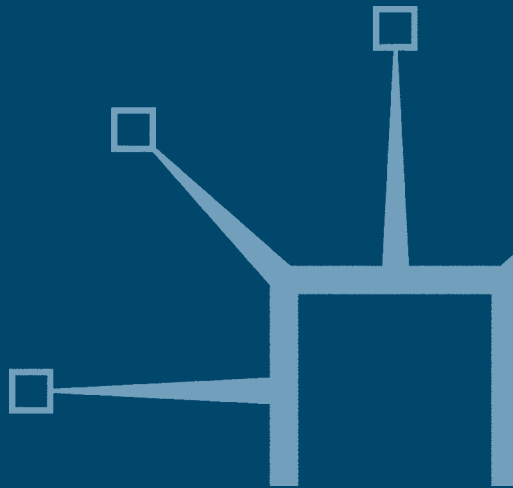


# Clumsy Solutions for a Complex World

Governance, Politics and  
Plural Perceptions

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Edited by  
Marco Verweij and Michael Thompson



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# Clumsy Solutions for a Complex World

## Governance, Politics and Plural Perceptions

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# Preface

This book spells out, in a hopefully clear and accessible way, the implications for collective decision-making of the theory of socio-cultural viability (or, for short, 'cultural theory') that many of the contributors have been developing over the last three decades. We believe that these ideas would be of importance for the never-ending attempts to solve pressing social ills, such as poverty, violence and ecological destruction. We therefore hope that our book will be read by many – not just by students of the social sciences, but by anyone who is interested in reporting and resolving social problems: politicians, journalists, teachers, business leaders, civil servants as well as NGO representatives and activists.

We conceive of this book as one element in an ongoing endeavour to forge social and, political theory that is cumulative (i.e., firmly rooted in, while still adding to the classical works in the social sciences), parsimonious, practical, dynamic and linked in meaningful ways to adjacent disciplines such as social neuroscience, the study of human complex systems, game theory and evolutionary biology. This book is an attempt to highlight the practical value of this emerging theoretical synthesis.

# Acknowledgements

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# 1

## The Case for Clumsiness

*Marco Verweij, Mary Douglas, Richard Ellis, Christoph Engel, Frank Hendriks, Susanne Lohmann, Steven Ney, Steve Rayner and Michael Thompson*

Most climatologists agree that by burning fossil fuels and engaging in other forms of consumption and production we are increasing the amount of greenhouse gases that float around in the atmosphere. These gases, in trapping some of the sun's heat, warm the earth and enable life. The trouble is, some predict, that if we continue to accumulate those gases, over the course of the new century the average temperature on earth will rise and local climates will change, with possibly catastrophic consequences. Will this indeed happen? Does climate-change put the future of the world at risk? Can only a radical reallocation of global wealth and power rescue us from this threat? Or should people not be overly worried, as the steady march of technological progress will see us through in the end?

Such questions of cause and effect are certainly not limited to the issue of global warming. They surround almost any major social and political problem – whether and how to legalize abortion, how to prevent terrorist attacks, whether and how to offer development aid, how best to combat corruption, whether to expand or decrease nuclear power, how to help the millions of refugees strewn across the world, to name but a few examples. In our view, people do not offer a great many different answers to such questions. In fact, we argue that the various ways in which people understand a phenomenon like global warming are derived from a strictly limited number of alternative perceptions of reality. These alternative ways of perceiving the world justify, represent and emerge from alternative ways of organizing social relations. In this introduction, we claim that successful solutions to pressing social ills consist of creative and flexible combinations of these different ways of organizing, perceiving and justifying social relations. This claim is at the heart of what we have come to call 'clumsiness', and is illustrated in the rest of the volume.

The current landscape of the social sciences can for our present purposes be divided roughly into two camps. One camp is built on the assumption that human beings, or indeed whole societies, are fundamentally the same. Rational choice theory – or the economic approach to social analysis – is a



major contender from this camp, as it posits that all individuals are similarly rational or self-interested. Another example would be systems theory, which maintains that all modern societies are fundamentally alike.<sup>1</sup> The second camp harbours a contrary position: the only goal to which social scientists can truly aspire is to document how every person, community and epoch is incomparably different from other people, communities and epochs. Post-structuralism, for instance, explicitly rejects making generalizations about social life on the grounds that such an exercise would always do injustice to the uniqueness of people and cultures. But also many of those who have not embraced post-structuralist tenets have ended up arguing that social scientists can only uncover causal relationships that are entirely local and temporary.<sup>2</sup>

We feel that both these edifices sit on shaky foundations. In view of the cultural and social variety across time and space, it seems implausible to insist that all individuals merely follow a single rationality, or that all societies are similar. Yet if it were true that individuals were wholly different from each other, how could we ever manage to communicate across cultures, understand history, cooperate and interpret new events?<sup>3</sup> In the words of Isaiah Berlin:

As for the issue of relativity and the subjective nature of values, I wonder whether this has not, for the sake of argument, been exaggerated by philosophers: whether men and their outlooks have differed, over wide stretches of space and time, as greatly as has at times been represented. ... If values had varied very widely between cultures and periods, communication would have been harder to achieve, and our historical knowledge, which depends on some degree of ability to understand the goals and motives and ways of life at work in cultures different from our own, would turn out to be an illusion.<sup>4</sup>

Fortunately, it is possible – at least in principle – to distinguish simultaneously between a limited number of social and cultural forms, and still recognize wide social and cultural variety. Physics has maintained that all the material objects that we can observe on earth and beyond consist of endlessly varying combinations of only six basic particles (or, in more recent formulations, a small number of strings). Analogously, it might be possible to discern a limited number of fundamental forms of social organization from which a large variety of ultimate forms of social and cultural life can be derived. This is the starting point of the theory of socio-cultural viability or, for short, cultural theory.<sup>5</sup>

The original aim of this theory was to devise a typology of social forms that fit – to the extent possible – the classificatory schemes developed by the grand old social theorists (Durkheim, Tönnies, Maine, Weber, etc.), as well as the evidence collected in subsequent ethnographic studies.<sup>6</sup> According to

our cultural theory, there are four primary ways of organizing, perceiving and justifying social relations (usually called 'ways of life', or 'social solidarities'): *egalitarianism, hierarchy, individualism and fatalism*.

We postulate that these four ways of life are in conflict in every conceivable domain of social life. Most such domains (say the way in which a school operates, or the way in which an international regime functions) will consist of some dynamic combination of these pure forms. As many social domains can be distinguished within and between societies (and as many societies can be distinguished around the world), the theory allows one to perceive a wide and ever-changing cultural and social variety – while still enabling one to formulate general propositions about social and political life. These propositions include possible ways in which people perceive and attempt to stave off a threat such as climate-change. In order to explain and illustrate this, we will have to set out our cultural theory in some detail.

Each of the four ways of life consists of a specific way of structuring social relations and a supporting cast of particular beliefs, values, emotions, perceptions and interests.<sup>7</sup> Our fourfold typology is strictly derived from two dimensions of sociality: what we call 'grid' and 'group'. Grid measures the extent to which role differentiation constrains the behaviour of individuals. Group, by contrast, measures the extent to which an overriding commitment to a social unit constrains the thought and action of individuals.

High group-strength results when people devote a lot of their available time interacting with other members of their unit. In general, the more things they do together, and the longer they spend doing them, the higher the group-strength. Where admission to the social unit is hard to obtain, making the unit more exclusive and conscious of its boundary, the group-strength also tends to be high. An extreme case of high group-strength is the monastic community whose members renounce their private property upon entering and depend on the corporate body for all their material and social needs. High group-strength of this sort requires a long-term commitment and a tight identification of members with one another as a corporate identity. Individuals are expected to act on behalf of the collective whole, and the corporate body is expected to act in the normative interests of its members.

Group-strength is low when people negotiate their way through life on their own behalf as individuals, neither constrained by, nor reliant upon, a single group of others. Instead, low group-strength people interact as individuals with other individuals, picking and choosing with whom they will associate, as their present preoccupations and perceived interests demand. The low group-experience is a competitive, entrepreneurial way of life where the individual is not strongly constrained by duty to other persons. Attractive though this freedom from constraint might first appear to some, there is a serious disadvantage: in a low-group context, you cannot count on the support of your fellows, should your personal fortune wane. In the high

group-context, the safety net of social support compensates for the loss of personal autonomy.

Grid stands for the complementary bundle of constraints on social interaction. Grid is high whenever roles are distributed on the basis of explicit public social classifications, such as gender, colour, position in a hierarchy, holding a bureaucratic office, descent in a senior clan or lineage or point of progression through an age-grade system. It is low when classificatory distinctions only weakly limit the range of social choices and activities open to people. A low-grid social environment is one in which access to roles depends on personal abilities to compete or negotiate for them, or even on formal regulations that ensure equal access and opportunity to compete. In either case, access to roles is not dependent on any ascribed characteristics of rank or birth.

Assigning two values (high and low)<sup>8</sup> to the grid and group dimensions gives the four ways of organizing, perceiving and justifying social relations. *Egalitarianism* is associated with a low grid score and a high group score. The combination of a high score on the grid dimension (many rules prescribing people's roles) with a high score on the group dimension (strong group boundaries) gives the *hierarchical* way. The third way of organizing and justifying social relations, *individualism*, is associated with low scores on both the grid and group scales. Last, *fatalism* is characterized by a high grid and a low group score.<sup>9</sup>

We are now in a position to describe how these four different forms of association tend to produce different ways of perceiving nature (including human nature), and the policy prescriptions that follow from that. In an egalitarian social setting, actors see nature as fragile, intricately interconnected and ephemeral, and man as essentially caring (until corrupted by coercive institutions such as markets and hierarchies). We must all tread lightly on the earth, and it is not enough that people start off equal; they must end up equal as well – equality of result. Trust and levelling go hand in hand, and institutions that distribute unequally are distrusted. Voluntary simplicity is the only solution to our environmental problems, with the precautionary principle being strictly enforced on those who are tempted not to share the simple life.

In a hierarchical social setting, actors see the world as controllable. Nature is stable until pushed beyond discoverable limits, and man is malleable: deeply flawed but redeemable by firm, long lasting and trustworthy institutions. Fair distribution is by rank and station or, in the modern context, by need (with the level of need being determined by expert and dispassionate authority). Environmental management requires certified experts to determine the precise locations of nature's limits, and statutory regulation to ensure that all economic activity is kept within those limits.

In an individualistic social setting, actors view nature as benign and resilient – able to recover from any exploitation – and man as inherently

self-seeking and atomistic. Trial and error, in self-organizing ego-focused networks (unfettered markets), is the way to go, with Adam Smith's invisible hand ensuring that people only do well when others also benefit. The upholders of individualistic solidarity, in consequence, cooperate until others give them reason not to and then retaliate in kind (the winning 'tit for tat' strategy in the iterated prisoner's dilemma game), and see it as only fair that (as in the joint stock company) those who put the most in get the most out. They think institutions that work with the grain of the market (that get rid of environmentally harmful subsidies, for instance) are what society needs.

In a fatalistic social setting, finally, actors find neither rhyme nor reason in nature, and suppose that man is fickle and untrustworthy. Fairness is not to be found in this life, and there is no possibility of effecting change for the better. 'Defect first' – the winning strategy in the one-off prisoner's dilemma – makes sense here, given the unreliability of communication and the permanent absence of prior acts of good faith. Without the possibility of ever getting in sync with nature, or of building trust with others, the fatalistic world unlike the three others is one in which learning is impossible. 'Why bother?' therefore is the rational management response.

Since it was first formulated, this classification of four different ways of organizing and perceiving social relations has helped illuminate the paradoxical and sometimes contradictory ways in which people approach contemporary public policy issues. Indeed, these solidarities, in varying strengths and patterns of pairwise alliance, are discernible almost anywhere you care to look: in debates over the wisdom of prescribing safety seat belts, in the international fora where delegates struggle to do something about climate-change, in the different ways international regimes cope with transboundary risks such as water pollution, municipalities go about the business of transport planning and hospitals treat nuclear waste, in the various ways households set about making ends meet and public authorities treat the mentally ill, in the different diagnoses of the pensions crisis in countries with ageing populations, and in the different panaceas that are variously championed and rejected by theorists of public administration, to mention but a few.<sup>10</sup>

What is remarkable about all these divergent examples is that they cannot be pinned down to a single level of social organization, or 'level of analysis' – indeed they range all the way from individual households to global institutions. Cultural theory assumes that same four forms of organizing and perceiving are interacting – forever merging, splitting and recombining – in unpredictable ways at each conceivable level of social organization. Thus, four straightforward organizational principles can result in an endlessly changing, infinitely varied and complex social world.<sup>11</sup>

Some will argue that this typology represents nothing new. Derived from classifications proposed by the founding fathers of the social sciences, it also

overlaps with a host of more recent categorizations. These would include the typical reactions to decline that Hirschman has described (exit, loyalty and voice), the patterns of economic action that Polanyi has pointed to (market, redistribution and reciprocity), the sorts of 'goods' distinguished by Snidal (private goods, public goods, common pool resources and club goods), the systems of interest representation set out by Schmitter (pluralism, corporatism, syndicalism and monism), McKinlay and Little's liberal, realist and socialist international systems, Lichbach's solutions to collective problems (market and contract, hierarchy and community) – not to mention the many times that social scientists have proposed to add a third type to Weber's classical distinction between market and bureaucracy: collegiums (Majone), community (Schmitter and Streeck, Perrow, Miller, Etzioni), trust (Granovetter, Bradach and Eccles), society (Wiesenthal), clans (Ouchi), forum (Elster) or civil society (e.g., Seligman).<sup>12</sup>

We agree with this assertion, but do not see the overlap as a drawback of cultural theory. On the contrary, we feel that these similarities fortify our assumption that human relations tend to be organized in a restricted number of ways. Moreover, in comparison to other taxonomies, the grid-group classification comes with several advantages. Not only does it add a fourth way of organizing to many classifications (usually fatalism), it also spells out the basic perceptions that typically underpin alternative ways of organizing. In addition, cultural theory's typology is usually more fine-grained than other classifications (being applicable at all levels of analysis, it can also be used to distinguish among different types of bureaucracies, markets or civil societies), and can be applied to any possible domain of human life (from sexual relations to the nuclear arms race). On the basis of these characteristics, Harry Eckstein argued that the four ways of life constitute 'especially promising constructions for cultural typology' that encapsulate 'a great many meanings into a limited set of supermeanings'.<sup>13</sup>

Cultural theory has several normative implications.<sup>14</sup> First, there is the realization that people are arguing from different premises and that, since these premises are anchored in different forms of solidarity, they will never agree. Second, in line with the 'argumentative turn' in policy analysis,<sup>15</sup> this contention, as well as being unavoidable, is all to the good: something to be harnessed through constructive communication. Each way of organizing and perceiving distils certain elements of experience and wisdom that are missed by the others. Each way of organizing and perceiving provides a clear expression of the way in which a significant portion of the populace feels we should live with one another and with nature. Each one needs all the others in order to be sustainable.<sup>16</sup>

It is useful to set out this latter point in some detail. Under pure egalitarianism there are no peaceful mechanisms, other than an endless search for consensus, for deciding between alternative opinions. There is no official leadership that can settle issues, nor a voting mechanism that can be

invoked. This lack of procedures for settling conflicts can easily paralyze egalitarian social settings. It can also give rise to the violent expulsion of dissenters. In addition, pure egalitarianism creates social ills by ruling out any activities that would give rise to inequality of condition. This limits economic production to a bare minimum, as many forms of economic life contain a competitive element. Hence, undiluted egalitarianism will have to be mixed with at least minimal doses of the other ways of organizing and perceiving, if it is not to evaporate. Hierarchy has a whole 'armory of different solutions to internal conflicts, upgrading, shifting sideways, downgrading, re-segregating and re-defining' (Douglas 1978: 20). Individualism preaches the right of each individual to live according to his or her own needs and wants, without group interference. Such enthusiasm for individuality serves to dampen the disrespect in which dissenters are held. Together, hierarchy and individualism provide many ways in which to increase the resource base of a group of people, thus preventing impoverishment. Fatalism is useful for egalitarian organizations, as it continuously replenishes the moral outrage that keeps such organizations together.

Hierarchy, too, needs the others. Without the distrust of central control and insistence on transparency that are prevalent within both individualism and egalitarianism, hierarchy would be apt to be prey to the classical problems of bureaucracy: corruption, arbitrary use of power, tunnel vision, lack of innovativeness and moral fragmentation.<sup>17</sup> Without the unquestioning acceptance and resignation that fatalism implies, hierarchical control would become impossible.

Unfettered individualism undermines itself, as it does not include the means to enforce property rights as well as contracts and check accumulating inequalities. To keep its playing fields level, an individualistic social system needs egalitarian-minded organizations to notice, and protest, mounting inequalities. It needs the regulatory capacities of hierarchy in order to enforce property rights and contracts, as well as to organize the continuous redistribution of resources that will keep playing fields level. And what would become of individualistic competition, if a (fatalistic) sucker were not born every minute?

Barry Schwartz has nicely summed up these interdependencies:

Each way of life undermines itself. Individualism would mean chaos without hierarchical authority to enforce contracts and repel enemies. To get work done and settle disputes the egalitarian order needs hierarchy, too. Hierarchies, in turn, would be stagnant without the creative energy of individualism, uncohesive without the binding force of equality, unstable without the passivity and acquiescence of fatalism. Dominant and subordinate ways of life thus exist in alliance yet this relationship is fragile, constantly shifting, constantly generating a societal environment conducive to change.<sup>18</sup>

It is therefore important that all the ways of life be taken some sort of account of in the policy process. And that, for all its simplicity, is the essence of clumsiness: all the 'voices' heard, and responded to by the others. We can now return to the issue of climate-change, and show how our theory sorts out, and clarifies, the ongoing disputes regarding this topic – and what this implies for governance.

## **The contested terrain of climate-change**

Cultural theory is emphatically a dynamic theory, with its typology identifying the timeless components in the ever-changing positions that are the destinations and points of departure for all that endless movement. In other words, the precise policies and arguments taken up will continuously change, yet whatever policies are fought over, they will continue to represent a small number of competing ways of organizing and perceiving social relations. We can therefore use the theory to take a snapshot of the present state of the climate-change debate.

The current positions in the debate on climate-change can be read as three policy stories (three, because the fatalist solidarity does not motivate people to participate loudly and consistently in the public debate; if it did it would not be fatalistic). Each policy story provides a setting (the basic assumptions), a villain (the policy problem), heroes (policy protagonists) and, of course, a moral (the policy solution). Each story emphasizes different aspects of the climate-change issue. What is more, each story defines itself in contradistinction to the other policy stories.

### **Profligacy: an egalitarian story**

This story begins by pointing to the profligate consumption and production patterns of the North as the fundamental cause of global climate-change. Rich industrialized countries, so the argument goes, are recklessly pillaging the world's resources with little regard to the well-being of either the planet or the peoples of its poorer regions. Global climate-change is more than an issue that is amenable to quick technical fixes; it is fundamentally a moral and ethical issue.

The setting for this story is a world in which everything is intricately connected to everything else, and nature is fragile. Whether this concerns human society or the natural world, this story urges us to think of Planet Earth as a single living entity. Environmental degradation, then, is also an attack on human well-being. Humans, so the argument goes, have, until now, successfully deluded themselves that they can live apart from the natural environment. In reality, however, there is no place for humans outside nature and thus there is no particular reason for considering humans as superior to nature. In short, this story is set in an ecocentric world.

The villain, in the profligacy story, is the fundamentally inequitable structure of advanced industrial society. In particular, the profit motive and

the obsession with economic growth – the driving forces of global capitalism – have not only brought us to the brink of ecological disaster, they have also distorted our understanding of both the natural and the social world. Global commerce and the advertising industry lead us to desire environmentally unsustainable products (bottled water, fast cars or high protein foods, for example) while our real human needs (living in harmony with nature and with each other: the egalitarian social construction of human nature) go unfulfilled. What is more, advanced capitalism distributes the spoils of global commerce highly inequitably. This is true within countries (the increasing gap between the rich classes and the poor classes) and among countries (the increasing gap between the affluent countries of the North and the destitute countries of the South). In short, prevailing structural inequalities have led to increasingly unsustainable patterns of consumption and production.

Since everything is connected to everything else, this story continues, we cannot properly understand environmental degradation unless we see it as a symptom of this wider social malaise. The way humans pollute, degrade and destroy the natural world is merely a very visible indicator for the way they treat each other and particularly the weaker members of the society. The logic that allows us to fell thousands of square kilometres of rainforests, to dump toxins in waterways or pollute the air is precisely the same logic that produces racism, misogyny and xenophobia. Tackling one problem inevitably implies tackling all the others.

The heroes of the profligacy story are those organizations and individuals who have managed to see through the chimera of progress in advanced industrial society. They are those groups and persons who understand that the fate of humans is inextricably linked to the fate of Planet Earth. The heroes understand that, in order to halt environmental degradation, we have to address the fundamental global inequities. In short, the heroes of the profligacy policy argument are those organizations of protest, such as Earth First!

What, then, is the moral of the profligacy story? Its proponents point to a number of solutions. In terms of immediate policy, the profligacy tale urges us to adopt a strict version of the precautionary principle in all cases: unless policy actors can prove that a particular activity is innocuous to the environment, they should refrain from it. The underlying idea here is that the environment is precariously balanced on the brink of a precipice. The story further calls for drastic cuts in carbon dioxide emissions; since the industrialized North produces most of these emissions, the onus is on advanced capitalist states to take action.

Yet none of these measures, the story continues, is likely to be fruitful on its own. In order to really tackle the problem of global climate-change, those in the affluent North will have to fundamentally reform their political institutions and their unsustainable lifestyles. Rather than professionalized



bureaucracies and huge centralized administrations, the advocates of the profligacy story suggest we decentralize decision-making down to the grass-roots level. Rather than continuing to produce ever-increasing amounts of waste, we should aim at conserving the fragile natural resources we have: we should, in a word, move from the idea of a waste society to the concept of a *conserve* society. Only then can we meet real human needs. What are real human needs? Simple, they are the needs of Planet Earth.

Earth First! provides a telling example. Here is how this group of 'deep ecologists' sees itself:

To avoid co-option, we feel it is necessary to avoid the corporate organizational structure so readily embraced by many environmental groups. Earth First! is a movement, not an organization. Our structure is non-hierarchical. We have no highly-paid 'professional staff' or formal leadership. ... Earth First! has survived attacks by moderates, would-be leaders and the agents of the system, remaining the most diverse, passionate, committed, and uncompromising group of environmental activists.

Earth First! is a priority, not an organization. It is the name of our journal, and the slogan of our emerging tribe, but it is a tribe without chiefs. The only 'leaders' are those temporarily working the hardest and taking the most risks. New ideas, strategies and crucial initiative come from individuals, and all decisions are made within affinity groups based on preferred tactics.

And this is how Earth First! sees the problem:

Over the last several hundred years, human civilization has declared war on large mammals, leading some respected ecologists to assert that the only large mammals to survive the near future will be those we humans choose to allow to live. Other prominent biologists, aghast at the wholesale devastation of tropical rainforests and temperate old-growth forests, rapidly accelerating desertification, and destruction of 'charismatic megafauna' due to habitat destruction and poaching, say that Earth could lose one quarter to one third of all species within a very few years.

Not only is the blitzkrieg against the natural world destroying ecosystems and their associated species, but our activities are now beginning to have fundamental, systemic effects upon the entire life-support system of the planet – upsetting the world's climate, poisoning the oceans, destroying the ozone layer which protects us from excessive ultraviolet radiation, changing the CO<sub>2</sub> ratio in the atmosphere, and spreading acid rain, radioactive fallout, pesticides and industrial contamination throughout the biosphere.

Clearly, the conservation battle is not one of merely protecting outdoor recreation opportunities; neither is it a matter of elitist aesthetics, nor

‘wise management and use’ of natural resources. It is a battle for life itself, for the continuous flow of evolution. We – this generation of humans – are at our most important juncture since we came out of the trees six million years ago. It is our decision, ours today, whether Earth continues to be a marvelously living, diverse oasis in the blackness of space, or whether the charismatic megafauna of the future will consist of Norway rats and cockroaches. To put it simply, the earth must come first.

From this perspective, the solution seems clear:

While many environmental groups are members of the American political establishment and essentially adopt the anthropocentric (human-centered) world view of industrial civilization, we say the ideas and manifestations of industrial civilization are anti-Earth, anti-woman, and anti-liberty. We are developing a new biocentric paradigm based on the intrinsic value of all natural things: Deep Ecology. Earth First! believes in wilderness for its own sake. Lobbying, lawsuits, letter writing and research papers are important and necessary. But they are not enough. Earth First!ers also use confrontation, guerrilla theater, direct action and civil disobedience to fight for wild places and life processes. And while we do not condone or condemn monkeywrenching, ecotage, or other forms of property destruction, we do present a forum for the exchange of ideas on creative opposition to the juggernaut of ‘progress’, including ideas about monkeywrenching.<sup>19</sup>

Similar opinions propel citizens’ groups such as Ecodefense, EcoEquity, Corpwatch, Adbusters, International Forum on Globalization and the Voluntary Human Extinction Movement. They once used to drive Greenpeace, Friends of the Earth and the Natural Resources Defense Council as well, but the internal organization and policy perspectives of these organizations have tended to become more hierarchical and technocratic over time – a road that Weber once dubbed the *routinization of charisma*.<sup>20</sup> It has earned Friends of the Earth a spot on the ‘sell-out list’ of Ecodefense.

### **Lack of global planning: a hierarchical story**

Our second story opens with a view on the limits to economic and population growth. In an older rendering of this story, a tale told some thirty years ago, these limits were supposed to lie in the dwindling resources of oil, gas and coal, which – scientific studies had conclusively shown – would not be sufficient to sustain the world’s economic growth forever more. Nowadays, after a thirty-year period in which ‘proven reserves’ of fossil fuels have continuously risen, different limits to economic and population growth are being highlighted. Rather than be afraid of natural resources running out, we should be concerned about the continued use of oil, gas and coal

across the globe. Such irresponsible behaviour, due to its long-term effects on the world's climates, would eventually wreak havoc on the ecosystems on which human beings depend.

The operative term in this policy story is 'long term'. Although human-made greenhouse-gas emissions have already started to affect ecosystems, there is still time to remedy matters. Unlike the profligacy story, the hierarchical tale does not include the line that the world is about to come to an end unless we radically change our wicked capitalist ways right now. Enough time is left to plan a gradual, incremental change towards technologies and energy resources that do not emit greenhouse gases. Unfortunately, the 'long term' also plays a less benign role in this tale. The consequences of climate-change lie far into the future, and are spread across the entire globe: way beyond the temporal and spatial ken of most citizens and enterprises. What is more, each single contribution that households, companies and even whole countries could make to the prevention of climate-change is so small as to be insignificant. It therefore makes no sense for any household or firm or country to unilaterally reduce its emissions. What we are faced with, therefore, is a 'tragedy of the global commons'.<sup>21</sup> This tragedy – in which undiscerning actors all over the world are slowly but surely crashing through the ecological limits established by experts – is the setting of the hierarchical story.

The underlying problem is the lack of global governance and planning that would rein in and steer global markets and protect global commons. Singled out for contempt as policy villains are those individuals, governments and enterprises sceptical of the view that the solution to global issues (such as climate-change, biodiversity or international terrorism) must consist of global intergovernmental treaties, based on scientific planning and expert advice, and sanctified by the United Nations. In the case of global warming these would include: American President Bush, the US Senate, the Australian government under Prime Minister John Howard and the government of Alberta. Scientists who argue against the climate-change thesis are put down as 'politically motivated', rather than objective and dispassionate. For instance, two economists recently argued that the scientific models predicting climate-change that have been developed by the IPCC (Intergovernmental Panel on climate-change – the body of scientists advising the governments on global warming) greatly overestimate the economic growth rates that poor countries could possibly hope to attain during the course of the century. (Any such exaggeration would have the effect of overestimating future emissions of greenhouse gases.) Even the IPCC model that predicts the smallest degree of global warming assumes that in nearly a hundred years' time the per capita income of the United States will be overtaken by South Africa, Libya, Algeria, North Korea and other currently near-destitute countries. In reaction, scientists involved with the IPCC claimed that the two economists had read the false documents, had not understood the

models and, anyway, were politically motivated. They did not, however, deny the basic criticism.<sup>22</sup>

The moral of this tale is clear: the only conceivable remedy to climate-change is for all the governments and parliaments of the world to formally agree on the extent to which future emissions should be cut, which countries should do so, how and when. States should then impose these formal, inter-governmental agreements on the multitude of undiscerning consumers and producers within their borders. This is the logic behind the 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change. It is espoused by almost all the governments of the world, by UN agencies and the World Bank, as well as by the large mainstream environmental organizations (the ones of which Earth First! is so disparaging).

The heroes of this story are those dispassionate scientists, experts, civil servants, NGO representatives and enlightened politicians who have not put their talents and energy in the service of Mammon, but are quietly building the global bureaucratic structures that will rectify the short termism and greed of global markets, and usher in the non-carbon age in a carefully planned and gradual manner.

Consider, for instance, the 1999 Human Development Report of the United Nations Development Programme (one of three international organizations administering the Global Environmental Facility, the main international source of funds for climate-change projects). This report focuses on how to organize global governance. In its Overview, after having acknowledged (p. vii) the 'intellectual advice and guidance by the external Advisory Panel of eminent experts', the report states (p. 2):

The challenge of globalization in the new century is not to stop the expansion of global markets. The challenge is to find the rules and institutions for stronger governance – local, national, regional and global – to preserve the advantages of global markets and competition, but also to provide enough space for human, community and environmental resources to ensure that globalization works for people – not just for profits.

In the report's final chapter, under the section heading 'Start Now to Build the Global Architecture Required for the 21<sup>st</sup> Century', the following conclusion is reached (pp. 110–11):

With the new challenges of globalization, and the need to ensure stronger action on old problems and new, the time has come to rethink the global architecture. Some of the key elements of an improved international architecture:

- A stronger and more coherent UN system, with more commitment from all countries;
- A global central bank;

- A world investment trust with redistributive functions and transfer mechanism;
- A world environment agency;
- A revised World Trade Organization, fairer and with an expanded mandate;
- An international criminal court, with a broader mandate for human rights;
- A broadened United Nations, with a two-chamber General Assembly to allow for civil society representation.

The 2003 Human Development Report has a chapter devoted to ‘Public Policies to Ensure Environmental Sustainability’. In this chapter, it is concluded (p. 130):

Intergovernmental processes tend to be difficult to organize and slow to execute, but they are the only realistic way to address cross-border pollution and ecosystem degradation.

And (p. 131):

A Life Observatory should be established to systematically monitor major ecosystems such as coastal habitats, major watersheds and wetlands. Such an observatory would complement current efforts, including the Global Terrestrial Observing System, the Global Climate Change Observing System and the Global Oceans Observing System. The Life Observatory should build on the Millennium Ecosystem Assessment, a four-year effort involving 1,500 scientists compiling the best available knowledge on the world’s ecosystems and the services they provide. The Life Observatory would ensure that these analyses are continuously updated to map the long-term effects of human activities on specific ecosystems. ... Environmental indicators that accurately track the environment should be developed and integrated with national policy-making. Long-term planning should factor in projected changes in climate and changes to specific ecosystems to assess how these trends will affect development progress and needs.

### **Business as usual: an individualistic story**

Those who belong to organizations of a more individualistic bent – the United States’ Cato Institute, for instance, or Britain’s Institute of Economic Affairs, or the editorial teams of *The Wall Street Journal* and *The Washington Times* – tell a very different tale. To them, the whole current ballyhoo over climate-change and global warming is much ado about nothing – at most just another attempt at scare-mongering by naïve idealists who erroneously

believe that the world can be made a better place, and by international bureaucrats looking to expand their own budgets and influence.

Such individualistically organized outfits are sceptical of the diagnosis of climate-change itself and they are convinced that, even if it is correct, the consequences will be neither catastrophic nor uniformly negative. Far from being at a 6-million-year juncture, we are, they assert, where we have always been: faced with uncertainties and challenges that, if tackled boldly by a diversity of competing agents, can be transformed into opportunities from which all can benefit. They focus on the lacunae in current climate-change science:

- Clouds, whose formation is poorly understood but which are expected to be more prevalent in a warmer world, would likely reflect more sunlight back into space before it reached the earth's surface.
- Human sources of greenhouse gases are dwarfed by natural sources (volcanoes, for instance, and termites and other wood-digesting creatures) – which means that it is impossible in the short run to say whether any warming (if it is happening) is man made.
- The climate models that are being used to predict future changes cannot even accurately chart changes that have already occurred.

Looking beyond the short term, they point out that a carbon-rich climate would increase agricultural productivity, and that, even if the negative impacts did outweigh the positive ones, we would still need to compare the costs of preventing global warming now to the costs of adapting to higher temperatures a few decades hence. Money not spent on preventing climate-change, they point out, could be used to tackle other, more pressing environmental and social ills. On top of all that, individualistic organizations are open to the view that technological progress and the unpredictable forces of 'creative destruction'<sup>23</sup> may soon render today's fuss over climate-change irrelevant. The production costs of renewable energy, they point out, have fallen dramatically over the last few decades, and these new technologies – wind, hydro, geothermal and solar – are rapidly becoming (indeed, in some instances, have already become) competitive with the old technologies of fossil fuels.

The setting of this individualistic story is therefore a wonderfully robust and bountiful natural world, while the villains are those individuals and organizations too woolly headed to grasp this simple fact, as well as those bureaucratic outfits that misrepresent matters in an attempt to increase their own clout. The heroes are those decision-makers who brave public opposition and do not allow themselves to be intimidated by all this scare-mongering: the whistleblowers and sceptics in the community of atmospheric scientists, as well as those risk-taking individuals and enterprises that will soon make people forget all about climate-change by

inventing cleaner and cheaper technologies. The moral of this story is: business as usual – *innovative* business as usual!

As Roger Bate, director of the Environment Unit of the Institute of Economic Affairs, concludes:

On the whole, society's problems and challenges are best dealt with by people and companies interacting with each other freely without interference from politicians and the state. We do not know whether the world is definitively warming, given recent satellite data. If the world is warming, we do not know what is causing the change – man or nature. We do not know whether a warmer world would be a good thing or a bad thing. [The scientific evidence] does not suggest that immediate action for significant limitation on energy consumption is urgently required. ... Until the science of climate-change is better understood, no government action should be undertaken beyond the elimination of subsidies and other distortions of the market.<sup>24</sup>

## The case for clumsiness

It is only by teasing out these sorts of policy arguments, and their diverse adherents, that we can understand the social constructions of needs and resources: how they are generated, how they are reproduced and transformed and how they shape the policy process. This understanding has some important implications:

- The three stories tell plausible but conflicting tales of climate-change. All three tales use reason, logic and science to argue their points. None of the tales is 'wrong', in the sense of being implausible or incredible. Yet at the same time, none of the stories is completely 'right'; each argument focuses on those aspects of climate-change for which there is a suitable solution cast within the terms of a particular form of organization.
- These three policy discourses are not reducible to one another. No one of the policy arguments is a close substitute for the others. Nor are any of the stories' proponents ever likely to agree on the fundamental causes of and solutions to the global climate-change issue. And, since these stories implicitly convey a normative argument, namely that of the good life (either in egalitarian enclaves, in hierarchies, or in markets), they are curiously immune to enlightenment by 'scientific' facts; we cannot, in any scientific sense, prove or falsify policy stories.<sup>25</sup>
- These stories also define what sort of evidence counts as a legitimate fact and what type of knowledge is credible. The profligacy story discounts economic theory as the obfuscation of social inequalities and dismisses rational management as the reification of social relations. The

tale of individual entrepreneurship views holistic eco-centrism as amateur pop-science and pours scorn on the naïve belief in benign control. Last, the global governance story rejects laissez-faire economic theory as dangerously unrealistic, and questions the scientific foundations of more holistic approaches.

This leaves us with a dynamic, plural and argumentative system of policy definition and policy framing that policy-makers ignore only at their cost, for three reasons. First, each policy story, as we have seen, thematizes a pertinent aspect of the climate-change debate. Any global climate-change policy, then, based on only one or two of these stories, will merely provide a response to a specific aspect of the global climate-change problem. It will, in short, provide a partially effective response. Second, each of the stories represents a political voice in the policy process. Ignoring any of these voices means excluding them from policy making. Within democratic polities, this inevitably leads to a loss of legitimacy. What is more, in democracies, dissenting voices will eventually force their way into the policy process (as we have seen for instance with the World Trade Organization in Seattle and Prague and the G8 riots in Genoa). Neither the cost of acrimonious and vicious political conflict, nor the loss of public trust experienced by those who (perhaps inadvertently, perhaps not) suppress dissenting voices, are particularly attractive. The former often leads to policy deadlock; the latter may well result in a legitimacy crisis in the polity as a whole. Last, even though these are contradictory and irreducible perspectives on policy, none of them can be effectively implemented on its own. Only innovative combinations of bureaucratic measures, risky entrepreneurship and technological progress, as well as frugality and international solidarity could be successful.

The failure of the Kyoto Protocol illustrates this latter point. In February 2005, this Protocol finally entered into force. It has taken some thirteen years of international negotiations for this to occur, even though the aims of the Protocol are infinitely small. The Kyoto Protocol is further hobbled by the fact that the two of the major polluters, the United States and Australia, refuse to abide by the pact. Moreover, almost none of the governments that have ratified the treaty have actually been fulfilling their requirements under it. And it has become increasingly clear to the diplomats involved that it will be impossible to forge intergovernmental agreement on any follow-up treaty. The Kyoto Protocol has been doomed from the beginning, as it has been based on the assumption that the prevention of climate-change is an expensive, and global 'public good' that can only be provided through a formal, binding treaty between all the governments and parliaments of the world. However, very few, if indeed any, costly, global intergovernmental treaties have ever been ratified and implemented. Attempts to agree on such treaties usually get quickly bogged down, due the vast ideological differences between governments and the financial interests that are perceived to be at



stake. The international attempts to stem climate-change have floundered, as they have not identified and promoted competitive processes through which curbing climate-change can become much less costly, or perhaps even turned into a profitable undertaking – as Chapter 2 will show in greater detail.

So these three policy stories have important implications, not just for global climate-change policy making, but for policy and for risk management, generally.

- *Endemic conflict* In a policy process where politics matters (i.e., in any policy process) there will be at least three divergent but plausible stories that frame the issue, define the problem and suggest solutions. Thus conflict in policy making processes is endemic, inevitable and desirable, rather than pathological, curable or deviant. Any policy process that does not take this into account does so at the risk of losing political legitimacy.
- *Plural policy responses* We have seen that each story tells a plausible, but selective story. Any policy response modelled solely in terms of just one or two of these tales will be, at best, partial and, at worst, ineffective or even counterproductive.
- *Quality of communication* Since policy-making is inherently conflictual, and since effective policy responses depend on the participation of all voices, policy outcomes crucially depend on the quality of the communication within the debate. A policy debate that can harness the argumentative conflict between different storytellers will profit most from the potentially constructive interaction between different proponents. Conversely, a policy debate in which all possible positions are sharply polarized will probably lead to policy deadlock. This is a structural argument that concerns the implicit and explicit ‘rules’ that govern policy deliberation in a polity. If the ‘rules of the game’ permit or even force policy actors to take seriously different types of stories, then what Sabatier and Jenkins-Smith call ‘policy-oriented learning’ can take place.<sup>26</sup> If this is not the case, then the policy debate will be an unconstructive dialogue of the deaf.

Thus far, we have not mentioned fatalism much. The ‘whatever will be, will be’ attitude that characterizes this way of organizing and perceiving social relations includes no rationale for getting involved in the political process. According to the fatalistic perspective, there are no heroes, only (barely distinguishable) victims and villains – and those upon whom Lady Luck happens to smile temporarily. Life is without rhyme and reason, and, hence, no policy story is worth telling (or listening to). Yet, this ‘non-story’ also contains a kernel of truth. Sometimes, a social ill – however pressing it may seem or feel – may be unsolvable, for instance, due to its sheer complexity. In fact, it may happen that any attempts to address the issue make matters

worse. In those cases, the resignation that fatalism induces might provide much-needed wisdom and relief. Therefore, any truly clumsy solutions will also be based on a careful consideration of the council of despair – the non-story – that fatalism offers.

Summarizing all of the above, we have at one extreme an unresponsive monologue and at the other a shouting match amongst the totally deaf. Between these extremes we occasionally find a vibrant multivocality in which each voice formulates its view as persuasively as possible, sensitive to the knowledge that others are likely to disagree, and acknowledging a responsibility to listen to what the others are saying. This is the condition – clumsiness – we must strive for if we value democracy or, as is the case with many regulatory agencies, we are mandated to develop and implement policy on behalf of a democracy. Getting there and staying there is, of course, not easy.

At the monologue end of the spectrum the policy process is seductively elegant and reassuringly free (it would seem) from the defiling intrusion of politics. Here we find the mindset characterized by single-metric rationality. At the other extreme we wallow in the incoherence of complete relativism. The cultural theory typology presented here suggests that between these extremes there is the possibility of constructive dialogue. It will often be a noisy, discordant, contradictory dialogue, but this is the clumsy beast that democratic policy-makers and regulators must seek to harness and ride – in each and every specific situation. On this we agree again with Isaiah Berlin:

The way out must therefore lie in some logically untidy, flexible and even ambiguous compromise. Every situation calls for its own specific policy, since ‘out of the crooked timber of humanity’, as Kant once remarked, ‘no straight thing was ever made’. What the age calls for is not (as we are so often told) more faith, or stronger leadership, or more scientific organization. Rather it is the opposite – less Messianic ardour, more enlightened skepticism, more toleration of idiosyncracies, more frequent ad hoc measures to achieve aims in a foreseeable future ... . What is required is a less mechanical, less fanatical application of general principles, however rational or righteous, a more cautious and less arrogantly self-confident application of accepted, scientifically tested, general solutions to unexamined individual cases.<sup>27</sup>

## **Making ourselves clumsy**

The term ‘clumsy institution’ was coined by law professor Michael Shapiro as a way of escaping from the idea that, when we are faced with contradictory definitions of problem and solution, we must choose one and reject the rest.<sup>28</sup> Clumsy institutions, we can say, now that we have the cultural-theory

typology, are those institutional arrangements in which none of the voices – the hierarchical call for ‘wise guidance and careful stewardship’, the individualistic emphasis on ‘entrepreneurship and technological progress’, the egalitarian insistence that we need ‘a whole new relationship with nature’ and the fatalist’s asking ‘why bother?’ – is excluded, and in which the contestation is harnessed to constructive, if noisy, argumentation.

Clumsiness emerges as preferable to elegance (optimizing around just one of the definitions of the problem and, in the process, silencing the other voices) once we realize that what looks like irreconcilable contradiction is, in fact, *essential contestation*.<sup>29</sup> From the reflexive vantage point that is afforded by our typology, and with the benefit of hindsight, it can be seen that many of our public institutions – Britain’s former Ministry of Agriculture, Fisheries and Food, the World Trade Organization, the Intergovernmental Panel on Climate Change and most national overseas aid agencies, to mention but a few – are insufficiently clumsy and, in consequence, erosive of democracy. Most policy tools (all single metrics such as cost–benefit analysis, probabilistic risk assessment, quality-adjusted life years, general equilibrium modeling etc.) and policy precepts (the insistence on a single agreed definition of the problem, the clear separation of facts and values and the focus on optimization) are similarly flawed.

It may be clear by now that clumsiness concerns both the effectiveness of attempts to tackle major social problems and the legitimacy of this process. Our clumsy hypothesis links the two, as it states that it is possible to generate widely accepted and successful solutions to social ills by constructing institutions in which all the voices are heard and responded to. This raises two pertinent questions: (1) given cultural theory’s assumption of ‘constrained moral relativism’, what should count as successful? and (2) under which institutional arrangements are clumsy solutions most likely to be generated?

People have always disagreed, and will continue to do so, about the priority that different social ills should receive, the extent to which they occur at all, what may have caused them, the manners in which they should be resolved and who should benefit most from this. But few are those who have seriously argued in favour of wholesale destruction of ecosystems, increasing world poverty, unleashing famines, creating massive flows of refugees, promoting corruption and nepotism and so on (apart, perhaps, from provocative attempts to establish freedom of speech, or as unavoidable sacrifices to reach higher goals or as means to achieve extremely nationalist, racist or religious aims).<sup>30</sup> Hence, one simple measure of ‘success’ (or lack thereof) is whether combinations of public policy, entrepreneurship and citizens’ activities have contributed to the alleviation of pressing, practical collective problems – without having caused the deterioration of any other such social ills. This is the definition that we adhere to.

We can only give a clumsy answer to the second question (the one regarding the institutions through which clumsy solutions may be best generated).

Each of the active ways of organizing lends itself to a particular preference for how clumsy solutions can be arrived at. In each particular situation, an appropriate and flexible combination of these alternative perspectives needs to be forged.

The egalitarian ideal for making ourselves clumsy would be through participatory, deliberative practices. Everybody involved should deliberate freely – from their own perspectives on the good life – until solutions are found on which all can agree. No participant in this deliberative debate should have more power resources (for instance in the form of superior rhetorical skills, more information or better training) than the others, and nobody should be aiming to promote their private interests in the public debate.<sup>31</sup> The hierarchical take on how to generate clumsiness would start from the assumption that ordinary citizens and organizations are simply not well informed or well meaning enough to be able to grasp, and balance, all these rather sophisticated, alternative rationales. Instead clumsiness can only be reached, when policy-makers and scientific experts carefully listen to ordinary folk arguing from their partial perspectives, weigh the evidence, weed out the good arguments from the bad, and then construct clumsy solutions in a top-down way.<sup>32</sup> The individualistic view would stress that clumsiness can be reached in an unplanned and antagonistic way. This view would call for checks and balances between people and organizations adhering to different rationalities. As long as the latter would be forced to respond – through the rules of the game – to each other's criticisms, and show that the accusations hurled at them are unfounded, clumsy solutions could arise in spontaneous, unintended ways, which would not require any form of consensus on any aspect of the issue.<sup>33</sup> Therefore, different ideals for how to make ourselves clumsy can be derived from the various ways of organizing and perceiving, none of which will be successful on its own.<sup>34</sup>

## Overview of the book

In this book, we illustrate the power of clumsiness in a wide range of case studies of both elegant failures and clumsy successes. The elegant failures analysed in the first part of this volume include the attempts to curb global warming on the basis of the Kyoto Protocol, the efforts to turn Nepal into a 'second Singapore' by building mega-dams in the Himalayas, the collapse of the Russian economy during its transition towards capitalism, the anti-discrimination policies followed by the Dutch government since the end of the 1960s and the global spread of laws making the wearing of safety seat belts in cars mandatory. Taken together, these cases exemplify various possible causes for a lack of clumsiness: hegemonic hierarchy (global warming, Nepali dams, seat belt legislation), rampant individualism (Russian transition to capitalism) and suffocating egalitarianism (Dutch anti-discrimination policies).

The clumsy solutions that are discussed in the second half of the book include a participatory process through which the pugnacious American gun debate might be resolved satisfactorily, the ever-changing balance of forces that keeps the Internet running, a novel way of providing water in California and the compensation of flood victims in the poorest part of Hungary. These solutions exemplify all the basic ways in which clumsiness can be achieved. The proposed resolution to the weapons debate in the United States consists of a process of reasonable deliberation among equals. The innovative method for parting the waters in California has been devised by the regulatory water agencies involved. The new plans for flood compensation in Eastern Hungary have been arrived at through combining these egalitarian and hierarchical roads to clumsiness. The flood compensation plans have been shaped in a deliberative process among the major stakeholders that has been organized and guided by academic experts. Last, the World Wide Web have achieved their current clumsiness mainly through never-ending conflicts between organizations and people with very different views on how the Internet should be organized. (By now, it should be almost needless to say that deliberation, expert planning and social conflict have played a useful role in establishing all clumsy solutions; only the relative weights of these alternative means have differed from case to case.)

In the end, the case for clumsiness rests on the idea that a limited number of collective ways of organizing and thinking exists, each with its particular strengths and weaknesses, none of which should ever be allowed to gain the upper hand. This is an old view going back to at least Weber and Mill, indeed even to Aristotle<sup>35</sup> – here complemented, and made more practical and policy-relevant, by a theory that spells out *which* collective ways of organizing and perceiving typically abound, and clarifies *how* they are dependent on each other.<sup>36</sup> All this does not entail that the notion of clumsiness can be invoked to uncover the one, true solution to a social controversy. Often, various clumsy solutions may exist, each with different distributive consequences. Sometimes, it may not be possible at all to find, or reach, any clumsy solution. Ultimately, as Émile Durkheim put it: ‘The science of opinion does not create opinion, but can only clarify it and make it more conscious of itself’.<sup>37</sup>

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## Notes

1. Niklas Luhmann, *Ökologische Kommunikation* (Opladen: Westdeutscher Verlag, 1986).
2. For example, Donald P. Green and Ian Shapiro, *Pathologies of Rational Choice Theory: A Critique of Applications in Political Science* (New Haven, CT: Yale University Press,

- 1994), p. 188; Bent Flyvbjerg, *Making Social Science Matter* (Cambridge: Cambridge University Press, 2001), p. 167.
3. Aaron B. Wildavsky, 'Choosing Preferences by Constructing Institutions', *American Political Science Review* (Vol. 81, No. 1, 1987), pp. 3–21.
4. Isaiah Berlin, *Liberty* (Oxford: Oxford University Press, 2002), pp. 44–5.
5. Mary Douglas (ed.), *Essays in the Sociology of Perception* (London: Routledge, 1982); Mary Douglas, *How Institutions Think* (London: Routledge, 1987); Michael Thompson, Richard Ellis and Aaron Wildavsky, *Cultural Theory* (Boulder, CO: Westview Press, 1990); Michael Thompson, Gunnar Grendstad and Per Selle (eds), *Cultural Theory as Political Science* (London: Routledge, 1999). This approach has also sailed under the flags of 'grid-group analysis,' 'theory of plural rationality' and 'theory of constrained relativism'.
6. Mary Douglas, 'Cultural Bias,' in *Occasional Paper* No. 35 (London: Royal Anthropological Institute, 1978); Thompson, Ellis and Wildavsky, op. cit., part 2. Manfred E.A. Schmutzer, *Ingenium und Individuum* (Berlin: Springer, 1994). Cf., Alan Page Fiske, *Structures of Social Life: The Four Elementary Forms of Human Relations* (New York: The Free Press, 1991).
7. In his classic *The Elementary Forms of Religious Life* (New York: Basic Books, 1917/1985), Émile Durkheim argued that differences in the ways in which groups of people organize interpersonal relations form the basis for the manners in which these groups differently perceive such fundamental notions as time, space, causality and morality. In present-day biology and linguistics, a similar idea has emerged, namely that the growth of cognitive skills among primates, as well as the emergence of human language, is explained by the evolution of more elaborate and flexible forms of social organization. See Frans de Waal and Peter L. Tack (eds), *Animal Social Complexity: Intelligence, Culture, and Individualized Societies* (Cambridge, MA: Harvard University Press, 2003). In any case, we buy into the view that diversity in social organization is at least one basis for the variety of human perception.
8. Here we have been following a time-honoured way of explaining cultural theory. However, this opens us up to a familiar, and quite reasonable, charge. Dimensions, properly speaking, do not serve to distinguish differences of kind – merely differences of degree. One cannot, for instance, get from a reef knot to a grannie knot by moving along some dimensions. Hence, the critique goes, how is it possible to distinguish four alternative ways of organizing on the basis of two dimensions? Put slightly differently, what justifies using the indicators 'high' and 'low' to generate four ways of organizing from the two dimensions? How high is 'high', how low is 'low'? Why not select a 'middle' as well? The most elegant (though technical) solution is set out in Manfred E.A. Schmutzer and Wyllis Bandler, 'High and Low, In and Out: Approaches to Social Status', *Journal of Cybernetics* (Vol. 10, 1980), pp. 283–99. This rigorous re-framing, in terms of cybernetics, distinguishes between 'openness' and 'closedness' (cf., low versus high grid), and between 'weak' and 'strong connectedness' (cf., high versus low group). Possible ways of organizing are then expressed in terms of a 'transaction matrix', which, it turns out, has only four solutions. These solutions match cultural theory's four ways of organizing, and are 'truly distinct types that cannot be transformed into each other unless the principal conditions are altered' (Manfred Schmutzer, personal communication). The grid and group dimensions, it appears, pick up this fourfold set of discontinuities.
9. The theory of socio-cultural viability distinguishes a fifth way of life, usually called the way of the hermit or the autonomous way of life. See Michael Thompson, 'The Problem of the Centre: An Autonomous Cosmology', in Douglas (ed.), op. cit. The way of the hermit represents not so much a way of organizing

social relations, as a way of *disassociating* oneself from social relations. As a consequence, the hermit has usually been left out of policy studies based on cultural theory – a practice that we follow here for simplicity's sake. We admit that the validity of this omission could be challenged. This matter can only be settled through further theoretical reflection and empirical research.

10. Respectively, John Adams, *Risk* (London: UCL Press, 1995); Michael Thompson, Steve Rayner and Steven Ney, 'Risk and Governance, Part II: Policy in a Complex and Plurally Perceived World', *Government & Opposition* (Vol. 33, No. 3, 1998), pp. 330–54; Marco Verweij, *Cultural Theory and Transboundary Environmental Problems: The Protection of the Rhine and the Great Lakes* (New York: Palgrave, 2000); Frank Hendriks, *Public Policy and Political Institutions: The Role of Culture in Traffic* (Aldershot: Edward Elgar 1999); Steve Rayner, 'Management of Radiation Hazards in Hospitals: Plural Rationalities in a Single Institution', *Social Studies of Science* (Vol. 16, 1986), pp. 573–91; Karl Dake and Michael Thompson, 'Making Ends Meet, in the Household and on the Planet', *GeoJournal* (Vol. 47, No. 3, 1999), pp. 417–24; Brendon Swedlow, 'Cultural Influences on Policies Concerning Mental Illness', in Dennis Coyle and Richard Ellis (eds), *Politics, Policy and Culture* (Boulder, CO: Westview Press, 1994); Steven Ney, 'The Rediscovery of Politics: Democracy and Structural Pension Reform in Continental Europe', in Robert Holzmann, Mitchell Orenstein and Michal Rutkowski (eds), *Pension Reform in Europe: Process and Progress* (Washington, DC: The World Bank, 2003); Christopher Hood, *The Art of the State* (Oxford: Clarendon, 1998).
11. In fact, the theory of socio-cultural viability assumes social life to be of a 'fractal' nature. That is to say, it assumes that the patterns that result from the interaction of the four ways of organizing at each possible level of society (e.g., families, schools, companies, ministries, football clubs) combine to form the same four ways of organizing at a higher level of society (e.g., a national system of interest representation or an international regime). For an introduction to 'fractals', see Benoit B. Mandelbrot, *The Fractal Geometry of Nature* (New York: Freeman, 1977). The full merger of cultural theory and the analysis of complex social systems is under way: Paul Tayler and Michael Thompson, *The Forces That Cause Movement* (manuscript in progress). See also Eve Middleton-Kelly, 'The Information Systems Professional as a Hermit: Of Plural Rationalities, Information Rejection and Complexity', *Innovation* (Vol. 17, No. 4, 2004).
12. Albert O. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* (Cambridge, MA: Harvard University Press, 1970); Karl Polyani, *The Great Transformation* (Boston, MA: Beacon Press, 1944); Duncan Snidal, 'The Politics of Scope: Endogenous Actors, Heterogeneity, and Institutions', *Journal of Theoretical Politics* (Vol. 6, No. 4, 1994), pp. 449–72; Philippe C. Schmitter, 'Still the Century of Corporatism?', *Review of Politics* (Vol. 36, 1974), pp. 85–131; Robert D. McKinlay and Richard Little, *Global Problems and World Order* (London: Pinter, 1986); Mark I. Lichbach, *The Rebel's Dilemma* (Ann Arbor, MI: University of Michigan Press, 1995); Giandomenico Majone, *Evidence, Argument and Persuasion in the Policy Process* (New Haven, CT: Yale University Press, 1990); Wolfgang Streeck and Phillippe C. Schmitter 'Community, Market, State – and Associations? The Prospective Contribution of Interest Governance to Social Order', *European Sociological Review* (Vol. 1, No. 2), pp. 119–38; Charles Perrow, 'Markets, Hierarchy and Hegemony', in Andrew van de Ven and William F. Joyce (eds), *Perspectives on Organizational Design and Behavior* (New York: Wiley, 1981); David Miller, *Market, State and Community* (Oxford: Oxford University Press, 1989); Amitai Etzioni, *The*

- New Golden Rule* (New York: Basic Books, 1998); Mark Granovetter, 'Economic Action and Social Structure: The Problem of Embeddedness', *American Journal of Sociology* (Vol. 91, No. 3, 1985), pp. 481–510; Jeffrey Bradach and Robert Eccles, 'Prices, Authority, and Trust: From Ideal Types to Plural Forms', *Annual Review of Sociology* (Vol. 15, 1989), pp. 97–118; Helmut Wiesenthal, 'Market, Organisation und Gemeinschaft als 'zweitbeste' Verfahren sozialer Koordination', in Raymond Werle and Uwe Schimank (eds), *Gesellschaftliche Komplexität und kollektive Handlungsfähigkeit* (Frankfurt: Campus, 2000); William Ouchi, 'Markets, Bureaucracies and Clans', *Administrative Science Quarterly* (Vol. 25, 1980), pp. 129–41; Jon Elster, 'The Market and the Forum: Three Varieties of Political Theory', in Jon Elster and Annund Hylland (eds), *The Foundations of Social Choice Theory* (Cambridge: Cambridge University Press, 1986); Adam Seligman, *The Idea of Civil Society* (Princeton, NJ: Princeton University Press, 1995).
13. Harry Eckstein, 'Cultural Science as Social Science, Rational Choice as Metaphysics', in Michael Thompson and Richard Ellis (eds), *Culture Matters: Essays in Honor of Aaron Wildavsky* (Boulder, CO: Westview, 1997), p. 31.
  14. Steven Ney and Michael Thompson, 'Consulting the Frogs: The Normative Implications of Cultural Theory', in Thompson, Grendstad and Selle (eds), op. cit.
  15. Joseph G. Morone and Edward J. Woodhouse, *Averting Catastrophe: Strategies for Regulating Risky Technologies* (Berkeley, CA: University of California Press, 1986); David Collingridge, *The Management of Scale: Big Organizations, Big Decisions, Big Mistakes* (London: Routledge, 1992); Langdon Winner (ed.), *Technology and Democracy* (Dordrecht: Kluwer, 1992).
  16. With the exception of fatalism. That is to say, while the other three forms of organizing need a minimum amount of fatalism, the reverse does not hold true. Fatalism, unlike the others, can feed on, and sustain, itself. This is, of course, the infamous 'poverty trap', or vicious circles of low trust and social capital, captured so well in Edward Banfield, *The Moral Basis of a Backward Society* (New York: The Free Press, 1958); and Robert D. Putnam, *Making Democracy Work* (Princeton, NJ: Princeton University Press, 1993).
  17. The endurance of these bureaucratic problems have recently been highlighted again: Bent Flyvberg, Nils Bruzelius and Werner Rothengatter, *Megaprojects and Risk* (Cambridge: Cambridge University Press, 2004); James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT: Yale University Press, 1999).
  18. Barry Schwartz, 'A Pluralistic Model of Culture,' *Contemporary Sociology* (Vol. 20, 1991), p. 765.
  19. All quotes taken from <http://www.earthfirstjournal.org/efj/primer/index.html> (17 November 2003).
  20. In the original: 'Die Veralltäglichsung des Charisma', Max Weber, *Wirtschaft und Gesellschaft* (Tübingen: Mohr, 1921/1972), pp. 142–8.
  21. Garrett Hardin, 'The Tragedy of the Commons', *Science* (Vol. 162, 1968), pp. 1243–8.
  22. Ian Castles and David Henderson, 'The IPCC Emission Scenarios: An Economic-Statistical Critique,' Nebosja Nakicenovic, et.al., 'IPCC SRES Revisited: A Response', *Environment & Energy* (Vol. 14, Nos. 2 and 3, 2003); Ian Castles and David Henderson, 'Economics, Emissions Scenarios and the Work of the IPCC', *Environment & Energy* (Vol. 14, No. 4, 2003).
  23. Joseph A. Schumpeter, *Theorie der wirtschaftlichen Entwicklung* (Leipzig: Duncker & Humblot, 1912).



24. Roger Bate, 'The Political Economy of Climate Change Science', in *Environmental Unit Briefing Paper No. 1* (London: Institute of Economic Affairs, 2001), available at <http://www.iea.org.uk> (21 November 2003).
25. Some qualification is needed here. Policy arguments that require water to flow uphill, say, or the sun to go round the earth, or motion to be perpetual (what a great way to mitigate the greenhouse effect!) or the moon to be made of green cheese, are unlikely to be persuasive because the scientific facts they seek to overturn lie outside the 'challengeable Pale' (the English Pale was a small area, around Dublin, beyond which the writ of English law did not run). For some indication of how that pale (which, of course, is far from fixed) can be mapped and coped with see Michael Thompson and Michael Warburton, 'Uncertainty on a Himalayan Scale: How to Save the Himalayas When You Cannot Find out What's Wrong with Them', *Mountain Research and Development* (Vol. 5, No. 2, 1985), pp. 115–35; and John Adams and Michael Thompson, *Taking Account of Societal Concerns about Risk*, Research Report 035 (London: Health and Safety Executive, 2002).
26. Paul Sabatier and Hank Jenkins-Smith (eds), *Policy Change and Learning: An Advocacy Coalition Approach* (Boulder, CO: Westview, 1993).
27. Berlin, op. cit., p. 92.
28. Michael Shapiro, 'Introduction: Judicial Selection and the Design of Clumsy Institutions', *Southern California Law Review* (Vol. 61, 1988), pp. 1555–63.
29. William B. Gallie, 'Essentially Contested Concepts', *Proceedings of the Aristotelian Society* (Vol. 56, 1956–57), pp. 167–98.
30. Cf., Len Doyal and Ian Gough, *A Theory of Human Need* (London: MacMillan, 1991); Martha Nussbaum, *Women and Human Development* (Cambridge: Cambridge University Press, 2001); Amartya Sen, *Development as Freedom* (Oxford: Oxford University Press, 1999).
31. Cf., John Dryzek, *Discursive Democracy* (Cambridge: Cambridge University Press, 1990).
32. Cf., Daniel A. Bell, *East Meets West: Human Rights and Democracy in East Asia* (Princeton, NJ: Princeton University Press, 2000).
33. Albert O. Hirschman, 'Social Conflicts as Pillars of Democratic Market Society', *Political Theory* (Vol. 22, No. 2, 1994), pp. 203–18; John A. Guidry and Mark Q. Sawyer, 'Contentious Pluralism: The Public Sphere and Democracy', *Perspectives on Politics* (Vol. 1, No. 2, 2003), pp. 273–89. For a slightly different individualistic view on how to organize clumsiness, see Christoph Engel, 'Der Egalitäre Kern des Internet', in Karl-Heinz Ladeur (ed.), *Innovationsoffene Regulierung des Internet* (Baden-Baden: Nomos, 2004).
34. At a more general level, it is difficult to see how clumsy solutions could be generated in undemocratic regimes, in which human rights are not fully upheld. Not surprisingly, we would maintain that each way of organizing comes with its own distinctive model of democracy, no one of them has the 'right' model; the essence of democracy, rather, is in its contestation. Hierarchy calls for a guardian model of democracy; egalitarianism instills a preference for a participatory model of democracy; individualism extols a protective model of democracy, which should enable individuals to carry out their own plans; and fatalism breeds a belief that democracy may be a good thing, but will not be established in this life. See Frank Hendriks and Stavros Zouridis, 'Cultural Biases and the New Public Domain: *Cui Bono?*'; and Lotte Jensen, 'Images of Democracy in Danish Social Housing', both in Thompson, Grendstad and Selle (eds), op. cit.

35. In *Wirtschaft und Gesellschaft*, Max Weber famously asserted that bureaucracies that are not made subject to democratic control or market forces will eventually derail. Weber, op. cit., pp. 815–68. John Stuart Mill wrote, in *On Liberty* (London: Penguin, 1859/2001), p. 110: ‘In politics again, it is almost a commonplace that a party of order or stability and a party of progress or reform are both necessary elements of a healthy state of political life ... Each of these modes of thinking derives its utilities from the deficiencies of the other; but it is in great measure the opposition of the other that keeps each within the limits of reason and sanity.’ Some 2300 years ago, in Book IV of his *Politics* (Oxford: Oxford University Press, 1995), Aristotle already advocated mixing alternative institutional forms and policies in order to attain the happy life.
36. To give credit, where credit is due, the first full-blown empirical study of this idea was: Frank Hendriks, *Public Policy and Political Institutions*, op. cit.
37. Durkheim, op. cit., pp. 439–40.

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# Part I

## Elegant Failures

Together, the elegant failures described in this section of the book exemplify all the possible ways in which we predict that attempts to deal with pressing social ills will founder. By ‘failure’ we always mean ‘unsuccessful in terms of the goals and norms of each and every of the four ways of life between which we distinguish’. The chapters on the intergovernmental efforts to curb climate change, on the decades-long attempts to set Nepal on the path of self-sustaining economic growth by harnessing the rivers cascading down from the Himalaya, and on the global move to increase road safety by making it obligatory to wear safety seat belts are all cases of one particular kind of failure. This is a rather common kind of failure, in which the attempted solutions have been singularly based on a hierarchical way of organizing, justifying and perceiving. The chapter on anti-discrimination measures in the Netherlands illustrates how predominantly egalitarian efforts can be utterly self-defeating. And the chapter on the Russian transition to capitalism instances the havoc that purely individualistic views and practices can wreak. We believe that these insights are of great practical importance, as we suspect that many actions by governments, businesses and civic organizations are based on a singular logic, and as we realize that much training in social science and engineering departments, as well as in business and public policy schools, is currently geared towards finding elegant solutions.

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# 2

## Is the Kyoto Protocol Merely Irrelevant, or Positively Harmful, for the Efforts to Curb Climate Change?

*Marco Verweij*

### The flawed protocol

At the beginning of November 2004, the Russian government gave up its long-standing opposition to the Kyoto Protocol. The original version of this Protocol had called upon industrialized countries to reduce their contributions to global warming by 5.2 per cent between 2008 and 2012 (as compared to 1990). Ratification of the treaty by President Putin meant that the minimum number of signatures was reached, so that the Kyoto Protocol could come into force on 16 February 2005 – some thirteen years after international negotiations on the treaty had started at the United Nations Conference on Environment and Development in Rio de Janeiro.

This international accord will not apply to the United States, the single largest contributor to global warming, as both the Bush Administration and the United States Congress have not wavered in their opposition to the treaty. This is a major drawback, as this country is responsible for about a quarter of the problem. Furthermore, the original aim of the Kyoto Protocol has been greatly reduced in a long process of intergovernmental bargaining. Ever since the text of the Protocol was agreed upon in 1997, the governments of the European Union have attempted to induce the governments of Japan, Russia and Canada to sign up the treaty. Without the participation of these countries, ratification of the Protocol would have become impossible. At first, the inducements consisted of various concessions that made it easier for these countries to meet their obligations under the accord. These carrots had sufficiently whetted the appetite of the governments of Canada and Japan by the beginning of 2004, but not of Russia. Hence, it needed a not-so-veiled threat from the governments of the European Union to block Russia's entry into the World Trade Organization to persuade the Putin government to see the wisdom of endorsing the Kyoto Protocol. In November 2004, the use of this stick had its hoped-for impact when President Putin gave the accord his

consent.<sup>1</sup> Still, the carrots-and-sticks approach has in effect cut the Protocol's original aim by more than half.<sup>2</sup> And this assumes that the United States abides by the treaty. Without the cooperation of the United States, the commitments under the Kyoto Protocol add up to a 10 per cent *increase* of the contributions that industrialized countries make to global warming.<sup>3</sup>

The arduous road to Kyoto illustrates the ineffectuality of the present approach to curbing global warming. But the problems of the Kyoto Protocol extend beyond the recurring intergovernmental squabbles over whether, and how, to implement the treaty. Even if the original, undiluted version of the Protocol had been implemented in full, it would still not have made any difference to the world's climate. Only a radically different approach to international decision-making can save the world from overheating. In this chapter it is described why this is so, what this alternative approach would look like and why this alternative is clumsy. In a nutshell, the argument runs as follows. The international efforts to slow down global warming are informed by merely one way of life, the hierarchical one. This strictly technocratic and bureaucratic approach is at the root of the many shortcomings of the Kyoto Protocol. A more effective, efficient and equitable set of alternative policies can be conceived of. These would include bureaucratic measures to unleash competitive and creative market processes in which fossil energy is quickly replaced by renewable energy, and through which poor countries are given the opportunity to locally produce and consume cheap forms of energy. This alternative set of policies would make use of hierarchical, individualistic and egalitarian forms of governance, and would achieve the policy goals of all ways of life much more than the Kyoto Protocol is wont to.

Global warming is an exceptionally difficult problem. It poses the gravest of ecological risks, and compiles all known hurdles to international environmental agreement. But first a crash course.<sup>4</sup> When the rays of the sun hit the face of the earth, heat is produced and rises up towards the sky. By burning fossil fuels, and undertaking other activities, we send a number of gases into the atmosphere that trap this heat close to earth.<sup>5</sup> Over time, this causes the average temperature on our planet to increase. Fossil fuels include oil, coal and natural gas. As a consequence, most human uses of energy contribute to global warming. When powered by fossil fuels, then driving a car, operating a plant, and heating and lighting a building, will all make the world warmer. For good measure, a number of industrial and agricultural activities add to this greenhouse effect. Methane, for instance, is a powerful greenhouse gas that is produced in the stomachs of goats, sheep and cattle, as well as by various ways of growing rice. Deforestation also releases greenhouse gases, as does the use of many fertilizers. But the bulk of the problem is the burning of fossil fuels – this accounts for some 75 per cent of all human emissions of greenhouse gases.

Human-induced global warming carries great risks. Warmer water takes up more space. A rise in global temperature will therefore lift the sea level. This

process will be accelerated by a melting of the ice caps on the South Pole. As a result of the rising sea level, small islands and low-lying coastal regions may become submerged. Rivers, lakes and groundwater will become saltier, which will threaten local agriculture. Equally important, an increase of the average temperature on earth will disrupt regional climates. Some parts of the world will get hotter, some colder, some rainier, some drier. But each climate will be affected. Not all plants and trees are able to migrate as fast as the world's climates will. Widespread destruction of flora and fauna, and further loss of farmland, may therefore result from climate-change. A wider spread of tropical diseases, such as malaria, can also be expected, as can an increase in storms and hurricanes in various parts of the world.

On top of all this, global warming might unleash forces that threaten life on a continental or even planetary scale. For instance, it might disturb the Gulf Stream that flows from the Gulf of Mexico northeast across the Atlantic Ocean, and that keeps Western Europe from freezing over. And no one knows for sure whether even a relatively small amount of global warming will not trigger an unstoppable, self-sustaining rise in global temperatures, turning earth into a sister planet of Venus.

Given these grave threats, it is maddening to realize that the problem of global warming rolls into one package nearly all the obstacles to international environmental cooperation that are laid out in the textbooks.<sup>6</sup> For a start, there is lingering scientific uncertainty over the causes and effects of climate-change. Although it is increasingly clear that global warming is occurring, there is still some room for arguing that climate-change is not taking place, or at least that it will not be as detrimental as is commonly assumed. This lingering uncertainty has fired up opponents of international collaboration on global warming.<sup>7</sup>

Another factor that hampers international action on global warming is that it is caused by so many different human activities taking place all over the world: it is a 'problem of many agents'. This lends plausibility to the idea that it may be quite costly to slow down global warming.<sup>8</sup> It also leads to the view that this is a global threat that can only be warded off by close cooperation between the national governments of all countries in the world. Yet, there are very few (if any) expensive and truly universal accords in place.

It also does not help that in the short term, global warming is a rather invisible process. There is a considerable time lag between the causes and effects of climate-change. Greenhouse gases that are being released at present will affect our climate in 20–50 years time. Intergovernmental environmental action is typically triggered by a highly visible and widely publicized ecological disaster, such as the oil spill from the Exxon-Valdez or the havoc wreaked upon the German forests by acid rain. Due to the time lag between causes and effects, no such 'luck' can befall the efforts to curb global warming.

To top things, there is the North–South stalemate. The governments of the Southern countries have a solid case. They point out that the Northern



countries have thus far been responsible for the overwhelming majority of greenhouse-gas releases – thus unilaterally inflicting environmental damage upon poor countries. Moreover, Southern countries have to cope with other, more pressing environmental problems that are much less of an issue in the North (such as soil erosion and the availability of drinking water). Of course, the people living in poor countries have fewer resources with which to slow down, and adapt to, climate-change. Hence, Southern governments have argued that it would be unfair to require them to make any immediate contributions to the prevention of global warming.<sup>9</sup> In their opinion, the North should first cut its own emissions, while enabling the Southern countries to acquire climate-friendly technology. The Northern countries, meanwhile, point out that any reductions in their emissions would be rendered entirely ineffectual if countries such as China, India and Brazil did not curb the growth of their emissions of carbon dioxide and other greenhouse gases. Especially the US Senate and the current Bush Administration have refused to endorse any international agreement that would not also legally bind Southern countries to keep the increase of their emissions within bounds.

Given these trials and tribulations, it is remarkable that the intergovernmental negotiations on the 1992 United Nations Framework Convention on Climate Change (UNFCCC) have advanced at all. Despite the extraordinarily difficult circumstances, after 13 years of international negotiations, the Kyoto Protocol to the UNFCCC came into effect in February 2005.<sup>10</sup> The Kyoto Protocol binds 'Annex B' countries (basically the member-states of the OECD, minus Mexico, but plus the Eastern European countries) to reduce the 1990 level of their greenhouse-gas emissions by 5.2 per cent between 2008 and 2012. Moreover, it instructs Annex B states to assist poor countries in acquiring climate-friendly technology.

One requirement for the Kyoto Protocol to become legally binding was that it had to be ratified by industrialized countries whose combined releases of greenhouse gases added up to 55 per cent of the world's total emissions. As the US Senate (and Bush Administration), and the Australian government under Prime Minister Howard, have been steadfast in their rejection of the pact, this rule made it imperative to overcome the opposition of the governments of Japan, Canada and Russia to the treaty. Without the support of these three states, the Protocol could not have come into force. A string of international conferences (The Hague in November 2000, Bonn in July 2001, Marrakech in November 2001, Milan in December 2003) aimed to bring the Kyoto Protocol closer to ratification by making it easier for these countries to meet their obligations under the treaty. One issue was the extent to which these countries could off-set their emissions of greenhouse gases by preserving their forests and agricultural lands. Trees and certain soils soak up carbon dioxide from the air, and thereby curb global warming. It could therefore be argued that preservation of these so-called carbon sinks contributes to preventing global warming. In Bonn, it was agreed that Japan, Canada and

Russia could count preservation of existing trees and soils towards their reduction goals. This is hardly an effective course of action, as these countries have harboured few plans to cut their forests in the first place. This form of creative accounting has in effect lowered the commitments of industrialized countries to a 2 per cent cut in their collective emissions of greenhouse gases (assuming that United States will abide by the Protocol).<sup>11</sup> Yet, even these compromises did not convince the government of Russia. It needed a European Union threat to block Russia's entry into the World Trade Organization to finally bring President Putin around. In November 2004, he finally ratified the Kyoto Protocol, which then came into force on 16 February 2005.

Despite all the consternation in The Hague, the elation in Bonn, the fatigue in Marrakech, the anger in Milan and the pressure from Brussels, it does not really matter that the Protocol has finally been ratified. The policy measures envisaged in the Kyoto Protocol are wholly insufficient, well-nigh impossible to implement, not sustainable, as well as too costly. Even if the Protocol is implemented to the letter, it will not prevent much global warming, stimulate economic growth or empower destitute people. The Kyoto Protocol cannot be considered successful from the viewpoint of any of the ways of organizing and perceiving.

The cutbacks in emissions stipulated by the Kyoto Protocol are so small as to be well-nigh insignificant. Most scientists involved believe that a reduction of at least 50 per cent in the worldwide release of greenhouse gases is needed by 2050 in order to stabilize the world's climate at the end of the century. Even if the *original*, undiluted version of the Kyoto Protocol were fully implemented, then only 8 per cent would be chewed off of a 'business-as-usual' scenario in which greenhouse-gas emissions would quadruple in the next hundred years. At this snail's pace, we would need another 29 Kyoto Protocols to stop global warming.<sup>12</sup>

The Kyoto Protocol will also be extremely cumbersome to implement. It allows for three international implementation mechanisms, encrypted as 'international trading of emission permits', 'joint implementation' and the 'clean development mechanism'. The Protocol aims to establish an international trading system of permits to release greenhouse gases. This trading system will allow parties that find it too expensive or difficult to comply with their legal obligations under the Protocol to buy extra emission permits from parties that are in over compliance. The joint implementation scheme sanctions industrialized countries to reduce their emissions of greenhouse gases through projects undertaken in other industrialized countries. An example would be the British government enabling a Polish energy company to switch from using coal to using gas (relying on the latter kind of fossil fuel would put less greenhouse gases into the air than the former). The clean development mechanism allows industrialized countries to meet their international obligations by helping developing countries reduce their

emissions. This would for instance be the case if the British government helped a Chinese energy company to start burning gas rather than coal. All three international schemes are very difficult to implement, as they require endless monitoring and complex calculations.

International emissions-trading is a politically explosive plan. The aim of this plan is to reduce the overall costs of implementing the Kyoto Protocol by making it possible to cut back greenhouse gases where it is cheapest to do so. At first sight, this may seem a reasonable idea, but its implementation is fraught with difficulties. David Victor has spelled out the international conflicts that emissions-trading invites.<sup>13</sup> Huge amounts of money are at stake. Permits to release greenhouse gases will be allocated between almost forty governments. Victor's estimate of the total value of these permits comes to more than \$2 trillion – by far the largest creation of assets ever. As a consequence, even the slightest change in the rules of the trading system could cost individual countries billions of dollars. The current allocation of permits has partly been based on expectations regarding the future economic growth of countries. International conflicts could easily arise when these predictions turned out to be wrong. Under the trading system, countries with an unexpectedly low economic growth will be rewarded for their poor economic performance with the opportunity to sell unused, 'left-over' pollution permits on the international markets. Countries that are economically more successful than foreseen will be punished by having to acquire more pollution permits. According to Victor, such developments could easily lead to calls for renegotiations of the trading rules. A first thorny issue has already cropped up. Since 1990 the Russian economy has imploded, and its emissions of greenhouse gases have sharply fallen. As a result, Russia cannot avoid meeting its emission standards under the Kyoto Protocol even if it tries to do so, and will have many emission permits on offer. If foreign governments or companies decide to buy these permits (as now looks highly probable), then the Russian state will receive tens, maybe hundreds, of billions of dollars for which it will not have undertaken any measures against global warming. (The opportunity to receive all this money for nothing made the long-standing opposition of the Russian government to the Kyoto Protocol all the more remarkable.) It is not unlikely that such windfalls will stir up discontent among the countries that will end up paying for them. In this vein, allocation of pollution permits between countries could easily set off international conflicts.

On top of this, the international trading scheme is expensive to implement.<sup>14</sup> The Kyoto trading-system allocates permits to pollute among states. But most governments of industrialized countries (including the European Union and Japan) will also allow individual companies within their jurisdictions to sell and trade emission permits. Under these national and regional schemes, it will be necessary to monitor how many greenhouse gases *each participating company* is putting into the air. Only with this knowledge will

governments have a basis for dividing emission permits between domestic enterprises, and for judging whether individual firms are in compliance. This never-ending monitoring will also be necessary for firms themselves, as it will tell them whether they need to buy emission permits or whether they can sell permits. The transaction costs of permit-trading will therefore be substantial.<sup>15</sup> Moreover, it is not clear which organizations should undertake all this monitoring. It would be quite expensive for governments to tackle this task by themselves. But if governments relied on self-reporting by firms, then they would open the door to cheating and fraud. Last, trading in emission permits will penalize firms that are unexpectedly successful and competitive, and reward enterprises with an economic performance that is below par. Any allocation of pollution permits among companies will have to be based not only on the present size of firms, but also on their *expected* future market share. Gauging the future growth of each individual firm in an economy is not only expensive, but is also a highly uncertain undertaking. (To be convinced of this point, one only needs to recall the sudden bankruptcy of American energy giant Enron in December 2001.) It could easily lead to endless discussions, and severe tensions, between the authorities responsible and the companies involved. Emissions-trading is typically lauded as a 'market solution' to the problem of global warming. Yet it punishes states and firms that are economically more successful than average, and rewards the rest.<sup>16</sup>

One major obstacle to the joint implementation and clean development mechanisms goes by the innocuous name of 'baseline establishment'. A guiding principle of both schemes is that governments should not reduce greenhouse gases by sponsoring projects that would have been carried out anyway. To pursue the earlier example, the British government should not meet part of its Kyoto obligations by helping Polish or Chinese energy companies to switch from coal to gas, if these enterprises had planned to do so anyway. As a result, for every project under these two international schemes a 'baseline' would have to be established. This baseline would predict what the future greenhouse-gas emissions of the company involved would have been, if the firm had *not* received foreign funding. The difference between the baseline emissions, and the future emissions that are expected to result from foreign aid, would then count towards the reduction goals of the sponsoring foreign country. But it appears well-nigh impossible to agree on baselines. These estimates need to take into account the future developments of too many random factors, such as interest rates, energy prices, production technologies and management strategies. When a workshop on 'baseline establishment' was held at the Organisation for Economic Co-operation and Development (OECD) in the Spring of 2001, the participating experts could not reach consensus on any issue.<sup>17</sup>

Another major stumbling block to joint implementation and the clean development mechanism is moral hazard.<sup>18</sup> Both parties involved in any project under these schemes have a financial incentive to overstate the

amount of emission reductions that will actually take place. By exaggerating, the buyer of emission reductions would be able to claim more reductions than it has paid for. The seller of reductions could make money by claiming that it has undertaken the environmental measures that it was supposed to put in place, without actually having done so. Therefore, some form of oversight on the proper implementation of these two schemes must be exercised. Unfortunately the vast majority of projects is supposed to take place in developing countries and in countries that once belonged to the Soviet bloc – regions that are not particularly well known for their smoothly running police, legal and administrative institutions. So, apart from the extensive administrative costs that continuous monitoring would entail, joint implementation and the clean development mechanism would also risk widespread cheating.<sup>19</sup> Besides being rather unambitious, the Kyoto Protocol is therefore also quite impractical.

Furthermore, it is doubtful whether the Kyoto Protocol could ever be expanded. This is because any expansion would depend on the willingness of a very large number of governments to cooperate. Its supporters have defended the Protocol as a ‘first step’. But that first step was only concluded 13 years after the UNFCCC had been agreed upon, and subsequent steps seem actually harder to make than this first one. Further steps would necessarily have to include the United States (as the largest current emitter of greenhouse gases) as well as developing countries (as their emissions are expected to rapidly rise in the near future). But almost all developing countries have refused to accept the slightest hint of future obligations, whereas the US Senate and the Bush Administration have stated time and again that they will not support any treaty that leaves developing countries off the proverbial hook. Underlying the tensions between the governments of the United States and the Group of 77 (G 77) (developing countries) are not only huge financial interests, they are also opposing moral perspectives on who is responsible for the global inequalities in wealth, and what, if anything, should be done to remedy this.<sup>20</sup> The American government has tended to take a more individualistic stance, according to which countries themselves are responsible for their plight. The G 77 has tended to view the world economy in egalitarian terms, in which structural power inequalities combine to make the rich richer and the poor poorer. In particular, the government of Brazil has frequently taken the latter stance, and has viewed the issue of climate change as a unique opportunity to reduce income inequalities around the world.<sup>21</sup> The tortuous history of the United Nations Conference on Tariffs and Trade (UNCTAD) shows how difficult it is to resolve these fundamental normative differences in intergovernmental fora. It is therefore not surprising that the head of the diplomatic team from one of the most influential developing countries confided in an interview that in his view ‘there will not be a second commitment period’. This is Protocol-Speak for saying that international agreement on further measures under the

Kyoto Protocol will not be possible. And even if all current disagreements could miraculously be overcome at a certain point in time, it would merely take a change of heart among China's rulers, or an economic downturn in Europe, or the election of US president with different priorities, to put the whole intergovernmental process at risk again.

Last, but certainly not least, the Kyoto Protocol is too expensive, in that it is not centrally concerned with the development of new technologies and energy resources that might bring down the costs of combating global warming. The main policy instruments that have been discussed at the international negotiations do nothing to speed up the development and use of climate-friendly technologies. The 'command-and-control' policies that were preferred until a few years ago by the European Union are notorious for not stimulating technological change. At best, these policies instruct firms to buy the greenest existing technology. But they do not spur companies on to use their knowledge and creativity in a risky effort to develop novel technologies and energy resources that are both profitable and emit less greenhouse gases.

Contrary to popular belief, it is not at all clear whether 'emissions-trading' (originally championed by the Clinton Administration, and accepted by the European Union some years ago) fares much better. Emission-trading may perhaps allow reductions of greenhouse gases to occur in those places where they cost least. But it may not promote much technological improvement. Proponents have argued that emissions-trading will stimulate technological change by making it more profitable for firms to develop and use cleaner technologies and energy resources.<sup>22</sup> Opponents have argued that such a scheme will not lead to technological breakthroughs. In their eyes, it would only entice large, profitable corporations that emit a lot of greenhouse gases to buy off their pollution by acquiring extra permits, rather than to commit themselves to the more slippery slope that may lead to technological innovation.<sup>23</sup> Having paid a lot of money for extra pollution permits, companies will be less inclined to take on the risks involved in developing and applying cleaner technology. The empirical evidence on this question is actually mixed.<sup>24</sup> In any case, the point is rather moot given the many diplomatic and practical problems that make emissions-trading well-nigh impossible to achieve.

To summarize, we have now had 13 years of protracted diplomatic battles (mostly fought out by people with the best of intentions) to produce a fragile, inadequate and costly treaty on global warming that is not being implemented.<sup>25</sup> Has all of this been in vain? Not entirely. The international negotiations have greatly raised people's awareness of the threat, and this is a vital pre-condition for any solution to global warming. Still, the Kyoto Protocol is not at all satisfactory from any view on policy and justice. Its proponents often attempt to silence critics of the Protocol by asserting that 'there is no alternative'.<sup>26</sup> Fortunately, they are wrong.

## The alternative

An effective, cheap and equitable solution to the threat of global warming would be based on the following principles. *We need to develop and apply novel technologies and energy resources that do not emit greenhouse gases (and, where possible, solve other environmental problems as well) and that are also cheaper than existing technologies and energy resources. International cooperation should not be overly formal, and should be concerned first and foremost with stimulating such technological change.* In the rest of this chapter, I argue why this is feasible, how it can be done and what role international coordination should play. For the moment, please suspend your disbelief and consider the advantages that this plan would bring if it were achievable.

The proposal is 'Y2K (debacle) proof'. Even if it turned out that the present concerns over climate change were greatly exaggerated, then the development of cleaner and cheaper technologies and energy resources would still be beneficial. Since it would lower the costs of energy, it would obviously bring about economic advantages. In addition, this scheme would lessen, or even cut entirely, the world's dependence on the oil-producing countries (as substitutes for fossil fuels would become economically attractive). This would make it only easier for democratic countries to stop supporting tyrannical regimes in the Middle East. And it would make the economies of the world less vulnerable to the vagaries of fluctuating oil prices and politics. Plus, increased use of alternative forms of energy would sometimes help out with solving other environmental problems, such as acid rain and water pollution.<sup>27</sup> A renewable revolution would also increase employment, as more people are typically needed to produce renewable energy than are required for fossil energy.<sup>28</sup> If feasible – and you have agreed to suspend your disbelief momentarily – then this would be a no-regrets policy.

Furthermore, the proposal taken up in these pages would meet all the basic objections that have been made over the years by the diplomatic teams of the United States, the European Union and the developing countries. The United States has continuously complained that the costs of curbing climate change are too high. This is why the representatives of the Clinton Administration insisted on creating international markets in pollution permits – these were supposed to lower the costs of curbing global warming. This concern also appears in President Bush's rejection of the Kyoto Protocol: 'For America, complying with those mandates would have a negative economic impact with layoffs of workers and price increases for consumers'.<sup>29</sup> The plan advocated here would assuage these concerns in another way. It would involve an all-out effort to make the fight against the greenhouse effect profitable by lowering the costs of energy.

For many years, the European Union balked at the creation of international markets for emission permits. The many monitoring problems that are involved in the creation of such markets made the European governments

wary of such a scheme. Moreover, they argued that countries have a moral imperative to clean up the mess that they have made within their own borders. In July 2001, in Bonn, the European Union grudgingly accepted a more widespread use of international emissions-trading, as this was the only way in which it could prevent the governments of Japan, Australia, Russia and Canada from copying President Bush's rejection of the Kyoto Protocol. The proposal defended here sidesteps this whole issue, as it does not rely on international emissions-trading. As a consequence, the proposal would also save on transaction and administrative costs, as well as avoid moral hazard.

The leaders of the developing countries, for their part, have rightly pointed out that most greenhouse gases have been released within rich countries, and they have protested about the environmental damage that the Northern states have thus unleashed upon the South. These governments have also argued that they are too poor, and have to deal with too many other environmental threats, to be able to contribute significantly to any solution of the climate-change issue. If the Northern countries want to prevent the economic growth in the South from contributing massively to global warming, then the former had better start paying up. This proposal pre-empts these objections as well. An all-out attempt to develop cheaper and cleaner energy resources would have to be initiated within affluent countries. One major way in which renewable energy can be made cheaper is by expanding current RD&D (Research, Development and Demonstration) levels. Thus far, almost all energy RD&D has been undertaken in rich countries, and only they have the financial means to significantly increase current budgets. The production costs of renewables could also be reduced by increasing the size of the plants in which the equipment for renewable energy is produced (so as to achieve benefits of scale).<sup>30</sup> Again, it seems that only the governments, companies and banks of affluent countries would have the financial clout to make this possible. By lowering energy prices in these ways, industrialized countries would already be helping the citizens of the Third World. They could even do more through assisting developing countries in their attempts to leap-frog to the latest technologies. This could entail aiding developing countries to set up their own energy RD&D centres, helping them to acquire their own production facilities for renewable energy, providing training and information, and so on. This show of international solidarity will be even more impressive when one realizes that many developing countries stand to benefit more from a renewable revolution than affluent ones do. The development of cheap forms of biomass, solar energy and batteries would negate the need to construct large-scale electricity grids, as it would enable individual households and villages to produce their own energy. This would be a great boon to the vast areas in the developing world that are at present without electricity grids. Furthermore, the many poor countries that receive a lot of sunshine would benefit disproportionately, since it would be cheaper to produce solar energy



in these regions than in the many affluent parts of the world that are afflicted by cloudy and rainy weather. In these various ways, the proposal laid out in this chapter also caters to the wishes of the Southern states.

The proposal would also ease the existing diplomatic tensions by greatly reducing the number of states that have to take part in the initial stages of the struggle against global warming. In The Hague and Bonn an impossibly large number of governments were negotiating with each other. Increasing RD&D budgets for energy would not involve a large group of countries, as only nine countries carry out more than 95 per cent of the world's energy RD&D.<sup>31</sup> Of course, other affluent countries should also do their bit, especially the newly industrialized countries (such as Singapore and South Korea) and developing countries with fast-growing economies (such as India, Brazil and China). Yet, this would still leave a rather limited number of countries. In addition, expanding production capacities, and achieving benefits of scale, could be undertaken within a single country, even one as small as The Netherlands.<sup>32</sup> Therefore, the plan laid out here would trim the number of involved governments to more reasonable proportions.

Moreover, not one of these countries, not even the United States, would be absolutely vital for this effort. A policy that stimulates the search for production processes and for forms of energy that are cheaper and cleaner mixes public with private goods. Its public goods aspect would mean that part of its benefits will accrue to the people who have not pitched in. Lower energy prices and fewer greenhouse gases would benefit all, including those who have not contributed to climate-friendly technology. Free-riding, from a Northern perspective; the repaying of a historic debt so far as the South is concerned. But either way those countries and companies that have been at the hub of the efforts to stimulate technological change would benefit more than the states and firms that have chosen to remain at the sidelines. In the field of energy there is a clear 'first-mover advantage'. If, for instance, British Petroleum were to engage in a serious search for renewable energy-resources that are economically viable, and were to be successful at that, then the company would enjoy a tremendous advantage over its slacking competitors in the world's energy markets. This competitive edge would also benefit the citizens of the various countries in which these companies have their main offices somewhat more than the populations of other places. (An increased market size of British Petroleum would bring more jobs and tax revenues to London than to Texas. A growth of Texaco would do the opposite.) Two things follow from this. If a country or enterprise decided not to support climate-friendly technology, then it would not undermine any collective enterprise. Furthermore, governments would be foolish not to climb on board.

In addition, the proposal would reduce the extent to which international agreement on global warming is needed, and would do away with much of the debilitating formality of the ongoing intergovernmental dealings. A

focus on technological change would not necessarily require an official international treaty. What would be needed most is a pledge to promote climate-friendly technology. This can be done through increasing national RD&D budgets, mobilizing capital, adapting infrastructure, shifting taxes and subsidies, training installers and maintenance engineers, engaging in a dialogue with firms and citizens' groups, encouraging local governments to organize the production of renewable energy and the like. As these policies would serve the self-interests of the countries involved, they would not necessitate large amounts of formal international cooperation. For reasons discussed at the end of this chapter, it would certainly be helpful if at least a handful of industrialized countries simultaneously decided to support renewable energy, and this would entail various forms of international coordination. But none of these forms of cooperation would have to be enshrined in global treaties.

In effect, the plan proposed here kills a flock of birds with one stone: it greatly diminishes the number of states that need to be involved in the struggle against global warming; it avoids making the success of this struggle dependent on the continued support of any of these countries, it provides strong incentives for each of these states to contribute to the struggle, and it reduces the extent to which this struggle needs to be coordinated internationally.

Last, this plan would make 'technology transfer' a much more feasible option. As presently conceived, technology transfer is very much a top-down undertaking. Present plans call for estimates of the future 'technological needs' of developing countries,<sup>33</sup> as well as assessments of how much these countries should receive in compensation for using the latest clean technology.<sup>34</sup> Again, this seems a rather dubious and overly technocratic project. If cheaper and cleaner energy resources and technologies became available, then the governments and companies in the South would have a strong incentive to acquire these themselves. Of course, such technological progress would not be a panacea for the spread of cleaner practices. It would not make the adoption of new technologies and energy resources by Southern companies automatic and instant. A large role for governmental action would still exist, in the form of capacity-building, demonstration projects, spreading the word, adapting institutions and infrastructure, providing credit and so on. Development assistance could, and should, support these actions. But the diffusion of clean technology would be a lot easier under this scheme, as it would be in the financial interest of companies and governments everywhere to employ the latest technology.

By now, it will hopefully be clear that without widespread technological progress, it will be well-nigh impossible to curb global warming through international action (or, for that matter, through any kind of action). With such progress, halting global warming would not be ensured, but it would certainly be a great deal easier. This leaves at least one big question hanging

in the air: is it possible to develop new technologies and energy resources that do not emit greenhouse gases and that are cheaper than existing alternatives?

## **The rise of the renewables**

Many opportunities to create 'win-win' situations abound in the attempt to prevent global warming. A lot of money can instantly be saved through increasing energy efficiency. In 2000, two of the world's largest environmental organizations each started to work with an assortment of enterprises that wanted to reduce their emissions of greenhouse gases, as well as their energy bills. In each case, the environmental organization provided firms with the latest know-how on how to save energy, and worked with the companies to tailor this knowledge to their particular circumstances. In return, the environmental organization was allowed to apply the lessons thus learned in its work with other firms. It also offered an independent assessment of the cutbacks in greenhouse gases that have been achieved by the corporations, as well as free publicity. Seven major companies from North America and Western Europe have pledged Environmental Defence to cut back their emissions in this way. Other major corporations have signed up to a similar program run by WWF. These enterprises are already environmental leaders within their diverse packs. Moreover, they have committed themselves to cutbacks that match or surpass the goals set out in the Kyoto Protocol. Households too can spare the climate and their purses by doing such simple things as switching to double glazing and fluorescent light bulbs. Both companies and households therefore have a variety of opportunities to save money and the use of energy. A recent report by the Oak Ridge and Lawrence Berkeley National Laboratories estimates that the United States could meet all obligations it would have under the Kyoto Protocol by just implementing energy-efficiency measures.<sup>35</sup>

In agriculture, various ways exist in which to make money by cutting back the emission of greenhouse gases. A more diverse diet for goats, sheep and cattle, as well as greatly reducing their release of methane, would also increase their production of milk.<sup>36</sup> And by growing more crops within rice fields, farmers can increase their production and income, while lowering their contribution to the greenhouse effect.

But renewable energy resources, such as solar, water, geothermal, biomass and wind energy, offer the greatest opportunities to turn the fight against global warming into a lucrative business. Their prices have come down considerably in recent years.<sup>37</sup> Wind energy stands poised to become fully competitive. State-of-the-art wind plants currently produce electricity at about \$0.05 per kilowatt-hour (kwh), or six times as efficiently than was the case in 1980. This means that only the breadth of a hair now separates the costs of wind energy from the expenses incurred when using other forms of energy. And expectations are that – due to the development of more efficient rotor

blades – the costs of wind energy will fall by another 20–30 per cent in the next few years.<sup>38</sup> Even the International Atomic Energy Agency has admitted that wind energy will shortly be fully competitive in the strictest economic sense with fossil and nuclear power. Hydro energy is making a strong come back after the disastrous experiences with building mega-dams in a variety of poor countries during the 1970s and 1980s.<sup>39</sup> In many parts of the world, water has long offered an inexpensive and reliable source of energy. All of Norway's energy needs are provided for in this way. But many of the huge water dams that were built in the past ruined ecosystems and forced large amounts of people off their lands. The latest hydro plants also come in small and medium versions, and can be located in places where they do not severely affect ecosystems (such as offshore). This has greatly increased the attractiveness of water energy.<sup>40</sup> Energy from geothermal sources (i.e., heat from the earth) has steadily become cheaper as well.<sup>41</sup> Its production costs have decreased by 25 per cent over the past two decades, and currently come to \$0.05–0.08 per kwh. This means that geothermal energy is very close to being competitive with fossil fuels. Moreover, the US Energy Department, working in tandem with the geothermal industry, has pledged to reduce the costs of geothermal energy to a mere \$0.03 per kwh in the next decade. This would make geothermal energy cheaper than fossil fuels (given the stagnant production costs of the latter).<sup>42</sup> Both forms of solar energy have also come a long way. Solar thermal energy uses the heat provided by the sun to generate electricity and heating. Since 1980, production costs have come down from \$0.40 to around \$0.08 per kwh, and are widely expected to keep falling. One major advantage is that this renewable energy can easily be transported over long distances, for instance from the deserts of North Africa to Southern and Western Europe. Photovoltaic (PV) solar energy does not rely upon the heat emanating from the sun, but instead transforms daylight into electricity. Hence this second type of solar energy can also be produced when it is cloudy (although production is more efficient, and therefore cheaper, under sunny conditions). The costs of generating electricity with PV solar cells have been reduced by a factor of 70 (*sic.*) during the last 20 years. It is already profitable to solely rely on PV energy in many poor, but sunny areas.<sup>43</sup> This is possible, as the use of PV enables these areas to avoid the construction of an electricity grid. Moreover, anywhere in the world, PV systems to generate heat and power can serve as walls and roofs of houses. The costs of doing so are usually not much higher than the costs of using traditional construction materials. In addition, the resulting energy costs for households are lower. This novel way of constructing houses is therefore already cost effective in many regions.<sup>44</sup> Admittedly, a further three- or fourfold cost reduction will be needed to make solar energy fully competitive in all parts of the world, and for all possible appliances. But the tremendous reduction that has already been achieved during the last two decades strongly suggests that this is feasible. The fact that the production process of PV systems is still

semi-manual only strengthens this belief. A 1996 report by consultancy firm KPMG concludes that *even with then current technology* photovoltaic systems would already be competitive if only the scale of production were greatly expanded.<sup>45</sup> As PV technology is constantly being improved as well (in particular with the introduction of thin film technology), great expectations exist for making PV energy cheaper than fossil energy.

With the prices of renewables coming down, demand is going up, making it increasingly possible to reap economies of scale, invest more in research, development and demonstration and to lower the prices of renewables even more. In Germany, several energy companies now offer electricity that is solely derived from renewable energy resources and that is only slightly more expensive than electricity from conventional sources. In the United Kingdom, the Royal Society for the Protection of Birds (the largest wildlife federation in Europe) offers a similar deal together with a Scottish energy company.

In the transport sector, things have also been moving fast. Almost all major car companies are planning to be able to mass-produce affordable electric cars that are powered by fuel cells rather than by batteries by the end of this decade.<sup>46</sup> When fuelled by various forms of biomass, these cars would not need to contribute to the greenhouse effect.<sup>47</sup> The costs of biomass have been halved during the last 20 years, and are expected to dwindle to the production cost of gasoline in some 10–15 years time.<sup>48</sup> Switching to biomass as the main source of transport fuel also offers a unique opportunity to overcome the many financial problems that have beset the agricultural sectors in North America and Europe for a long time. Various competitive forms of biomass can be grown on farms. The so-called C-4 plants are particularly suitable: they come in 17,000 varieties; have a high yield; include species that are native to East Asia, North America, South America and Africa; require little fertilizer; and use half the water needed to grow traditional agricultural and forest plants.<sup>49</sup> When grown in a sustainable manner (!), then the use of these forms of biomass in cars would not add to global warming. Other affordable forms of biomass include municipal waste and industrial residues. Using these sources of energy would have the added advantage of making a dent in the garbage heaps that modern societies produce. Of course, oil companies and countries could attempt to thwart these developments by constantly lowering their prices. However, the production costs of biomass are expected to fall below the production costs of oil in not more than a decade. Oil producers will therefore soon find it more profitable to redirect their investments into the direction of biomass rather than to keep on cutting into their own prices and profits.

And even if biomass were not to work out, then other clean alternatives to oil might. Fuel cells can also be fed with hydrogen. Cars running on hydrogen would only produce drinking water as a by-product. Due to the fact that hydrogen is a renewable fuel that can easily be stored and transported over

long distances (and hence lends itself well to mass production on specific sites), almost all major energy and car companies have started to invest in the production and use of hydrogen.

In southern France, a small company led by a former Formula One engineer is presently trying to follow up on a completely different hunch. It is trying to construct a car that runs entirely on compressed air. It claims that this car would have a maximum speed of 110 kilometres (km), a range of 300 km, a recharge time of three minutes and the same size as present models. Recharging would only cost a few pounds/dollars/euros. At the time of writing, it is not at all clear whether this company will be able to live up to its promises, although it claims to be ready for mass production in the next few years.<sup>50</sup> However, *if* the company were successful, then a major technological break-through (with far-reaching economic, political and strategic implications) would have been achieved.

Not all countries have equal endowments of renewable energy sources. Some regions have more wind, others more intensive daylight, yet others more geothermal sources or more water power. The renewable energy mix that can be tapped into differs from country to country, and even from locality to locality. But virtually all parts of the world will be able to fulfil their needs for electricity and transport with the help of renewables.<sup>51</sup> For instance, three-quarters of the total current need for electricity in rainy and cloudy the Netherlands could already be satisfied with PV solar energy.<sup>52</sup> Two-thirds of Europe's electricity could come from offshore wind energy parks by 2020.<sup>53</sup> Geothermal energy alone has the potential to supply half of the electrical power needs of the United States.<sup>54</sup> The mind boggles at the opportunities that exist when regions start to combine different renewables.

At this point several widely dispersed counter-arguments often pop up, which need to be addressed.<sup>55</sup> Sceptics routinely argue that the production of renewable energy would take up too much space. This argument does not take into account that the production facilities for fossil energy also occupy a lot of territory. Just think of the large swathes of land that coal mines, oil fields and refineries and nuclear reactors gobble up. In addition, it is often asserted that renewable energy is 'intermittent', and thereby fatally wounded. (Familiar complaints include: 'at night, the sun does not shine'; 'the wind does not always blow'.) Fortunately, these assertions are also not valid. The intermittent nature of renewable energy can be overcome by (1) relying upon a variety of alternative renewables; (2) combining the power generated by wind parks from different locations; (3) the possibility to transport solar thermal energy, geothermal energy, biomass and hydrogen over large distances; and (4) further improving the technology of storage batteries. Wind energy is frequently lamented for the environmental hazards that it supposedly leads to. Windmills, it is said, alter landscapes and kill birds as well. The former complaint can be met whenever it is possible to build wind farms offshore (which is also economically more attractive, as the

wind blows more regularly and stronger on open water than on land). Furthermore, the latest wind turbines are often designed by leading designers, such as Sir Norman Foster (the architect of the new Reichstag in Berlin), and the F. Porsche design center. The latter lament can somewhat be pre-empted by not locating wind farms on routes chosen by migratory birds. Most importantly, though, one needs to realize the choice that is at stake. If our electricity needs are not nourished by renewable energy, then they are likely to be met by fossil energy. The ecological problems caused by the use of renewable energy pale into comparison with the air pollution, climate change, deforestation and other environmental ills that fossil energy brings about.

The rise of the renewables is all the more impressive given the low priority these energy resources have been given over the years. Over 60 per cent of *all* energy RD&D undertaken around the world during the last 40 years has been spent on developing nuclear energy. In sharp contrast, a meagre 6 per cent has been used to support renewable energy.<sup>56</sup> As we now know, the nuclear industry has not been able to offer convincing answers to the questions of what to do with nuclear waste, and how to clean up nuclear plants that are no longer in use. As a consequence, nuclear energy has widely been rejected in both North America and Western Europe. It would indeed not be far-fetched to believe that we would never have found ourselves into the current mess in the first place (or at least not to this degree), if the great majority of the world's energy RD&D had not been used to fatten the white elephant called nuclear energy.<sup>57</sup> A more balanced allocation of funds would surely have made the renewables much cheaper by now.

Surprisingly perhaps, this misallocation of funds is still going on. Despite all the rhetoric to the contrary, the public and private funds spent on researching and developing new forms of energy have actually declined in recent years. The painstaking research of James Dooley and his colleagues at the Pacific Northwest National Laboratory has shown that the world's public and private sector investments in energy RD&D have been cut significantly during the last decade.<sup>58</sup> Moreover, due to worldwide privatization of energy markets, energy RD&D has increasingly been shifted away from fundamental, long-term projects with distant and insecure pay-offs to low-risk, market-oriented projects. In 1999, in the United States, the Federal Government alone poured about \$40 billion into military RD&D each year, while both the private *and* public sectors in America sprinkled a mere \$4.4 billion on energy RD&D.<sup>59</sup> This misallocation of funds borders on the absurd, given the worldwide superiority of the US military and the very large contribution of America to the greenhouse effect. On the bright side, this misallocation strongly suggests the tremendous potential that renewable energy holds. Starved of funds, the renewables have already gained considerable ground. With a more substantial dose of financial fertilizer, they will bloom.

Combating climate change will certainly not be painless. A lot of money will have to be spent on breaking our allegiance to fossil fuels. Some industries and regions will suffer and decline as a result. Much infrastructure will need to be changed, and this will be expensive too. But if it were possible to make renewable energy resources cheaper than fossil fuels, and to adapt our modes of transport and production to these novel forms of energy, then we would save ourselves a literally unending stream of money. This point has been overlooked by those who have estimated that the costs of curbing global warming will range in the trillions of dollars.<sup>60</sup> Yet it remains fully attainable to sink the costs of renewable energy below the costs of energy generated from fossil fuels through a process of 'creative destruction'.<sup>61</sup> As even the International Energy Agency (a traditional ally of fossil-energy producers) now admits, this is a realistic goal in view of the impressive progress that the renewables have already made during the last 20 years – against all odds.<sup>62</sup>

One reason for why the Kyoto Protocol is not just ineffective, but even harmful for the global efforts to curb global warming, is that it institutionalizes the belief that preventing climate change will be a hugely expensive and a highly problematic undertaking. This induces governments to erroneously believe that vast national interests are at stake at the climate-change negotiations, which need to be vigorously defended. As a result, only minimal international obligations, and weak domestic policies, are put into place.<sup>63</sup> Another of the Protocol's fatal flaws is that it provides governments with a fig-leaf with which to cover up their inaction on climate change.

## **A snowball against global warming**

The rise of the renewables might perhaps suggest that market processes by themselves will save us from global warming. It appears that in some 10–15 years almost all forms of renewable energy will have become cheaper than fossil fuels, which will then set off a rapid increase in the use and production of renewable energy. The catch is that these developments may come too late, if not spurred on by governmental action. All energy and oil companies have made massive investments in the production of fossil fuels. These enterprises would like to see a full return on these investments, and therefore face a strong temptation to slow down the switch to renewable energy. They could do so by refusing to throw their financial might and expertise behind the further development and production of renewable energy. This is important, as for now only the big oil and energy companies have the financial clout to expand plants for the construction of solar panels to the size at which PV energy would become competitive. Another way would be by lobbying policy-makers so as to keep existing subsidies for fossil fuels intact. (One week after the governments of the European Union claimed a moral victory over the United States at the climate change conference in Bonn in July 2001, the same governments decided to renew their massive coal



subsidies for another ten years, instead of phasing them out)<sup>64</sup>. The fact that the energy and oil markets are still rather oligopolistic (despite deregulation) makes it easier for energy and oil companies to block any renewable revolution. The unwillingness to invest in renewable energy also extends to major banks and financial corporations. In particular in Europe and Japan, banks hold large amounts of the shares put out by energy and oil companies. These banks, therefore, have a financial interest in allowing energy and oil enterprises to obtain a full return on their huge investments in fossil fuels, instead of financing a shift towards renewable energy.<sup>65</sup> The capital that is needed for large-scale production of renewable energy has thus far not been forthcoming – despite, for instance, the findings of BP Solar that even with current technology PV energy would be fully competitive if only produced at a much larger scale.<sup>66</sup> A recent study of the Dutch National Institute of Public Health and the Environment recognizes the enormous potential that renewable energy holds. Still, the study shows that if the international energy markets were left to themselves, the introduction of renewable energy would probably proceed too slowly to prevent high levels of global warming.<sup>67</sup> It is therefore vital that governments actively seek to increase the pace at which renewable energy is developed and taken up. They have many means at their disposal to do so.

Right away, governments should vastly increase their expenditures on renewable energy RD&D. A couple of principles need to be followed when doling out this extra money. First, increased public funding should not diminish private investments in renewable energy RD&D. Second, it is vital not to put all public eggs into one basket. This was the principal mistake of post-war energy policy around the world, gambling everything on nuclear energy. A wide variety of renewable energy resources and novel technologies should be supported. Forms of energy and technology that would not only be climate friendly, but would also alleviate other environmental problems as well, should be promoted in particular.<sup>68</sup> Third, it is imperative not to channel all public funds through a single department or organization. Allowing a diversity of departments to allocate funds for energy RD&D would be another check on organizational myopia. Given the rapidly accumulating evidence of climate change, there is no time left to raise and nurture any more white elephants.

Governments can also do much to stimulate private investments in energy RD&D. Moral persuasion can play an important role. Many empirical studies have shown that especially in Western Europe and Eastern Asia corporations are not single-minded profit-seekers without any regard for the environment.<sup>69</sup> When corporate leaders in these countries are offered conclusive evidence that their companies pollute the environment, they often attempt to change their ways. Therefore, engaging in a dialogue with industry leaders and environmental activists on the need to develop forms of energy and technology that do not emit greenhouse gases may make an impact.

But it will not be necessary to merely tread softly. A big stick can also be wielded by governments interested in curbing climate change. The energy prices on the world markets are neither divinely ordained, nor the natural outcome of unperturbed market forces. Energy prices are heavily influenced by existing infrastructure for producing, distributing and consuming energy, such as electricity grids. They are also dependent on many public institutions, including government regulation of energy markets, patenting rights, as well as taxes and subsidies. All of this gives governments quite a bit of influence over energy prices. At present, many government regulations and much infrastructure still rig the competition in the energy markets in favour of fossil fuels. For example, governments all over the globe each year spend some \$300 billion on subsidies for fossil fuels.<sup>70</sup> The European Union alone sponsors the use of the most polluting fuel, coal, with an annual \$10 billion.<sup>71</sup> As a start, this playing field should be levelled as soon as possible.

The literature on innovation offers some insight into how technological growth can be stimulated.<sup>72</sup> If governments want to promote innovation within firms and sectors, they have to temporarily allow for a minimum of 'sheltered competition'. In the energy markets, governments can offer such shelter to enterprises that are developing renewable energy resources by shifting taxes, offering subsidies, revamping infrastructures, arranging credit, assisting in the training of craftsmen who can install and repair solar energy, encouraging the formation of agricultural cooperatives to produce biomass, helping to forge coalitions between interested parties (such as car manufacturers, suppliers of biomass and hydrogen, and outlet points), and perhaps even given some temporary financial guarantees to those companies that want to produce PV energy at an adequate scale. Given the large pool of opportunities to make clean sources of energy economically viable, these government measures would offer quite a few enterprises strong financial incentives to plunge headlong into the development of renewable energy resources. An example of an effective domestic policy is the '100,000 Roof Photovoltaic Program' that the German federal government started in 1999.

Thus, a snowball effect against global warming can be created. When it becomes clear that certain companies are well on their way to developing and deploying clean technologies and energy resources that are cheaper than existing dirty alternatives, then a mad rush to imitate will follow. For clear-cut financial reasons, it will be imperative for sluggish competitors to scramble upon the bandwagon. If British Petroleum were to start conquering the world's energy markets with cheap renewables, then Exxon would have to follow suit or perish. If the German electricity company Eon-Aquapower undercut the prices of its competitors that had kept on using fossil fuels to generate electricity, then the latter would have little time left to change course. The same would apply at the country-wide level. If the oil-producing countries realized that other states are sincerely committed to developing

affordable and clean energy, then they would have to quickly develop cheap methods to decarbonize fossil fuels, or invest heavily in other forms of energy, or else bite in the sand. Along these lines, a tiny snowball made up of a few companies and sectors here and there could grow in size very quickly, and have a tremendous impact on our efforts to curb global warming.

The policies that are needed mainly consist of domestic programmes that induce firms to invest in renewable energy. These policies would serve the financial self-interests of the countries pursuing them – even if other states did not follow suit. Still, their impact would be greatest if at least a handful of industrialized countries (such as Germany, the United Kingdom, Japan, Canada, California and the Scandinavian countries) would simultaneously pursue such policies. Routine coordination and consultation between civil servants of the ministries involved would usually suffice to form this critical mass.

Other forms of international cooperation would also be helpful. A major role for international cooperation lies in assisting developing countries to acquire low-cost technologies and energy resources that do not emit greenhouse gases. Rich countries should help poor ones to gain information about the new technologies and forms of energy. Furthermore, developing countries should be assisted in making the institutional and infrastructural changes that will allow them to tap their vast renewable energy resources. The International Energy Agency and the OECD (through its Climate Technology Initiative) have already initiated a lot of good work in this regard. Yet again, diversity should be the watchword. A patchwork of governmental and private organizations should be involved in technology transfer. Multilateral as well as bilateral forms of cooperation should be encouraged. The developing countries are so diverse and numerous that a single, universal transfer mechanism would undoubtedly fail. The ‘Global Environmental Facility’, administered by the World Bank, United Nations Development Program and United Nations Environment Program, should therefore only play a limited role.

In addition, it might be helpful if the OECD countries agreed on stringent goals for the reduction of greenhouse gases. But these goals should then be seen as targets that the government will strive to reach, and not as legally binding international agreements. In this way, the legal bickering that typically befuddles international treaties could be skipped. It would also allow for the formulation of much more ambitious goals than has thus far been the case. These ambitious aims should be based on the cutbacks in greenhouse gases that scientists deem necessary for the stabilization of our atmosphere, rather than on what might look ‘politically acceptable’ to exhausted diplomats during the last few hours of an international conference. Moreover, having a set of strict international norms would stimulate technological change. Technological innovation is an inherently risky process. It is therefore crucial to those who are contemplating investing in new technologies

that the authorities will not waver in their support of these technologies. A strict international agreement on the reduction of greenhouse gases would flag to enterprising firms that the governments were serious about combating global warming. But such an international treaty would certainly not be necessary – merely helpful. Domestic and bilateral policies can bear the brunt of the fight against global warming.<sup>73</sup>

### **Why is this solution clumsy?**

From the viewpoint of cultural theory, the UNFCCC/Kyoto Protocol relies almost exclusively on a single way of solving international issues: the hierarchical way.<sup>74</sup> The Convention and its Protocol represent an all-out attempt at planetary planning – through top-down, bureaucratic regulation – of a bewildering array of human activities that stretch far into the future. These include most human uses of energy, as well as many (other) aspects of agricultural and industrial production. The Protocol foresees that all the national governments on the globe collectively reach binding decisions on which states should adjust their activities, at which point in time, with what permissible means and which states should foot the bill. In deciding upon these complex matters, the governments are supported by a continuously expanding international bureaucracy: the secretariat of the UNFCCC, the Intergovernmental Panel on Climate Change, the Global Environmental Facility, as well as the World Bank's Prototype Carbon Fund. Any decisions thus taken need to be imposed by the national governments on the citizens and firms within their jurisdictions. In addition, the policies envisaged by the Kyoto Protocol (clean development mechanism, joint implementation and emissions-trading) require endless monitoring and central planning by national governments and international bureaucracies. Very little faith is put in local, voluntary measures against global warming, and even less awareness is evident of the powerful market forces that forever shape and re-shape systems of production and consumption through technological innovation and entrepreneurship. This also holds (or, rather, in particular holds) for the national and international trading systems in emission permits set up under the Kyoto Protocol. Despite the rhetoric, these 'carbon markets' are not market mechanisms. They would not have evolved (in whatever rudimentary form) spontaneously, and are the sole result of bureaucratic decrees. As explained earlier in this chapter, extraordinary amounts of administrative planning, measuring and monitoring are needed for these markets to function at all. For instance, to make a domestic trading scheme function properly, a national government needs to establish how many greenhouse gases each single company is currently putting into the air, and what the future growth prospects are of each firm. Moreover, these markets have perverse outcomes (at least, on economic efficiency) in that they punish enterprises with an unexpectedly high growth in market share, and reward companies with an unexpectedly low growth in output.

The clumsiness hypothesis of cultural theory predicts that such a monolithic set of institutions and policies is doomed to fail. Indeed, the Kyoto Protocol has faltered thus far. With no consensus in sight on a 'second commitment period', this situation is not likely to improve. The Protocol is unsatisfactory from any criteria that the competing ways of life provide: the agreement is costly, ineffective and is likely to spread corruption. One does not need cultural theory to reach such a conclusion. Henk Tennekes (director of research at the Royal Netherlands Meteorological Institute) has warned against the continuing efforts to combat global warming through 'technocratic totalitarianism'.<sup>75</sup> Hermann Scheer (member of the German parliament, president of the European Association for Solar Energy, and 1999 recipient of the 'alternative Nobel Prize') has chided the Kyoto Protocol for promoting 'Totalbürokratismus'.<sup>76</sup> David Victor has written about 'Kyoto's Fantasyland'.<sup>77</sup> Ronald Brunner has deplored the 'technocratic hubris' that pervades the current international negotiations on climate change.<sup>78</sup> Marvin Soroos has analysed the 'futility' of the Kyoto Protocol.<sup>79</sup> And Robert Repetto has judged the treaty's clean development mechanism to be an 'institutional nightmare'.<sup>80</sup> Still, the theory of socio-cultural viability would immediately have informed the designers of the Kyoto Protocol that the path they were hacking would eventually lead into an abyss.

By contrast, the snowball against global warming set out in this chapter is a clumsy set of policy solutions. The snowball is made up of all available policy styles. It mixes a healthy dose of creative market forces with a large number of central regulations and planning, and also opens up many possibilities for local action. As such, the policies proposed on these pages allow for flexibility and strategy-switching, and would arguably form a much more effective set of measures to ward off the threat of global warming. In addition, the snowball promises to satisfy the normative criteria of all ways of life. Individualism prioritizes the importance of economic growth, efficiency, speed and individual opportunity. Using regulatory measures to set off a gale of creative destruction in the energy sector would achieve exactly those goals. By assisting innovative companies in their quest to make renewable energy cheaper than fossil fuels, this set of policies would not only combat climate change, but also spur on economic growth and facilitate entrepreneurship. Hierarchy privileges order, security and predictability. This way of organizing social relations seems to benefit least from the snowball policies proposed in this chapter. But the central, planetary planning foreseen in the Kyoto Protocol only evokes an illusionary image of an orderly transformation towards a carbon-free world. As argued above, if implemented the treaty would risk setting off continuing international conflicts over who should reduce what and when. More tellingly, the Protocol seems already to have collapsed under its heavy load of bureaucratic regulation, as its extremely modest goals are not being reached, and as the treaty will not be renewed or expanded. Hence, in this case, less (central control and planning) means

more (stability and predictability). Egalitarianism favours equity, solidarity and local sovereignty. Again, the policies advocated here can deliver these goods. The policies proposed would redress global inequities in several ways: (1) through inducing companies and governments from rich countries to develop novel sources of energy that are cheaper in many developing countries than elsewhere (as these forms of energy could pre-empt the need for a electricity grid in rural areas, and as many developing countries have more sunshine, which makes solar energy cheaper to produce); (2) through making technology transfer a more realistic prospect; and (3) through assisting developing countries to acquire their own energy RD&D centres, and helping them build their own facilities for energy production. A wholesale shift to renewable energy would also fortify local sovereignty. Oil, coal and gas reservoirs are located in a relatively small number of places around the globe, and are easily transportable. By contrast, daylight and wind reach every square metre of the earth's surface. As a result, markets for renewable energy tend to be much more decentralized. Renewable energy allows, often even necessitates, local production and local consumption – an old egalitarian ideal of democracy. Stimulating a variety of renewables would allow local communities to decide which specific combination of renewable sources would fit local conditions best.

There is, therefore, an alternative to the Kyoto Protocol – a clumsy one.

## Notes

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3. Den Elzen and de Moor, op. cit., p. 5.
4. S. George Philander, *Is the Temperature Rising? The Uncertain Science of Global Warming* (Princeton, NJ: Princeton University Press, 1998); United Nations Convention Framework on Climate Change, 'Climate Change Information Kit' (<http://www.unfccc.int/resource/iuckit/index.html>), (28 August 2001).
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6. For example, Oran A. Young and Gail Osherenko, 'International Regime Formation: Findings, Research Priorities and Applications,' in Oran A. Young and Gail Osherenko (eds) *Polar Politics: Creating International Environmental Regimes* (Ithaca, NY: Cornell University Press, 1993).
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  13. David Victor, *The Collapse of the Kyoto Protocol and the Struggle to Slow Global Warming* (Oxford: Oxford University Press, 2001).
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  16. This certainly holds for the current plans for emission markets within the European Union, which call for 'grandfathering', that is, the allocation of emission permits among companies based on the greenhouse gas emissions of companies in the past. See the 'Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC', available at: [http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l\\_275/l\\_27520031025en00320046.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_275/l_27520031025en00320046.pdf). Accessed on 18 May 2006.
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# 3

## Hype and Hydro (and, at Last, Some Hope) in the Himalaya

*Dipak Gyawali*

### Introduction

Nepal's barons of hydro-policy have long promised a bonanza from the waters cascading down the Himalaya, if and when developed into electricity from high dams and exported to India. Water, and hydroelectric potential in particular, is described in many a ministerial speech as the country's 'only resource': a resource, moreover, of such magnitude that Nepal is 'second in the world in hydropower potential'.<sup>1</sup> Any hype should be viewed with suspicion, this one especially, since no other country has yet come forward saying it is number one.

The hype of the last half-century – and a waterpower development policy stemming from that hype – has left Nepal in a sorry state at the beginning of the new millennium. The fifty years since the end of the Second World War saw Nepal emerge from the international isolation that had been imposed upon the country by a feudal Rana *shogunate* with hereditary prime ministers. Almost immediately, she plunged headlong into the Age of Foreign Aid, where anxious (and, with the Cold War, competing) international donors poured money into the power, irrigation and drinking water sectors. Unfortunately, the bigger and more expensively planned the development intervention efforts became, the worse these sectors fared: irrigation canals had no water in them when farmers most needed it, domestic water supplies became grossly intermittent and Nepali consumers were saddled with some of the highest electricity tariffs in the world – this ironically in one of the world's 'least developed' (i.e., poorest) countries with 'colossal hydropower potential'.

This chapter aims to explain how this sorry state of affairs has come about, what roles Northern aid agencies have played in this and how matters can be improved. The mere formality of democracy – multiple parties, constitutional monarchs, elections, NGOs and the rest of the trappings – is not sufficient to ensure that development policy is efficient, effective and equitable. For that, a vibrant pluralism is needed, with at least three policy

perspectives (the hierarchical, individualistic and egalitarian ones) vigorously contesting policies at each and every level – from the village to national and international fora. Until the 1990s, the water policy terrain in Nepal, as in most developing countries, was the uncontested domain of hierarchical technocrats. With the restoration of multiparty democracy in 1990, at least some space became available to advocates of other ways of perceiving and organizing to challenge what was until then an almost divine wisdom handed down from donor and recipient bureaucracies. As a consequence, during the last dozen years or so, the development of hydroelectric power has been faster and cheaper than ever before. The dynamics of this contestation, and the lessons they hold are set out below. First it is shown how the policy terrain was monopolized in the 1970s and 1980s. Thereafter the painful transition to a more plural order is recorded.

## Rise of a state monopoly

Nepalis first saw electricity in their country when the small 500 kilowatt (kW) Pharping hydroelectric plant located at the southern end of Kathmandu Valley was commissioned in 1911 during the reign of the Rana *shogun*, Chandra Sumshere. The next station, the similarly sized Sundarjal hydroelectric plant in the north of Kathmandu, was commissioned in 1934. The basic purpose of these plants was to light the palaces of the Rana *shoguns* and their retainers (one of which – the Singha Durbar – was the largest private house in the world; Nepal's superlatives do not end with Mount Everest). Around the same time, another technology – the internal combustion engine – arrived, with the Ranas' horseless carriages being carried up through the roadless jungle that separated Kathmandu Valley from the plains of India by teams of emaciated porters. These technologies, therefore, set off as status-markers rather than as harbingers of modernity and universal consumption: more like cups and saucers from the Russian Tsar's porcelain factory than flat-pack chairs and tables from Ikea! Unsurprisingly (and although the Morang Hydro-Electric Supply Co. was established in 1942 as a private venture by some Rana retainers), electricity development remained mostly a state-led and state-controlled undertaking.<sup>2</sup>

With the Second World War drawing to a close, there was talk among the British rulers of its southern neighbour, India, of helping Nepal build hydroelectric plants. Nepali Gurkha soldiers had helped the Allies fight the Axis powers, and the British government felt that some 'present' should be offered to Nepal in recognition of this support. The following note, by the Secretary of British India, three months before the armistice in Europe reveals how commercial interests could be wrapped in an altruistic cloak, just as foreign aid is today:

There is one particular sphere of progress which seemed to hold out some hope and that is in the development of hydropower in Nepal. Indeed, it

may perhaps be said that Nepal has two important exports, one realized, namely soldiers, and the second prospective, namely electric power. If Nepal can be included in the present hydroelectric surveys that are being undertaken, and if promising sites are discovered, it might well be that she could bear a large part in the closest association with the Provinces of Northern India in a scheme of joint provision of power for industrial development that would go a long way. If Nepal stays out, those Provinces will establish their own grids and she will be left in the cold. There is no doubt that under Nepalese law and usage, a large part, if not the main part, of the capital would have to be Nepalese, but the Rana family have accumulated very considerable reserves of Indian rupees during the war.<sup>3</sup>

Events, however, overtook everyone. Gandhi had launched his Quit India movement in 1942, and the British were forced to leave India by 1947. With their departure, the main geopolitical support of the Rana regime collapsed. In February 1951 the king of Nepal regained his traditional power and the Nepali people, hitherto living in a sequestered kingdom, found themselves open to the wider world and its myriad ideas. From then on, hydropower development in Nepal became enmeshed with the rising domestic aspirations of a deprived population. It also became entangled with India's water policies concerning the four main tributaries of the Ganga that flow from Nepal (the Kosi, Gandak, Karnali and Mahakali rivers).

The first electro-bureaucracy in Nepal had been the *Bijuli Adda* of the Ranas, meaning 'electricity office'. It had been established to manage the operation and distribution of power to Rana palaces, homes of retainers and government offices after Nepal's first hydroelectric plant was commissioned in 1911. Even though the Rana dynasty was overthrown in February 1951, its bureaucratic structure continued unchanged until the first elected government came to power in 1958, when the *Bijuli Adda* was renamed the Electricity Department. The democratic experiment lasted all of eighteen months; until December 1960, when King Mahendra scrapped the parliament based on the Westminster model, and by 1962, instituted the Panchayat system of 'guided democracy'. In order to supply power to the capital, Kathmandu, the new regime entered into power project agreements with friendly governments. Aid money started pouring in from competing donors who built several power plants – the 2.4 megawatt (MW) Panauti hydroelectric plant in 1964 (by the Soviet Union), the 21 MW Trisuli hydroelectric plant in 1966 (by India) and the 10 MW Sun Kosi hydroelectric plant in 1970 (by China). The Americans helped to build the electric distribution network in Kathmandu valley. Because these projects were gifts to Nepal's government, they were handed over upon completion to the government bureaucracy, thereby strengthening its monopoly role in the sector and helping it to sideline the nascent private sector.

As well as friendly governments, international aid agencies – which had begun to be involved in Nepal's development at the end of the Second World War – expanded their cooperation with the new regime. His Majesty's Government's (HMG) bureaucracy was the vehicle of development implementation. Because foreign aid agencies paid the development piper, they also called the development tune: the projects were all imbued with the donors' conditionalities of cooperation. One of the mandatory requirements in the power sector (primarily from USAID) was that an 'autonomous' body be set up, which would operate according to corporate practices and principles, unlike the *Bijuli Adda* that had been run more like a feudal fiefdom.<sup>4</sup> In 1962, as a result of these pressures, HMG formed a wholly government-owned parastatal, the Nepal Electricity Corporation, to handle the distribution of power produced by hydro plants owned by HMG's Department of Electricity. It was to this department – directly under the Ministry of Water Resources – that international donors handed over the power plants they had helped construct. This arrangement lasted for two decades, when multi-lateral lending agencies<sup>5</sup> imposed another precondition: before they would approve the loan to construct the 69 MW Marsyangdi hydroelectric plant, electricity would have to be generated, transmitted and distributed by a single, vertically integrated entity. Thus, in 1985, the Electricity Department was merged with the Nepal Electricity Corporation to form the Nepal Electricity Authority (NEA). This was done through an act that granted full monopoly powers to this body.

While donors may have wanted such a single corporate entity to be run on commercial principles, this was not in the interests of many in the Electricity Department. A sizable number of erstwhile department staff wished to maintain their privileges as HMG officers rather than become employees of a parastatal. These – around a hundred officers in all – managed to get themselves transferred to the Ministry of Water Resources on deputation rather than actually becoming employees of NEA: an action that in effect re-created a *de facto* Electricity Department within the Ministry. Ten years later, in 1995, this group was able to engineer an HMG decision that effectively resurrected the Department under a new name, the Electricity Development Centre. And, a few years later, they completed the *de facto* to *de jure* journey and became the Department of Electricity Development. This department, originally justified to study and develop multipurpose hydroelectric projects (meaning storage projects with power, irrigation, flood control and other benefits), has now taken upon itself the role of an agency that grants or denies licenses to emerging private power producers. While such a regulatory body is required if an effective market is to function, the trend has been in a different direction: towards the revival of old feudal habits of control and away from the promotion of the sort of corporate culture envisaged by the donors.

It is not that the private sector was wholly absent in Nepal during the post-war period; only that private companies were being swamped by a rising

government monopoly. The Butwal Power Company was one of the survivors, and its history is indicative of the problems faced by the private sector at the hands of a rising government monopoly. In December 1965, the United Mission to Nepal<sup>6</sup> registered Butwal Power Company as a corporation and received a ten-year license from HMG's Electricity Department to produce, transmit, distribute and sell electricity mainly within the Lumbini Zone in central Nepal. The first consumer to receive the diesel-generated electricity was an industrial firm in Butwal. A year later, in 1969, supply was given to three private consumers and by April 1971, 323 electricity consumers were on the company's roster. Construction of the 1 MW Tinau hydroelectric plant was begun by Butwal Power Company in 1966 and in December 1970, 50 kW of its first stage started generation. The final stage of the power plant was completed in April 1978, increasing its total capacity to 1000 kW. Although His Majesty the King formally inaugurated this project in February 1979, it was effectively nationalized a little over a year later, on 16th July 1980. HMG then handed over the ownership of the project to its parastatal, the Nepal Electricity Corporation, which then took up the plant's operation and maintenance.

Approximately a year after this 'nationalization', in September 1981, an unprecedented flood on the Tinau damaged the powerhouse and encased the generators in mud. After four months of clean-up work, the plant started to generate electricity and was restored to full capacity; but, with subsequent poor maintenance – the bane of many state-owned utilities – Tinau's output suffered reduction. The system was also hampered by its generation and distribution voltage (of 3 kV) not matching the standard of 11 kV in Nepal. In consequence, it could only supply an isolated segment of Butwal town. Although this was quickly rectified technically (with the construction of an interconnection to the national grid), the managers of the utility delayed its synchronization into the larger system for many years.<sup>7</sup> This neglect, by the Nepal Electricity Corporation, of an asset that (though constructed by a private entity) it owned, is difficult to rationalize within the normal paradigm of 'utility efficiency'.

The same fate befell other smaller electric works such as the Bageshwari Electric Company of Nepalganj and the Eastern Electricity Corporation. They were taken over by HMG in the 1970s, and merged into the Nepal Electricity Corporation. HMG's industrial policy, formulated in 1972, contained a provision whereby the government could nationalize electric power generation and supply, and this brought more targets within its range: among them the Bageshwari Electric Company, which originally had been started by West Nepali landed gentry in 1964 after the government's land reform measures had made investing in land ownership a risky proposition. It was argued that Bageshwari's management was not technically skilled enough to manage the business of power generation and supply. The government's industrial investment bank (called the Nepal Industrial



Development Corporation) decided to take over Bageshwari Electric and to eventually hand it over to the Nepal Electricity Corporation. It justified its action on the grounds that there were complaints against Bageshwari Electric by significant sections of the town's business community, which viewed this small company as a bottleneck in its industrialization efforts and hoped to get more electricity at a subsidized rate from the government. Either way, however, the outcome was nationalization, since the takeover action was pursued as the only solution. Helping the company to acquire technical and managerial skill, or allowing other private parties to take it over – options that might have yielded better results – were not entertained.

Since then, the government-owned utility's track record has been no better. Hindsight shows that this 'nationalization' did not solve the problem: just glossed it over very well.<sup>8</sup> What was really happening at this time was that Nepal's government, and the major donors that were supporting it, were going through a phase characterized by a shared faith in state-led and state-consolidated development. In the wake of the first oil shock of the early 1970s, international development agencies and banks were flush with excess liquidity and were under pressure to disburse money in the forms of loans, as much as they could. Neither HMG nor the donors were prepared to entertain the idea that the private sector might be able to make a meaningful contribution to power generation. Even while the Tinau hydroelectric project was being constructed by the Butwal Power Company, the World Bank was engaged in putting together a loan for the 60 MW Kulekhani hydroelectric project for HMG. Its 'staff appraisal report' acknowledged the existence of the Butwal Power Company and the Eastern Electricity Corporation, but dismissed them in one short paragraph as 'entirely private companies' that are best ignored.<sup>9</sup>

This tacit approval of nationalization by powerful donors is believed to have spurred government officials to discourage private sector involvement in electricity generation. Even as late as 1987, NEA and its Canadian donors were reluctant to admit the existence of the Butwal Power Company or projects such as the Tinau. In a crucial study that justified the Arun-3 hydroelectric project (discussed in the following paragraphs), the Tinau plant is not shown or acknowledged in the system diagram, being simply dismissed as small hydro.<sup>10</sup> Today, of course, these very same international donors are clamouring for the privatization of the water and power sector.

The monopolistic electricity bureaucracy had thus closed off all avenues other than its own for investment in the power sector. Even so, the United Mission to Nepal, a non-profit charity, did manage to bring in money for hydropower construction, with HMG imposing the condition that the assets thus created be handed over to HMG six months after the projects' completion.<sup>11</sup> In subsequent projects built by the company, such as the 5 MW Andhi Khola hydroelectric plant (commissioned in 1991) and 12 MW Jhimruk hydroelectric plant (commissioned in 1994), HMG similarly took

over the share assets of the Butwal Power Company accounted for by these projects. However, in the latter cases, the Ministry of Finance retained the shares and did not hand over ownership to the NEA. As a result, the Ministry ended up owning close to 97 per cent of the shares of Butwal Power Company. The remaining 3 per cent were divided between the United Mission to Nepal, NEA and the Nepal Industrial Development Corporation. The United Mission to Nepal thus found itself outmanoeuvred and left with little influence over company affairs. This 'imposed impotence' has a bearing on the subsequent privatization of the Butwal Power Company in 2003, which is discussed as part of a 'clumsy solution' aimed at pluralizing the power terrain in Nepal.<sup>12</sup>

## **Contentious dams**

It is said that empires decline and fall when they expand to the point where they become unable to fend off the barbarians at the gate or placate a raucous proletariat inside the walls.<sup>13</sup> The fatal flaw in the growth strategy of Nepal's official electric monopoly was that it grew to absolute power on a rich diet of foreign aid, eventually creating a debilitating dependency on external suppliers and alienating its customers with outrageously expensive electricity. Under the Panchayat system of direct rule by the king that lasted from 1960 to 1990, the hydrocracy faced no challenges to the decisions it was making. Its choices of technology began to veer towards larger and more expensive projects that fitted the ambitions, views and needs of its technocrats, but not necessarily those of its fatalized customers. The dominance of Nepal's technocracy meant that major mistakes went unchallenged, and hence undetected until too late. The saga of power development in Nepal is told through three hydroelectric stories – of Kulekhani-1, Arun-3 and the Mahakali Treaty, the last being a prelude to the construction of the 315 meters Pancheshwar high dam between Nepal and India.

### **Kulekhani-1**

The first major project attempted by the power bureaucracy with soft loans from international aid agencies was the 60 MW Kulekhani-1 hydroelectric plant. It was a 114 metres high dam, the highest so far in the Nepal Himalaya, and could store 83 million cubic meters of mostly monsoon flow in the stream by the same name. The project, undertaken under the lead of the World Bank and Japanese International Cooperation Agency, was designed with a cost-benefit ratio of 2.59 (which is extremely good, since anything above one implies more benefits than costs, this particular estimate showing that benefits would be two and a half times more than what would be invested). At the time of its planning, the Nepali integrated national grid had less than 40 MW of reliable hydroelectric plants. This project was criticized at the time on the grounds that attempting to add a single

hydroelectric plant one and a half times larger than the entire system would be bad planning since its outage would mean blackout over the entire system. It is a rule of thumb in power system planning that a single unit of a plant should not be more than 10 per cent of the overall system capacity, the idea being that if such a generator trips, its output can be instantly taken over by the reserve in the system that is kept at about 10 per cent. Kulekhani-1 had two units of 30 MW each in a power system that was no larger than 40 MW at the time of planning! A more practical power development policy would have been to encourage 5 to 15 MW hydroelectric plants at different geographical locations to spread out the risk of system failure, but it was not the policy preferred by the hydrocracy and its main donors.

The mother of all assumptions in the planning, however, turned out to be that regarding sedimentation, which Mother Nature decided to test in the monsoon of 1993, some thirteen years after the plant's commissioning. The cost-benefit ratio of 2.59 had been made assuming that the reservoir would have an economic life of 100 years. Because all reservoirs eventually get filled due to sedimentation, the assumption in design is to allow for accretion of the inflow of sediment mass into the reservoir bottom (the dead storage). The 1974 feasibility report of the Kulekhani project, done by Japanese consultants, assumed the sedimentation rate of the reservoir to be 400–700 m<sup>3</sup>/km<sup>2</sup> of catchment per annum.<sup>14</sup> Because data on sedimentation were not available (nobody had measured it because no one in the subsistence agrarian economy needed to know such arcane facts), the designers based their assumption on a 1963 report and concluded that 'the mountain upstream from the proposed dam site is comparatively stable, accordingly it is not necessary to estimate much quantity of sedimentation in the Kulekhani reservoir'. With increasing bouts of optimism, the report went on to assume that 'even if a collapse takes place on the upper reaches, the major part of the debris will deposit on these flats and the sedimentation will be little on the lower reaches where the Kulekhani reservoir is to be created'. In its 1975 staff appraisal report, the World Bank endorsed the findings of the feasibility report and concluded that the dead storage will provide enough capacity over the project's estimated life of 100 years with the sedimentation rate of 700 cubic meters per kilometre per annum.<sup>15</sup> The project was thus duly financed and built.

According to a bathymetric survey of the reservoir fortuitously (for science) conducted just before the monsoon of 1993 (which saw a massive cloudburst), the accumulation of sediment was found to be at a much higher rate. At almost 1455 m<sup>3</sup>/km<sup>2</sup>, it was more than double the design estimate. In July 1993, a cloudburst over the Kulekhani region dumped 540 millimetres of rain in twenty-four hours, which triggered massive mass wasting (landslides) and debris flow. The sediment deposited into the reservoir by this single event was almost 4.8 million m<sup>3</sup>, which was about half the planned dead storage of 10 million m<sup>3</sup>. The specific sedimentation rate from this

particular cloudburst was  $38,000 \text{ m}^3/\text{km}^2$ , almost fifty to hundred times more than estimated. When the 1993 event was averaged over the thirteen-year operation period of the hydroelectric plant, the sedimentation rate was  $4273 \text{ m}^3/\text{km}^2$  per annum, which was six to ten times higher than assumed in the design!

More surprising was the lessons *not* learned from this experience by the hydrocracy and its financiers. In the wake of the Arun-3 controversy, the World Bank reviewed some 50 dams around the world. It rated Kulekhani-1 as a failure on socio-economic and environmental counts. The reservoir designed to last for a hundred years had effectively lost its dead storage volume in thirteen years. Its cost-benefit ratio was recalculated with an economic life of only 30 years and the revised cost-benefit ratio was recalculated with an economic life of only 30 years and the revised cost-benefit ratio was estimated at 1.59. This extended life of the reservoir had been achieved by rebuilding a new 'sloping intake' with heavy investment (almost a third of the entire cost of the original project), which also included building of upstream sediment traps and other watershed protection measures. Despite its recognition that the project was a failure, the 1996 report by the World Bank harks back to the long-discredited 'theory of Himalayan degradation' according to which the main blame is placed on the shoulders of poor farmers cutting trees. This myopia essentially ignores the 1993 cloudburst event and the untenable assertions of the earlier studies on which the decision to fund the project was made. The Bank report states: 'as a result of continuing expansion of farming, firewood collection and deforestation, incoming sediment [into Kulekhani Reservoir] has quadrupled from  $88,200 \text{ m}^3/\text{year}$  at the time of project completion in 1982 to  $355,000 \text{ m}^3/\text{year}$  in 1994'.<sup>16</sup> In 1979 when the hydro project was being built 48.95 per cent of Kulekhani's watershed was under forest cover, cultivated area was 38 per cent and barren grazing land was 12.38 per cent. In an impact analysis of post-project resource use, Bjønness recounts reforestation efforts initiated by the Food and Agriculture Organization around the reservoir, as well as in the catchment area of the Kulekhani basin. By 1984 the area under forest had expanded to 49.1 per cent; the cultivated area had also expanded to 40 per cent, but grazing land had reduced to 8.93 per cent.<sup>17</sup> The idea, therefore, that marginal farmers cutting trees led to the loss of reservoir life would be laughable if it came from a graduate student rather than from heavily funded, venerable institutions such as the World Bank. This is a classic example of selective use of science, which implies that some institutional filter is at work that selects facts that fit with particular interests and perspectives and filters out others that do not.

Within Nepal, Kulekhani-1 had also been criticized for its high costs. It was built at \$2000 per kW constructed cost when in Bhutan and in the Indian Himalaya, similar projects were constructed four times cheaper. An immediate successor to Kulekhani-1 was the 69 MW Marsyangdi hydroelectric plant,

which was a run-of-river project (no big dam to store water, only a diversion weir to use whatever was naturally flowing in the river) completed in 1989 at the height of the economic 'blockade' of Nepal by India.<sup>18</sup> It was completed at the astoundingly high rate of \$4000 per kW. Such expensive projects have ensured that Nepali consumers today pay, at almost nine cents a unit, some of the highest rates for electricity in the world – this in a country where the per capita GNP never seems to go beyond \$180 per annum, but which is supposed to have colossal untapped hydroelectric potential. Unchallenged in their decision-making, the engineers of the power bureaucracy chose to go for projects that were more expensive as well as technically more intricate in such a 'hydro-rich' country. Arun-3 was part of a continuing saga that began with Kulekhani-1.

### **Arun-3**

In describing technology choices that are prone to surprises, Michael Thompson identifies four technical and four social indicators of inflexibility.<sup>19</sup> The technical indicators are: large scale, long lead-time, capital intensive and requiring major infrastructure early on. The corresponding four organizational indicators are: 'single mission' outfits, closure to criticism, hype (as in 'if we don't cover the Himalaya with trees, Bangladesh will sink forever beneath the waves'), and hubris (often in the form of overconfidence as to what the future holds, or the categorical certainty that 'there is no alternative'). The aim of building the 201 MW Arun-3 hydroelectric plant was pursued with single-minded devotion by Nepal's hydrocracy with the support of the World Bank and other donors. Yet, the project exhibited all of Thompson's eight indicators of inflexibility. After 1985, the donor consortium and HMG spent close to twenty million dollars in studies alone on this project. However, when activists started a campaign against it in 1993 on grounds of excessive costs (\$5300/kW estimated construction cost), the World Bank had to ignominiously drop it two years later.<sup>20</sup>

Arun-3 was going to be built on Arun River, which originates in Tibet and flows South into Nepal just east of two major peaks over 8000 metres, Everest and Makalu. It joins other tributaries from the Nepali hills to form the Sapta Kosi, which in turn joins the Ganga in India, but not before being known as Bihar's 'river of sorrow' for frequently changing its course during floods. It was first identified as an attractive physical site for developing a hydro project (based on its flow and incline characteristics) in a basin study financed by the Japanese International Cooperation Agency between 1983 and 1985. At the time, the reliable installed capacity in the integrated Nepali national grid was about 215 MW. Arun-3 would have been a single project addition that would double the size of the system in much the same way as Kulekhani-1.

Even though the Japanese (who designed Kulekhani-1) originally identified Arun-3 as an attractive site in their 1985 Kosi basin master plan study, they

were more interested in pushing a 225 MW Sapta Gandaki hydroelectric project at a much more accessible site at about half the cost of Arun-3. This plan was thwarted by Canadian consultants who were working in Nepal in conflicting roles. On the one hand, they served as policy advisers to the Nepal Government through its Water and Energy Commission. On the other, they were contractors for an approximately \$12 million feasibility study of the 10,800 MW Karnali project. The Canadian consultants helped other donors to notice Arun-3 and eventually introduce it as a competitor to, and finally a winner over, Sapta Gandaki.<sup>21</sup>

In 1987, the Government of Nepal requested the World Bank to become a 'lead donor agency' in mobilizing resources for Arun-3.<sup>22</sup> Thus for the first time in Nepal's development history, a ministry gave up its lead role to a foreign institution, authorizing it to speak to other donors on its behalf. At this point, on 19 July 1987, Chancellor Helmut Kohl of West Germany paid a state visit to Nepal. One of the gifts he left behind was a commitment on Germany's behalf to provide Nepal with a grant of 260 million Deutschmarks, which was to be used for the feasibility engineering study of Arun-3. Thereupon, a German consultancy firm, which had designed and supervised the expensive Marsyangdi hydroelectric project, also received the main contract to design the Arun-3. Not much later, it was decided that the three power generation units for Arun-3 would come from Germany too.

At \$1.1 billion, Baby Arun<sup>23</sup> represented the largest investment ever made in Nepal and hence also constituted the investment with the largest attendant risks. To put things in perspective, this amount was slightly more than HMG's then total annual budget of \$1 billion. The internal revenue that Nepal could raise constituted about 40 per cent of the total investment needed. The risk of putting such a large project into such a small economy was never properly assessed by the legitimate institutions, such as the Water and Energy Commission and the National Planning Commission. Even the World Bank failed to conduct a proper macroeconomic impact assessment of this large investment prior to activist critique in 1993. When they eventually did so under activist pressure, the Bank initially continued to maintain that social and other sectors would not suffer in Nepal as a result of this project. Finally, in August 1995, the new president of the World Bank Mr Wolfensohn decreed that the risks inherent in Arun-3 were greater than what Nepal could bear.

Several studies were conducted by the World Bank to justify Arun-3. None of these really addressed the objections that had been raised by activists. In one expensive effort, the Bank hired Electricité de France to conduct a reconfirmation study of Arun-3. However, this company stated: 'During the screening analysis (of March 1990), NEA and the World Bank imposed a number of conditions concerning the finalization of the study. One of these conditions is that none of the hydro projects selected would be able to be commissioned before 1998/1999' (i.e., before Arun-3). The other conditions

required the consultant to apply cost-increase coefficients to alternative hydro projects of up to 30 per cent with absolutely no rationale other than to make them less competitive than Arun-3.<sup>24</sup>

From its very inception, Arun-3 had many unanswered technical, economic and social anomalies, which never featured in the official consideration of the project, either within the government of Nepal or within the World Bank. Blatant planning defects were systematically ignored. For example, among Thompson's indicators of inflexibility is the need to put in heavy infrastructure early on. Arun-3 required a 118 kilometres access road (197 kilometres if one took a more populated route through villages) with additional side feeders in extremely difficult Himalayan terrain, which would hence be a major project by itself. Since the access road was part of the overall project, and construction of the road and powerhouse was to be done in parallel rather than sequentially, power for construction at the dam site would have to come from a diesel generator, the fuel for which would have to be ferried in by helicopters. The World Bank, in what can only be called a fit of hubris, chose to call this 'extended air support', which alone would cost \$40 million! At the end of this quixotic exercise, when the 201 MW of power would finally be produced, it would be impossible to evacuate the electricity to the major demand centres since the transmission capacity from East Nepal to the center was only 27 MW, and 54 MW if upgraded to a double circuit line. There were other problems about dam height, type of turbine selected and the like, which would add up to major operational problems in a project already too expensive to contemplate.<sup>25</sup>

Another of Thompson's indicators – hype – began to dominate the official reaction to vigorous public protests. When the defects of Arun-3 began to be highlighted by activists and academics, the official response was that 'there is no alternative'. It was also said that with Arun-3 all Nepalis would be able to cook their *daal-bhaat* (rice and lentils) in electricity. Without it, the country would be plunged into the darkness of underdevelopment. Hence those opposing Arun-3 would really be anti-national elements not wishing prosperity for the country. In a country like Nepal, so rich in water resources, it is indeed ironic that every project from Kulekhani-1 in the early 1970s to Arun-3 in the 1990s was justified on the grounds that, because 'no other project has been adequately studied' and that 'so much effort has already been spent on it', the project must be implemented. The language used by the Bank implied that there was too much 'institutional momentum' behind the project to even consider stopping it.

As a result of this 'no options trap', Nepal's electricity projects have been among the most expensive ones in the world. An international comparative study showed that the composite cost of power production per kW in 1989 US dollars (inclusive of generation, transmission, distribution and services) to be 1502 for China, 2061 for India and 4346 for Nepal. Even Papua New Guinea and Burma, which predominantly have hydro schemes, have not

managed to go beyond 1925 and 2719 respectively, despite military dictatorships and general backwardness. Only Sri Lanka matches Nepal at 4451, but this has to be seen in the context of the widely criticized Mahaweli scheme.<sup>26</sup>

In Nepal's 'development' process, base material interests have gone hand in hand with high-minded principles – as cultural theory would point out. Many Nepali politicians and civil servants have sincerely adhered to a hierarchical view according to which water management is best decided upon by dispassionate and highly educated experts rather than 'rapacious' business people. Aid donors have often genuinely endorsed a hierarchical perspective according to which the populations of developing countries lack the expertise and funds (i.e., human and physical capital) that would set them off on a miraculous path of sustained economic growth. Yet, at the same time, the huge and complex water projects that these domestic and international technocrats have invariably favoured have also: (1) lined the pockets of consultancies and construction companies from donor countries; (2) increased the influence and job security of Nepal's bureaucrats; (3) offered politicians ample opportunities to maintain and expand corrupt, clientelistic relations; and (4) polished the egos of international civil servants by allowing them to play an influential, almost ministerial role in the economic development of an entire country.

In other words, the reliance on a single way of perceiving and organizing has allowed the construction of an 'iron triangle' that has smothered Nepal's water policy. This triangle has consisted of three apexes: low-paid Nepali bureaucrats and politicians in very powerful positions who decide the fate of millions of rupees; donor agencies where promotion depends less on the success of projects than on the number and size of projects pushed through; and the middleman 'commission agents' or 'development merchants', essentially fixers capable of linking international manufacturers and servicing companies with local decision-makers. This iron triangle has trapped the country into a no-options scenario with escalating project costs. Foreign aid, rather than changing this political economic framework, has thus itself become a part of a neo-feudal order. It has taken the activism of environmentalists and those committed to alternative perspectives to make a dent in this iron triangle.<sup>27</sup>

## **Mahakali**

When the Arun-3 project collapsed in August 1995, the Hindu Kingdom of Nepal was being ruled by the Nepal Communist Party (United Marxist Leninist – UML). This party had been in the opposition when the anti-Arun-3 campaign had begun in February 1993. At the time, the UML had argued that the conditionalities on the project imposed by the World Bank were against the national interest. When the party came to power, however, even though it conducted a review that confirmed its earlier suspicions, the new



communist government wrote to the Bank that it supported all the conditionalities imposed by the good donor (and previously agreed to by its opponents, the Nepali Congress). These conditionalities entailed that the Bank approve the government's annual budget before it was presented to the national parliament, and that HMG not even consider studying other medium hydroelectric plants without the Bank's prior approval. Hence, when the World Bank withdrew support, panic broke out within the main political parties, with one blaming the other for this debacle. The communists were soon out-voted in the parliament and an incongruous coalition of rightists and centrists led by the Nepali Congress took over the reigns of government. It is within this political climate of dashed hopes for a large hydropower project that the foreign ministers of Nepal and India signed the Mahakali Treaty in January 1996 with much fanfare.<sup>28</sup>

The treaty envisages construction of possibly the world's highest rockfill dam on the eponymous border river at Pancheshwar to produce 6480 MW of electricity. It also contains the claim that a detailed engineering design can be completed in six months, financing (for six to ten billion dollars) arranged in two years, and the project itself completed in eight years. It is currently the tenth year since the treaty's signing, and even the engineering report is nowhere near completion. Despite ratification by the Nepali parliament with more than a two-thirds majority on 20 September 1996 (and public opinion mostly vigorously against it), the treaty currently languishes in an uncomfortable impasse.<sup>29</sup>

The signing of the Mahakali Treaty was accompanied by unprecedented hype in the political and journalistic circles of Nepal. The (then) minister of water resources was quoted in newspapers as saying that with this treaty Nepal's development would take a massive leap forward, making Nepal 'if not an Asian tiger, at least an Asian leopard'. A senior opposition leader claimed that once the Pancheswar high dam under the treaty was completed, Nepal would receive an annual income of 120 billion rupees. That would be possible only if India – the sole possible importer of the electricity generated by the dam – paid a tariff some ten times higher than going electricity rates in India, and if Nepal did not have to pay back any interest on loans for building the dam. Still, the hyped-up claim asserted that the treaty was such a miraculous panacea for all Nepali ills that it was the equivalent of the sun rising from the west.

Nepal's interest in building the Pancheshwar high dam mushroomed overnight after the collapse of the Arun-3 project. Pancheshwar was a dam that India had wanted all along for over two decades, but for which Nepal had never before shown much interest because of its smaller requirements for water and power. Complicating matters was a lack of clarity from the Indian side regarding power purchase price, as well as the valuation of flood and irrigation benefits. It was also feared that India's security concerns over control of the dam would compromise Nepal's sovereignty. The Mahakali

Treaty clearly and without doubt was of an 'all encompassing, serious and long-term' nature and therefore needed two-thirds ratification by parliament as per Article 126 of the Constitution. It also became clear that Article 3 of the treaty, as well as Clause 3 of the accompanying exchange of letters, had compromised Nepal's rights to a fifty per cent share of the waters of a border river.<sup>30</sup>

Strangely, rather than send the treaty back for renegotiation, the parliament ratified it, but simultaneously and unanimously passed a stricture with the treaty. This stricture basically redefined the above two clauses in Nepal's favour – something India has never agreed to. Also, treaty ratification with strictures is no ratification at all and this has caused the current impasse: the Indian side cannot agree to the strictures and the Nepali side cannot go beyond it. The genesis of this anomaly lay in the fact that Nepali political leaders were prisoners of their own hype and could not be seen as creating hurdles for a treaty that would ostensibly bring in an overflowing cornucopia of hydrodollars. The result has been an ignominious and embarrassing impasse that threatens other genuine and potential Indo-Nepal cooperation to harness the Himalayan rivers.

With the collapse of the Arun-3 project looming ominously, the government of Nepal also entered into other agreements and initiatives, which smacked of a 'panic sale'. The most notable among these initiatives were first, the granting of permission to an Australian company to develop the 700 MW West Seti hydroelectric plant to export power to India, and second the Enron saga. The West Seti venture has floundered for the last ten years for two main reasons: (1) the price the developer has proposed (about 9 to 7 cents per unit) is much too high for India's power managers to accept<sup>31</sup>; and (2) the project is supposed to provide irrigation and flood control benefits, in which India seems uninterested as it could capture downstream benefits without having to paying for them, but that would submerge Nepali villages, forests and agriculture land. This matter has not been raised in the parliament, possibly because of the 'Mahakali fatigue', even though it clearly is a resource-sharing matter and could possibly require a two-thirds majority for ratification. It has also been deceptively argued that commercial agreements with private parties are not treaties and hence do not need to be submitted to parliament.<sup>32</sup> With an aggressive opposition, the matter could ignite the parliament in the same fashion as the Mahakali saga and hence is a rather shaky foundation upon which to base several billion dollars worth of investment.

The now discredited and bankrupt Enron of Texas proposed to invest in building both the larger 402 MW version of Arun-3 and the giant 10,800 MW Karnali hydroelectric plants, the latter mainly to export power to China. While it was self-evident that India – into which Nepali rivers flow – constituted the logical market for not only the electricity produced but also for the regulated water from Nepal's storage reservoirs, Enron's proposal to

sell the power to China was bizarre. China's nearest grid point is in Xian some 2500 kilometres away to the north-east and as far from the Karnali site as Teheran, Colombo or Bangkok. It also lies across the Himalaya and the Tibetan plateau, across gorges through which flow some of the major rivers of Asia such as the Brahmaputra, Salween, Mekong and the Yangtze.<sup>33</sup>

Left-wing leaders in Nepal, traditionally perceived as being anti-Indian, immediately welcomed this proposal, one of them even arguing before his cadres that new technology would now allow Nepal to break the Indian monopsony and export hydropower to China – via satellite! When activist pressure built up against this quixotic enterprise and the government balked at giving Enron the license it had asked for, the chairman of the communist UML threatened in parliament to start a *jihad* against the government. It was perhaps one of the few instances anywhere in the world of a communist party going to bat for a multinational company.<sup>34</sup> Six years down the road, now with Enron no longer the paragon of developmental virtue, it can be seen that this was a clever ploy by a sharp trader to cash in on hyped-up Nepali sentiments of earning hydrodollars.

## Re-Emergence of Nepal's hydro entrepreneurs

In its single-minded, hubris-ridden pursuit of the ill-fated Arun-3, the official monopoly NEA did not even bother to study other projects as contingency measures and to place them in the development pipeline. When the World Bank withdrew from this outrageously expensive venture following activist opposition, the NEA did not have any option to fall back on. Amidst the ensuing confusion, a slew of Nepali entrepreneurs eagerly stepped in. Today, eight years later and despite all kinds of problems, these hydro-entrepreneurs and their international partners have planted their projects all across Nepal's power landscape. Despite their official marginalization two decades ago, they are demonstrating that they can mobilize investments more effectively and build hydroelectric plants more cheaply, significantly more cheaply, than the NEA or the World Bank. Indeed, with the collapse of Arun-3, Nepal has by now commissioned a number of smaller projects, which in total give a third more electricity at less than half the cost and time.

During the 1970s and 1980s, the mainly Norwegian missionaries behind Butwal Power Company (BPC) unobtrusively kept building up the capacity of their staff and organization to build hydro-technical structures, despite being overshadowed by the monopoly official utility. In the mid-West town of Butwal, they set up mechanical engineering units that manufactured turbines, as well as a training centre that produced technicians. They were able to use these assets to build the Andhi Khola and Jhimruk hydroelectric plants very cheaply (between \$900 and \$1200/kW, i.e., almost half as cheap as the official projects). When it started to become clear that Arun-3 would not be coming on line anytime soon (if ever), BPC proposed investing in the

Khimti hydroelectric plant. The negotiations with HMG's hydrocrats regarding power purchase took a couple of years. By 1996, the Khimti hydroelectric plant was under construction and it was commissioned in 2000. Similarly, a business group that owned the country's premier luxury, Hotel Soaltee, teamed up with a group of US investors to develop the 36–52 MW Upper Bhote Kosi hydroelectric plant. Its power purchase agreement (at six cents per kilowatt hour) was concluded in July 1996, and in January 2001 the electricity it produced was synchronized into the national grid.<sup>35</sup>

In general, the privatization chorus led by aid agencies and HMG still retains a *sotto voce* of hierarchic control. Negotiated power purchase agreements (where all control is still retained by the bureaucracy) continue to be in vogue, instead of a truly market-led, open bidding process where sites are let out for development to the most efficient and competitive bidder. However, chinks have begun to appear in the armour. Nepali entrepreneurs have started to explore the possibilities of investing in hydropower development.

A small company, Arun Valley Hydropower Development Company, set about developing a 3 MW Puluwa Khola hydroelectric plant in the very river valley where the infamous Arun-3 had once been planned by NEA and the World Bank. The total cost of the project worked out to Rs 280 million, 70 per cent of which came from a consortium of Nepali banks and 30 per cent from individual investors. The unit cost of the project turns out to be only \$1400/kW, which is four times cheaper than Arun-3 (even after eight years of inflation). Despite Maoist insurgents blowing up a transformer of the project as well as an army ban against transporting explosives needed at the construction site for civil works, Puluwa Khola hydroelectric plant was completed in time and, since 2003, has been synchronized with the national grid.<sup>36</sup>

Still another private initiative is the Lamjung Electricity Development Company of mid-West Nepal, which was formed in 1994 with shareholding from Lamjung businessmen, as well as its village and district governments. Despite being bedevilled by problems of vision in its corporate mission, it has constructed, in a record time of ten months, a 183 kW small hydroelectric plant at the rather low cost of \$1300 per kW in a remote part of the district with no access roads. These facts paradoxically overturn the 'economy of scale' principle of economics in Nepal. The company is now planning investments in a 3 MW Khudi hydroelectric plant.<sup>37</sup> Ten such private companies are currently engaged in mobilizing local and foreign investments in developing the country's hydropower at the small and medium scale.

Nepal's hydro-entrepreneurs have also profited from the changing fashions of development thinking. Today, the themes championed by aid agencies are privatization and liberalization. Entrepreneurs took advantage of this window of opportunity, and pulled off the privatization of Butwal Power Company. The effort to privatize this company, whose history has been described above, had long been a failure, with tender bids cancelled

several times by HMG under various pretexts, the latest in 2002. Despite the fact that the Maoists bombed the company's biggest power plant, the 12 MW Jhimruk, a consortium of Nepali business houses and a Norwegian company put up the highest bid and successfully negotiated the buyout of controlling shares of BPC. To date, it is the biggest enterprise to be privatized in Nepal and represents a significant step in pluralizing the generation of hydropower in Nepal.

The collapse of Arun-3 in 1995 also provided foreign aid donors the opportunity to identify and construct better projects cheaper and faster. The Asian Development Bank quickly diverted its approximately \$128 million dollars committed to Arun-3 towards the building of the 144 MW Kali Gandaki hydroelectric plant. During the anti-Arun-3 campaign, it was one of the projects highlighted by independent academics and activists as being a better option than Arun-3 because it could be built at half the cost and half the time. This assertion has now turned out to be valid: the plant was completed in early 2002 at about \$2600/kW.<sup>38</sup> It has, however, been criticized by activists for a poor record of fulfilling compensation promises to those affected by the project, questionable inflation of costs and other financial irregularities.

Other donors have diverted their funds to other hydroelectric plants built by the private sector or even by the NEA. The Germans have diverted their portion of the Arun-3 funds to a 70 MW Middle Marsyangdi hydroelectric plant whose construction has just begun. The only portion of the fund committed to Arun-3 that is still available – seven years after the collapse of the project – is the World Bank's \$175 million. The Bank, acting upon suggestions by activists during the anti-Arun-3 campaign, agreed to create a power development fund. The idea was that this money could be used by the likes of Lamjung Electricity Development Company and Arun Valley Hydropower Development Company to build smaller and cheaper plants on a competitive basis. The Bank and the Nepal government have so far been unable to set in motion such a fund.<sup>39</sup> This failure is made all the more poignant if one reflects on the fact that about two-thirds of Nepal's population, mostly living in the rural areas, still have no access to electricity.

Pluralizing the hydropower policy terrain cannot only be limited to the generation end of the business. Much of the consumption of electricity by the people occurs in the distribution end. A fairly successful innovation in Nepal has been the 'communitization' of distribution, an antidote to both 'socialist nationalization' (hierarchy-biased) and donor-agency pushed 'privatization' (individualist market-biased). The communitization of distribution, which allows more egalitarian participation of local communities and hitherto fatalized masses, involved two steps. First, the NEA's distribution monopoly, the huge directorate of Distribution and Consumer Services, was internally unbundled into eighteen semi-autonomous 'distribution centres' with independent account keeping and a performance contract with

the centre. This gave both independence and accountability to the distribution manager. More importantly, it also brought decision-making closer to the consumer than previously, when directions came from far-away Kathmandu. This has had the immediate impact of toning down egalitarian critique.

The second was to allow rural communities to organize and manage their own distribution systems by having a 'bulk supply' contract agreement with the national utility. Nepal's is a largely remittance economy where workers in the Gulf or South-East Asia send back money to their families, an amount conservatively estimated to equal the national budget. As with many other Southern countries, there are few avenues to invest this money productively, and so the high liquidity ends up in real estate boom and jewellery. By allowing rural communities to manage their own electricity distribution systems, there is now the possibility of some of that money finding avenues for productive investment in village well-being. The one-year experiment has been quite successful, with eighteen community distribution groups already licensed to distribute their electricity and over two hundred waiting for their application to be evaluated.<sup>40</sup> This arrangement essentially balances the nationalized high-voltage transmission grid and privatized generation with an egalitarian commune at the distribution end of the business. The layout is no longer the neat and rigid vertically integrated monopoly: it is a contentious, but clumsy and stable arrangement.

The story of making Nepal's hydropower policy terrain clumsier would not be complete without an account of Nepali reactions to the report of the World Commission on Dams.<sup>41</sup> Initially, as with many Southern governments, HMG Nepal also rejected the guidelines of the World Commission on Dams as being unfriendly towards dam building, which is needed for her prosperity and provision of water-related services to her population. However, Nepal (unlike her neighbours China and India) is dependent on external investments and donor support for her projects. Nepal therefore could remain aloof from the report only to her detriment. It was therefore decided to engage Nepal's dam builders, dam critics and dam managers in a neutral forum to evaluate the 26 guidelines of the World Commission on Dams. The process, organized under the aegis of the International Union for the Conservation of Nature (IUCN) Nepal Chapter with full participation of the Ministry of Water Resources, took about a year and has shown that in many of the guidelines, the legal regimes and provisions of Nepal are far ahead and more progressive than what the World Commission on Dams has asked for. In others, some small changes in the legislation would more than meet the Commission's requirements. In one particular provision regarding transboundary information sharing, all participants agreed that it was biased against Nepal and other upstream countries and hence would not be in the country's interest to agree to it.<sup>42</sup> That the laws of Nepal regarding dam building acquired a progressive overtone is the outcome of the active

engagements between the upholders of the three alternative ways of organizing and perceiving that emerged during the Arun-3 and Mahakali debates: the egocentric market players represented by the dam builders (individualism), the alarmists represented by the social activists (egalitarianism), and the procedural fetishists represented by the managerial water bureaucracy (hierarchy).

## **Cleaning up muddied waters**

Cultural theory predicts that public policies tend to go abysmally wrong when based upon a single way of organizing and thinking. Such policies are prone to cause costly surprises, as they lack the wisdom and experience contained in other ways of defining and solving the issues at hand. Moreover, each way of organizing and perceiving cannot survive by itself, but needs the vigorous opposition of the alternative ways so as not to collapse onto itself and thereby cause the outbreak of massive fatalism, clientelism, patronage and other forms of corruption. Hence, a singular, hegemonic policy perspective is not only surprise-prone, but also tends to have corrupting effects on society. Water policy in Nepal, and in many other parts of the South, has provided many sad reminders of this simple but profound insight.

In Nepal, governmental attempts at water management (be it for the purposes of providing irrigation, drinking water or power) have almost always followed a strictly hierarchical and technocratic line. The problems and opportunities spotted on this uncontested terrain could invariably only be solved and realized by massive governmental projects. Individualistic and egalitarian voices pointing to more efficient, equitable and small-scale options for water management were suppressed before the return of democracy to Nepal in 1990, and often studiously ignored thereafter. Alas, these 'elegant' governmental policies failed to achieve their stated goals. Instead of turning Nepal into a 'second Singapore' or 'an Asian leopard', the gigantic dams, canals and other water projects selected by the technocracy have left the large majority of Nepalis without access to electricity, irrigation and clean drinking water. And those lucky enough to have been provided with these services continue to pay an exorbitant price for them.

In addition, this strictly hierarchical view has spread corruption and has fortified already existing feudal, clientelistic structures. In monopolizing the Nepali hydropower sector, the Nepali bureaucracy has often found itself in the conflicting roles of client, engineer-consultant, as well as contractor. Under such conditions, markets become distorted or phantom markets, while government gets corrupted. Instead of a level playing field, one finds monopolies, exchange rate controls and multiple rates favouring cronies, as well as a License Raj of tariffs, quotas and permits that allows a rent-seeking feudocracy to extract surplus at various stages of the development game. While there has been some move towards private sector consultancies and

contractors in Nepal, the institutional bias continues to be towards fostering fully government-owned and controlled entities that properly belong to the market or civil society. Wholly government-owned electricity companies are loath to relinquish their hold and subject themselves to the discipline of the market. This malaise is as present in India as it is in Nepal.

A singularly hierarchical approach to policy-making has also usurped the proper 'social auditor' function of civil society. In many Southern countries (including Nepal), governments have monopolized social services and have prevented independent voluntary associations from functioning. As a result, NGOs have often stopped being activists for a social cause but have instead become fronts for businesses or politics, and are known by various descriptive acronyms: GONGOS (government-organized NGOs), DONGOS (donor-organized NGOs), BONGOS (business-organized NGOs), PONGOs (party-organized NGOs), and so on. Foreign aid donors providing development funds through NGOs do not necessarily foster the egalitarian critique so necessary for a properly plural and contested policy terrain.

Foreign aid has to shoulder a significant portion of the blame for the lack of clumsiness prevalent in Nepal and other countries of the South. The Bretton Woods arrangement and the allied 'United Nations' concept conferred upon Southern states feudal *zamindari* rights over its citizens and spaces as never before in their histories: it allowed government officials the right to borrow the future through sovereign loans. For a feudal state apparatus, this boon was god-sent. Foreign aid became akin to nutrient inflow in a pond resulting in eutrophic algal bloom: government agencies soon began to take over village and community functions, from resource management to small-scale business. Aided and abetted by foreign aid, government functionaries essentially became business people and also monopolized social services, choking other forms of institutional life like over-productive algae.

Egalitarian-minded activists and academics have often protested against the attempts by the Nepali government and its aid donors to gamble the fate of the country on a few massive hydro projects. They have frequently exposed the dubious economic assumptions hidden in the design of these projects, and have deplored the regional inequalities, environmental destruction, graft and destitution that these projects were bringing about. Advocates of individualistic perspectives have pointed out that Nepali private companies are quite capable of finding efficient, practical and innovative business solutions to the problems of lacking water supply, irrigation and drinking water. Before the restoration of multi-party democracy in Nepal in 1990, these alternative voices were frequently silenced; thereafter they were too often ignored, despite occasional successes, by the nexus of politicians, bureaucrats and contractors/suppliers. Power development in Nepal will only blossom when defenders of all three ways of perceiving and organizing can freely engage in a clumsy debate over what the problems are and how they should be solved.



## Notes

1. This phrase is repeated *ad nauseam* in almost any newspaper reporting on water in Nepal as to be a public truism, no questions asked. Two policy quotes perhaps suffice. His Late Majesty King Birendra: 'One of our chief resources in Nepal is water which if harnessed and managed properly holds a magic key for all-round development of our country.' Quoted in HMG Ministry of Water Resources, *Water: The Key to Nepal's Development* (Kathmandu, 1981). Also prime minister Sher Bahadur Deuba: 'The only way for Nepal to make a leap in development is water resources. ... Except for water resources, we have no other alternative.' Quoted in Nepal Forum For Environmental Journalists, *Pani Ka Kura* (Kathmandu, 1998).
2. A prospectus of Morang Hydro-Electric Supply Co. Ltd. dated 1 December 1942 describes the company as having an authorized capital of one million rupees owning a 1000 kVA hydroplant in Letang near Dhankuta on the Lohindra river costing 750,000 British Indian rupees and having a licence to operate it for 30 years. A landslide washed out the plant in the following years and the company itself taken over by the government's Eastern Electricity Corporation, established in October 1974, also took over the Dharan Electricity Corporation. It is owned up to 25 per cent by the Nepal Electricity Corporation and the remainder by HMG.
3. Note by Sir Olaf Caroe, Secretary Government of India, External Affairs Department, dated 18 February 1945. Records kept at the India Office Collection at Blackfriars, London.
4. For instance, many Rana retainer families did not pay any electricity bill as late as the 1960s because Chandra Sumshere Rana, the shogun-like prime minister between 1901–29 had decreed so. (Personal discussions and interviews)
5. These were the Asian Development Bank and the World Bank.
6. United Mission to Nepal, an international federation of Christian missionary groups, has as one of its members a Norwegian organization that was able to arrange funding for the Tinau project partly through donations of second-hand electro-mechanical equipment and partly in cash from the Norwegian aid agency NORAD. Some funding also came from HMG as loan from the government-owned industrial investment bank, the Nepal Industrial Development Corporation.
7. Details on Tinau from D. Gyawali and A. Dixit, 'Fractured Institutions and Physical Interdependence: Challenges to Local Water Management in the Tinau River Basin, Nepal', in M. Moench, E. Caspari and A. Dixit (eds) *Rethinking the Mosaic: Investigations into Local Water Management* (Boulder, CO: Nepal Water Conservation Foundation, Kathmandu and Institute for Social and Environmental Transition, 2000).
8. Personal communication from the then loan officer in the Nepal Industrial Development Corporation who dealt with the subject in the mid-1970s. See Gyawali and Dixit 2000, *ibid*.
9. See Power Division, South Asia Projects Department, 'Appraisal of the Kulekhani Hydroelectric Project', Report No. 833a-NEP (Washington, DC: World Bank, 1975).
10. See Canadian International Water and Energy Consultants (CIWEC) and NEA's System Planning Department, 'Least Cost Generation Expansion Plan – 1987', Report No. PD/SP/431124/3–3.
11. In Nepal, one of the legal provisions for registration of non-governmental organisations (Nepali or international) is that their assets would revert to HMG if they

ceased to function. The principle at work behind this provision is that such assets have been created as part of a public trust which is not taxed and so on. Hence, once the entity that is holding that public trusts no longer functions, such asset ought to revert to another 'public trustee' such as the government.

12. It must be stated for record that this privatization happened during my watch as Nepal's water resources minister and the ex-officio chairman of Nepal Electricity Authority. Some of the other 'clumsy' solutions to Nepal's hydropower problems described below, including an agreement with the World Bank on the power development fund, the unbundling of urban distribution, the communitization of rural electrification, the working out of the trigger criteria for Article 126 of the constitution, as well as drafting HMG's new irrigation policy that places farmer-managed irrigation systems in the centre stage, all happened on my watch.
13. Concepts from A. Toynbee, *A Study of History* (Oxford: Oxford University Press, 1960).
14. The details on the assumptions on sedimentation are found in the Feasibility Report on Kulekhani Hydroelectric Project, jointly undertaken by His Majesty's Government and the Japan International Co-operation Agency, September 1974.
15. Also see Power Division, South Asia Projects Department, World Bank, op. cit.
16. See Operation Evaluation Department, *The Bank's Experience with Large Dams: A Preliminary Review of Impacts* (The World Bank, August 1996). According to Nipon Koei, *Master Plan on Sediment Control For Kulekhani Watershed* (1994), the total sediment deposited in the 13 years of impoundment is 7 million cubic meter which gives the average sedimentation rate of 538,461 cubic meter per year. The figure of 355,000 was taken on the logic that 'technique of averaging one high value with 12 rather low values does not given a representative future yield'.
17. I.-M. Bjonness, *Hydroelectric Development in Rural Nepal: Resource Analysis of Kulekhani Hydro Electric Project*, thesis submitted for the degree of Doctor Scientiarum in Resource Geography, (University of Oslo, Department of Geography, Norway, 1992).
18. The 1989 blockade by India (which surrounds Nepal on all three sides and controls Nepal's access to the sea), resulted from Nepal importing Chinese arms, much to India's dislike.
19. See M. Thompson, 'Huge Dams and Tiny Incomes', *Water Nepal* (Vol. 4, No. 1, 1994).
20. Details in D. Gyawali, *Rivers, Technology and Society: Learning the Lessons from Water Management in Nepal* (London: Zed Books, 2003).
21. The first analysis was done by Canadian International Water and Energy Consultants (CIWEC), a consortium of Canadian hydropower consulting firms led by Acres of Niagara Falls and financed by CIDA grants to Nepal, in a February 1987 report entitled 'Evaluation of Hydropower Projects for Generation Expansion Plan'. It was later enshrined in an official document (written by a CIWEC consultant, this time working not in WECS but in the NEA) that was to acquire the status of a Bible: 'Least Cost Generation expansion Plan – 1987', published in April 1987 as Report No. PD/SP/431124/3–3 of the System Planning Department of the Planning Directorate of the Nepal Electricity Authority (NEA).
22. Ultimately, the World Bank was able to almost cobble together an aid package of 1.1 billion dollars in which the commitments of various donors amounted to: 16.2 per cent (World Bank), 11.8 per cent (ADB Manila), 11.5 per cent (German KfW), 1.8 per cent (France), 1.6 per cent (Sweden BITS), and 0.9 per cent (Finland's FINNIDA). The Nepali consumer was expected to bear 41.1 per cent through steep

tariff increases and 'interest during construction' on sovereign loans. Interestingly, it was expected that the Japanese would contribute 15.1 per cent of the \$1.1 billion, but they never fully came on board because of differences with the Germans about apportioning of contracts for supply and construction. This was the infamous 'funding gap' which also contributed to the World Bank's pulling out.

23. The original full-blown version of Arun-3 was a 402 MW project. But when export to India was dropped and securing funding became difficult, the project was scaled down to 201 MW.
24. See Electricité de France, *Reconfirmation of Arun-3 Hydroelectric Project (Update of the Least Cost Generation Expansion Plan), First Draft Summary* (Kathmandu: Nepal Electricity Authority Corporate Planning Department, 1990).
25. Details in Gyawali, op. cit.
26. See E.A. Moore and G. Smith, *Capital Expenditures for Electric Power in Developing Countries in the 1990s* (Toronto, Canada: C.I. Power Services Ltd, 1990). Also summarized in *Water Nepal* (Vol. 3, No. 1, 1993).
27. The corruption angle in development has been analysed in greater detail in D. Gyawali, 'Governance, Corruption and Foreign Aid' in S. Sharma, et al (eds), *Aid Under Stress – Water, Forests and Finnish support in Nepal* (Kathmandu: Himal Books, 2004).
28. See details in D. Gyawali and A. Dixit, 'Mahakali Impasse: A Futile Paradigm's Bequested Travail', in D. Kumar (ed.), *Domestic Conflicts and Crises of Governability in Nepal* (Tribhuban University, Kathmandu: Center for Nepal and Asian Studies, 2000).
29. See *Kathmandu Post*, 'Mahakali-Pancheshwar Office Closed Down' (2 July 2002): 'The joint office set up two and a half years ago to prepare the DPR has been closed down even though the DPR preparation is far from complete and differences have remained between the Nepali and Indian technicians over the issue of water-sharing and selecting a re-regulating dam site.'
30. The wordings of Article 3 of the Treaty: 'and hence both the parties agree that they have equal entitlement in the utilisation of the waters of the Mahakali rivers without prejudice to their respective existing consumptive uses of the waters of the Mahakali river', is contradicted by Clause 3 of the exchanged letters: 'It is understood that Paragraph 3 of Article 3 of the Treaty precludes the claim, in any form, by either party on the unutilised portion of the shares of the waters of the Mahakali River of that Party without affecting the provision of the withdrawal of the respective shares of the waters of the Mahakali River by each party under this Treaty.' This wording basically prevents Nepal from claiming financial benefits from its equal entitlement of the waters of the border river if it does not use it within Nepal and allows it to flow downstream.
31. It has been reported that the Power Trade Corporation of India has agreed to a substantially lower power buyback rate of about 4 cents, which – for storage energy – is lower than what the Nepali national utility is paying (6 cents) for non-regulated hydro-energy.
32. A status report prepared by the Ministry of Water Resources in May 2003 attempts to define what would constitute a treaty of an 'all-encompassing, serious and long-term' nature as well as the nine criteria that would trigger a two-third ratification by the parliament. See details in A. Dixit, P. Adhikari, and S. Bisangkhe (eds), *Constructive Dialogue on Dams and Development*, (Kathmandu: Nepal Water Conservation Foundation with World Conservation Union, 2004).
33. See R. Dahal, 'As Enron Came, it Went', *Himal South Asia* (Vol. 11, No. 6, June 1998).

34. See *Kathmandu Post* of 3 August 1998. It is surprising that this issue was raised because the water resources minister, in an interview with *Himalayan Times* when asked if Enron had gone back because of his intransigence, replied that he was willing to give the survey license to Enron provided the issue of downstream benefits ('which would extend all the way to Bangladesh') could be resolved before the production license would be given. See *Himalayan Times* (10 May 1998).
35. Both the Khimti and Bhote Kosi have been criticized for high power purchase agreements of 5.9 or 6 cents per kilowatt hour. It is argued that open bidding would have produced much cheaper power. The justification from the government side is that, as first efforts to invite private investors, it was necessary to invite Khimti and Bhote Kosi investors rather than submit them to an untested bidding procedure.
36. See K. Dixit, 'Hari, the Hydro-Entrepreneur', *Nepali Times* (22–8 February 2002).
37. See *LEDGO Khabar*, the newsletter of the Lamjung Electricity Development Company (Vol. 1, Nos. 1–4 and No. 7, August 1999–April 2002).
38. See *Vidyut: Semi-Annual Journal of Nepal Electricity Authority* (Kathmandu: February 2002).
39. There was some progress on this front during my watch: the primary Memorandum of Understanding was signed with the Bank. However, subsequently, the institutional mechanism has run into unexpected turbulence.
40. See the daily *Raajdhani* of 9 May 2004: 'Samudayik Bidhyutikaran Bata Saphalta' (in English: 'Success in Community Electrification'). The news report quotes the utility manager as saying that the loss and theft has been greatly reduced while the income of the utility from bulk contracts have gone up by 70 per cent. The consumer groups claim that the difference between the bulk purchase and retail prices of electricity has allowed their cooperatives to make a handsome profit.
41. In the wake of the global opposition to large dams, the World Bank and the International Union for the Conservation of Nature & Natural Resources (IUCN) convened a meeting of activists and the dam-building industry in 1997. The meeting set up a 'World Commission on Dams' chaired by the then South African water resources minister, Kader Asmal, and having as its members dam builders, dam critics and dam managers. It produced the report *Dams and Development* in November 2002.
42. Details in Dixit, Adhikari and Bisangkhe, op. cit.

# 4

## Segregation through Anti-Discrimination: How the Netherlands Got Divided Again

Mark Bovens and Margo Trappenburg

Another question repeatedly asked by students: why do I work at such a bad school? But why, I ask, do you think this is a bad school? Well, Sir, if this isn't a bad school, why don't any Dutch kids go here? If this was a good school, Dutch parents would send their kids here, too, wouldn't they?

Kees Beekmans, pre-vocational education teacher, in *De Groene Amsterdammer* (24 January 2004).<sup>1</sup>

### A devilish dilemma

In the autumn of 2003, SV Blerick, a local amateur football club in Limburg, in the south of the Netherlands, made headlines when the news broke that young players with ethnic minority backgrounds were temporarily being barred from becoming members of the club. The club's chairman explained that it was virtually impossible to get club members from minority backgrounds, or their parents involved with the club as volunteers. Nearly all the work in the club was therefore left to a dwindling number of native Dutch members. If the number of club members from immigrant backgrounds were to increase any further, then it looked likely that the few remaining board and committee members would quit. If that were to happen, the club would fall victim to its own success. At that time, about 30 per cent of the total membership of SV Blerick was from an ethnic minority background – far more than at most other football clubs in the region. In 1997, the club had won the Fair Play Award, precisely because of the large number of players from ethnic minorities.<sup>2</sup>

Since then, other clubs have contemplated similar membership caps. The chairman of RVC/Rijswijk, a football club in a suburb of The Hague,

recently declared:

The percentage of members from ethnic minorities is currently 45%. We are seeking to prevent this from rising any further (...) I realise that we are treading a very fine line here (...), but we have no desire to become a Turkish or Surinamese club and drive away our native Dutch membership.<sup>3</sup>

In the Netherlands, regional governments have set up some forty 'Anti-Discrimination Bureaus' to closely monitor, investigate and prosecute cases of suspected discrimination. And the day following the club chairman's *cri-de-coeur* brought a stereotypical response from the Anti-Discrimination Bureau in The Hague:

We intend to investigate whether this is morally permissible (...). It is an extreme measure and, in our view, socially very undesirable. With this step, the clubs are well on the way to promoting segregation.<sup>4</sup>

Hence the well-meaning chairs of SV Blerick, RVC/Rijswijk and many other football clubs that gladly wanted to become mixed clubs find themselves confronted with a devilish dilemma. The explicit institution of a quota for ethnic minority players presents a real risk of having to answer discrimination charges. Yet, without a quota, their clubs may become immigrant clubs, and, in the worst case, collapse due to a lack of volunteers to shoulder the administrative and organisational responsibilities.

Nor are football clubs the only social institutions in the Netherlands facing this dilemma. Schools and housing corporations, too, are finding it necessary to limit the number of pupils and tenants with an ethnic minority background, as once a certain percentage has been reached, schools or neighbourhoods tip over to become entirely occupied by ethnic minorities. Over the past decades, school boards have gained much experience with progressively 'blacker'<sup>5</sup> schools and the 'white flight' causing this phenomenon. Already, schools have had to be shut down due to the fact that, at these schools, a steadily increasing proportion of minority students has been accompanied by an equally steady decline in the total student population.

The devilish part of the dilemma is that the ban on quota systems, while designed to combat segregation appears to have achieved precisely the opposite. In many cases, after the percentage of ethnic minorities in football clubs, schools or neighbourhoods had risen to a certain level, the flood could no longer be stemmed. Thus, many a football club has become an ethnic club, many a school a black school and many a neighbourhood a residential area predominantly populated by ethnic minorities.

During the last thirty years, Dutch football clubs, schools and urban areas have provided more than a few empirical examples of the processes captured in the 'Schelling Segregation Model', developed by the economist Thomas

Schelling – somewhat ironically around the time of the start of the Dutch segregation processes.<sup>6</sup> In these pre-PC times, Schelling developed his formal model by placing pennies and dimes on a chess board, and then moving these around according to various rules. The board symbolized a city, while each square of the board represented a house or a lot. The pennies and dimes stood for agents representing any two groups in society, such as different ethnic groups, boys and girls, smokers and non-smokers, and so on. The neighbourhood of any single agent occupying a location on the board consisted of the squares adjacent to his or her own spot. Thus, interior agents had eight neighbours, while boundary agents had either three or five neighbours. The behavioural rules spelled out under which conditions particular agents were happy in their locations, and what strategy they could follow when they were not. If an agent was unhappy, he would try to move to another location on the board, or possibly exit the board entirely. Not too surprisingly, Schelling found that the board quickly evolved into a strongly segregated location pattern, if the ‘happiness rules’ governing the agents were specified so that segregation was heavily favoured. More surprisingly and importantly, Schelling also discovered that initially integrated boards tipped into full segregation, even when the agents’ happiness rules expressed only a mild preference for having neighbours of their own type (that is to say, even when the agents were satisfied with having only a few similar agents living in their neighbourhood).<sup>7</sup> We will argue that this latter version of the model accurately describes the segregation processes at work in Dutch schools, residential areas and sports clubs during the last thirty years.

No one in the Netherlands seems happy with the currently high levels of segregation. Immigrant parents regularly indicate that they would like to send their children to mixed schools and clubs. Football club chairs, school boards and housing corporations generally favour mixed clubs, schools and neighbourhoods. Native Dutch parents, neighbourhood residents and members of sports clubs presumably have no objection to mixed schools, neighbourhoods and clubs, as long as they know that at some point ‘a line will be drawn’. They have no problem with children from ethnic minorities as classmates for their child, as long as their child is not the sole white child at a black school. Dutch natives do not mind having immigrants as neighbours, but have no desire to end up living in Little Marrakesh or Little Istanbul. Parents and native Dutch neighbourhood residents would therefore rather be safe than sorry. As there is no guarantee that the influx of newcomers will be halted at some point in time, people exit before the school has become wholly black, and before the neighbourhood has turned into a Little Turkey.

In this chapter, we will consider which factors and organizations have contributed most to the splitting of Dutch schools, urban areas and football clubs into two parts – a black and a white one. We will show that, since the early 1970s, overly stringent anti-discrimination policies have served to

promote segregation in the Netherlands by effectively stripping the well-intentioned directors of social institutions of the means to achieve some degree of diversity. As housing corporations, school boards and sport clubs have been barred from using any quota systems, no effective diversification policy has been possible, and – just as Schelling would have predicted – strongly segregated black and white neighbourhoods, schools and clubs have resulted. In our view, this redividing of the country – some thirty years after the (in)famous Dutch religious and ideological pillars had dissolved – was an unfortunate development.<sup>8</sup> We believe that growing up in ethnically segregated neighbourhoods and attending predominantly black schools adversely affect the self-perception of, and the opportunities available to, the children from ethnic minority backgrounds, and are also harmful to social cohesion. We also offer a number of recommendations as to how the legal openings could be created that are needed to enable a diversification policy.

The larger, theoretical message of this chapter is that it can be as detrimental to place a taboo on hierarchical views and solutions as it is to rely exclusively on hierarchical perspectives and measures. Compared to the other policies that have been advocated, the quota systems that have been proposed – and rejected – for Dutch schools, cities and clubs during the last thirty years have been hierarchical measures. As the clumsiness-hypothesis retrodicts, the steadfast refusal to seriously consider any hierarchical solutions has led to policies that have not been successful according to any way of organising, perceiving and justifying social relations – indeed, to policies that have achieved exactly the opposite of what was intended.

## Segregation in public housing

### The Netherlands: a segregated country

During the early 1980s, urban sociologists Bovenkerk, Bruin, Brunt and Wouters were studying ethnic tensions in the Utrecht neighbourhood of Lombok.<sup>9</sup> They discovered that these tensions did not date from the period when the first immigrant workers from Morocco and Turkey had moved into the neighbourhood. Back then (during the 1960s and the 1970s), the neighbourhood residents had responded with hospitality, going out of their way to help their immigrant neighbours feel at home. The social relations in Lombok only began to deteriorate when the number of immigrants soared (partly due to the practice of family reunification), and when it became unclear who was to socialize whom in Lombok.

In the Netherlands, non-western ethnic minority groups are mainly found in certain neighbourhoods in the major cities, such as Lombok in the city of Utrecht. According to Dominguez Martinez and Vreeswijk, from the Rotterdam Institute for Economic Studies, 83 per cent of the Cape Verdeans in the Netherlands live in one of the major cities, of which 79 per cent live in Rotterdam.<sup>10</sup> 74 per cent of the Ghanaians and 70 per cent of the



Pakistanis live in one of the four major cities. The figures are less extreme for the bigger ethnic population groups but remain considerable: 57 per cent of the Surinamese in the Netherlands reside in one of the four major cities, as do 48 per cent of the Moroccan and 36 per cent of the Turkish population. Ethnic minorities, in both the major cities and the smaller municipalities, are very likely to live in immigrant neighbourhoods. 86 per cent of the Turks and 82 per cent of all Moroccan households inhabit neighbourhoods with an immigrant population of at least 20 per cent. It should be noted that the immigrant neighbourhoods in question are mixed, with an immigrant population from a variety of backgrounds. The Netherlands has very few ethnically homogenous (such as exclusively Turkish or Moroccan) neighbourhoods. The net result of all this is that nearly one-third of the inhabitants of the major Dutch cities belong to ethnic minorities, while the national average is approximately one in ten.

Compared to other countries, the Netherlands is a highly segregated country. Even so, it is often assumed that the level of segregation in the Netherlands is nowhere near as bad as it is in the United States. However, if, instead of looking at the ghettos in the metropolises of the United States, the Dutch situation is compared to those American cities that are more or less of the same size as the cities in the Netherlands, a different picture emerges:

Ethnic minorities are as segregated from ethnic Dutch as are blacks and Hispanics from 'Anglo' Americans (that is, non-Hispanic whites). However, Dutch minorities tend to live in more ethnically varied neighbourhoods (often with other immigrant groups). African Americans, Hispanics and Asians do not share neighbourhoods to the same degree in the USA.<sup>11</sup>

Ruud Koopmans has compared the segregation index for certain categories of ethnic minorities in various European cities, and has shown that the degree of segregation in the cities of Rotterdam, Amsterdam and The Hague is relatively high, particularly when compared to German cities.<sup>12</sup>

The obvious question is how such a high level of segregation could have developed in the Netherlands. Is this urban settlement pattern a consequence of the preferences of immigrant and native inhabitants, does it have to do with policy (deliberate or otherwise), or is it a combination of these factors? To a limited extent, this pattern has to do with choices made by ethnic minority groups. A good example is that of asylum seekers who, once having been granted a residence permit, choose not to remain in the region where the asylum seekers' centre is located, but instead elect to move to one of the four major cities in the Netherlands. This phenomenon can be observed on a modest scale, in particular among Afghans and Iraqis.<sup>13</sup> Many Surinamese also apparently choose to live in neighbourhoods with high concentrations of ethnic minorities.<sup>14</sup> However, opinion research has never

shown that Turkish and Moroccan immigrants prefer to live among themselves. When asked, these immigrants tend to express a preference for a more mixed neighbourhood. Ethnic minorities with the financial means to do so move to neighbourhoods on the outskirts of the city, just like native Dutch inhabitants of deprived neighbourhoods do.<sup>15</sup>

The Blok Commission, a recent parliamentary commission that examined thirty years of Dutch integration policy, concluded in 2004 that the current segregation should largely be attributed to government policy.<sup>16</sup> The problems began back in the early 1970s, when migrant workers – unlike the newcomers before them: the immigrants from the (former) dominions of the Dutch Indies, Surinam and the Antilles – were no longer provided housing upon arrival in the Netherlands. These workers were initially housed by their employers in dilapidated boarding houses, and were later forced to seek accommodations that they were able to afford by themselves. Many washed up in the cheapest neighbourhoods in the four cities of Amsterdam, Rotterdam, The Hague and Utrecht.<sup>17</sup> A high-ranking civil servant who had worked at the time at the Ministry of Culture, Recreation and Social Affairs explained it as follows to the Blok Commission:

The Ministry argued in favour of a more even distribution of foreign migrants throughout the country, by providing housing in the various projects that were being realised during the seventies and the eighties. Immigrants could be decently housed in these dwellings among the ethnic Dutch population. However, this was a non-issue: one not to be discussed, as these people were different from the Surinamese, Antilleans and Indonesians, who were ‘presented’ with dwellings, which meant that indirectly, a form of diversification policy was followed. This did not hold for the foreign migrant workers.<sup>18</sup>

The Blok Commission also quotes Mr Molleman, the former Minorities Policy Director at the Ministry of the Interior:

At that time (...) it had already become clear that the influx of ethnic minorities would be concentrated in the neighbourhoods with the lowest rent levels. It was all very logical, but here was where [the] most underprivileged people lived, often in very deprived circumstances. Back then, I pointed out that the developments in the immigration politics would serve to increase the country's social problems and would impose increasingly heavy burdens on the poorest groups in society, who were least able to cope with these.<sup>19</sup>

### A ban on diversification

In an attempt to cushion or prevent these foreseeable events, municipal councils and housing corporations began to pursue a more or less official

policy of spatial distribution of ethnic minorities across neighbourhoods and multi-tenant buildings.<sup>20</sup> Such attempts to achieve a certain degree of dispersal were, however, quickly blocked by the authorities. Politicians and public authorities compiled various policy documents (memoranda, circulars, reports) in which ethnic diversification was condemned as being 'inadmissible' or 'unlawful'. In 1983, the State Secretary for Public Housing declared ethnic diversification to be in violation of the principle of non-discrimination:

[There are cases] where the term ethnic diversification policy is primarily understood to mean a more even distribution of population groups throughout the municipality, to be achieved by means of the allocation of housing (*inter alia*) based on ethnic criteria. In that case, individual choice and the available stock of dwellings no longer form the decisive factors; the municipality determines the concentration or the distribution of minorities on the basis of irrelevant ethnic criteria, to which the individual is subservient. To my mind, such a treatment of ethnic minorities could very well violate the non-discrimination principle. Reference could be made in this connection to the International Convention on the Elimination of All Forms of Racial Discrimination.<sup>21</sup>

In 1988, when it was found that the local housing policy still bore traces of ethnic-based spatial distribution, the government once again emphasized that all such practices had to cease:

The individual freedom of choice, the available housing supply and conventional distribution and allocation criteria are key. No heed will be paid to the demands and opinions of the present residents about the number of ethnic minorities in their residential area ...<sup>22</sup>

In the nineties, the concentration of migrants increased even further, partly as a result of the absolute ban on any form of dispersal, but also due to the ongoing liberalization of the housing market, which meant that the housing corporations began to give less attention to the lowest-income groups.<sup>23</sup> In response, the government finally voiced some concern in 1997, and a subsequent Memorandum on Urban Renewal stated that:

In certain neighbourhoods, where the ethnic concentration is dominant or threatening to become so, a better quality of life and working environment can be promoted .... by the redifferentiation of the housing supply.<sup>24</sup>

Yet, by 2000, this concern had once again abated. The policy memorandum *Mensen, Wensen, Wonen* ('People, Wishes, Housing'), published in the name of the then State Secretary for Housing Mr Remkes, asserts that an ethnically

homogenous residential population is not necessarily a problem, as long as this is not due to a lack of choice.<sup>25</sup>

Local administrators, housing corporation boards and civil servants all informed the Blok Commission that they were concerned about the absence of opportunities to achieve any form of diversity. Ms Brewster, who works for a housing corporation in the Bijlmer, an impoverished borough of Amsterdam, put it like this:

The Bijlmer district is my territory, and I see a concentration of similar problems. As all the people in this area live in apartments, it is difficult for both the housing corporation and the government to come to grips with the problems. Moreover, it doesn't make it any better for these people, as the children grow up in a situation where everyone is mired in the same hopeless conditions. All they see around them is that this is the way it is supposed to be.<sup>26</sup>

Mr Tuijnman, from Rotterdam (the second largest city in the country), pointed out that the possibilities for diversification beyond the city limits are almost wholly lacking and that a further liberalization of the housing market can only aggravate the situation:

As far as public housing is concerned, Rotterdam is completely dependent on the goodwill of the surrounding towns. I very much doubt that this will lead to anything, especially if the liberalisation process eliminates all the instruments we have at our disposal.<sup>27</sup>

The current spatial segregation is therefore largely the result of governmental policies, in particular the liberalization of the housing market, as well as the deliberate choice to discourage any form of tenant dispersal by housing corporations and municipal executives.

### **The role of the courts**

A few times, the courts have been involved in cases relating to anti-segregation policy.<sup>28</sup> A regulation regarding housing allocation that had been designed by the city of Rotterdam to foster a well-balanced population structure was declared void by the Crown as early as 1974, on the grounds that this was in contravention of the Housing Accommodation Act and the International Convention on the Elimination of All Forms of Racial Discrimination. A housing corporation in Eindhoven that had not been willing to cooperate with a proposed reallocation of dwellings was firmly reprimanded – its refusal being judged by the cantonal court to be 'overtly' discriminatory.<sup>29</sup>

Yet several court decisions demonstrated more understanding for these anti-segregation attempts. In 1981, the President of the Rotterdam Court

ruled that the municipal housing policy was not unlawful, as the proposed anti-segregation policy was intended to offer immigrants more opportunities to gain access to better housing accommodation.<sup>30</sup> In 1990, a Utrecht residents' committee protested against the influx of foreign families in their neighbourhood, only to be accused of racism in a letter from the city's Housing Management Department. The residents subsequently applied to the Municipal Ombudsman, who decided in their favour; the Housing Management Department was compelled to retract the letter.<sup>31</sup>

The legal options for a diversification policy, however, were restricted in 1994. The Equal Treatment Act specifically prohibited discrimination on the grounds of religion, conviction, political affinity, race, sex, nationality, sexual orientation or marital status by institutions with respect to housing. In theory, the Equal Treatment Commission – the quasi-judicial body that had to enforce the Equal Treatment Act – could interpret a decision made pursuant to an anti-segregation policy as an (admissible) form of affirmative action (article 2, paragraph 3 of the Equal Treatment Act). However, we have not been able to find any decisions of the Commission in which this reasoning was followed.

Overall, we have to conclude that the courts and the (court-like) Equal Treatment Commission have *not* played a major role in striking down any efforts to prevent urban segregation. If anything, the courts have left some room for the imposition of quota systems in cities, provided that these would benefit ethnic minorities as much, if not more, than ethnically Dutch people. The taboo on quotas in urban planning was mainly laid down by the Dutch government at all levels.

## Segregation in education

### Mixed neighbourhoods, segregated schools

On 21 February 2003, Monique Kremer and Shervin Nekuee sounded the alarm on the opinion pages of *De Volkskrant*, one of the leading Dutch newspapers. They were looking for a school for their son, Sheyda, and opined:

Our neighbourhood is perfectly mixed: half is from an ethnic minority background, while the other half is native Dutch. However, we lack a mixed school in our neighbourhood. There is a Christian primary school down the street, which is attended by only very few Dutch Christians. The school is black, but not mono-ethnic: 32 nationalities currently attend the school. There are clear advantages to so much diversity. Children from richly varied backgrounds mix together and learn to cope with differences. And, just as important: Dutch functions as their common language. Nonetheless, Sheyda's foreign-born father would rather that his son did not attend this black school. He is acutely aware of the narrow-mindedness of the dominant class in the Netherlands, the middle

class. Unlike in classic immigration countries such as the United States, knowledge and professional skill is simply not enough to succeed, as is demonstrated by the thousands of well-educated refugees sidelined by unemployment. To 'make it' in the Netherlands, to get ahead, it is vital to have become thoroughly immersed in the codes of conduct of the mighty middle class. To succeed, Sheyda should attend the highly recommended white school in a different neighbourhood.

Sheyda's native Dutch mother does not want Sheyda to attend this school. She is afraid that he will be bullied or teased by classmates because of his dark eyes and non-Dutch sounding name. As an adult, it can be a mark of pride to be different, but children want nothing more than to be the same as 'everyone else'. Moreover, this white school is no place for Sheyda to prepare for life in the Dutch Randstad. In a city where half of the population is made up of ethnic minorities, it is never too soon to start adjusting to cultural differences. Sheyda should feel at home in a city characterised by diversity. He must learn to surmount cultural bounds easily and flexibly in order to be able to live together with his fellow townsmen.<sup>32</sup>

The segregated housing situation in the Netherlands has also aggravated the ethnic divisions in schools. Ethnic minority children who are growing up in deprived, black neighbourhoods usually go to school in their own neighbourhoods. Obviously, the neighbourhood school will often be predominantly populated by the children of immigrants. However, in many areas, the segregation in education is worse than the residential separation. In neighbourhoods where 40, 50 or 60 per cent of the population consists of native Dutch people, and 60, 50 or 40 per cent is made up of ethnic minorities, the population distribution of the neighbourhood is not reflected in that of the primary schools. Instead, in such neighbourhoods there is often a black school next to, or across from, a white school. In some 7 per cent of the Dutch primary schools, ethnic minorities account for over 50 per cent of the student population.<sup>33</sup> Initially, black schools constituted a big-city problem, but today the number of black schools in medium-sized communities is on the rise as well. Even though a few native Dutch pupils from lower socio-economic backgrounds can sometimes be seen at a black school, well-educated middle class immigrant parents frequently choose to send their children to a white school and to move to a white area.<sup>34</sup>

Rusk, Frieling and Groenemeijer conclude in their comparative study that the spatial segregation in Dutch cities corresponds to that in American cities of the same size.<sup>35</sup> However, the segregation in education is much greater in the Netherlands than in the United States. They point out that in American studies on the effects of education since the 1960s, two conclusions are usually drawn: (1) a student's school career and academic success are largely determined by the socio-economic status of their family and that of their

classmates; and (2) children from lower socio-economic classes benefit from attending a middle class school. Dutch researchers have frequently doubted whether these effects also occur in the Netherlands, arguing that schools in deprived neighbourhoods in the Netherlands are eligible for extra funding (each ethnic minority student counts as 1.9 students in the educational system, and hence more teaching staff can be hired). Yet, the assumed beneficial effects of this policy of positive discrimination on education in deprived areas have never been conclusively demonstrated.<sup>36</sup>

The report of the Blok Commission lists a number of studies that compare the learning performances at black and white schools. According to these studies, a higher concentration of ethnic minorities results in lower scores in language. The Commission's report also points out that the composition of school classes affects the scores of students from ethnic minorities. The problem that has hobbled a lot of educational research is that children attending a black school also tend to come from the lower socio-economic classes, and tend to have parents with only little education. For this reason, it is very difficult to establish the effect that the schools' ethnicity has on the pupils' performance, independently from such other factors as family background, socio-economic status, or the neighbourhood that they grew up in.

### **The Equal Treatment Commission Rules**

Attempts to combat segregation at schools through following a diversification policy have been more or less forbidden by the Equal Treatment Commission – the powerful, quasi-judicial arbiter in Dutch anti-discrimination matters. A Protestant school in IJmuiden pursued a quota policy for ethnic minority students of 25 per cent, prompted by the thought that the school population should largely reflect the neighbourhood in which the school is located. As approximately 15 per cent of the residents of Zee- en Duinwijk (which is the name for this neighbourhood) came from an ethnic minority background, the school felt that it had already been generous with a quota of 25 per cent. Ethnic minority students who registered for a class in which the 25 per cent quota had already been reached were placed on a waiting list. The Anti-Discrimination Bureau in Haarlem immediately requested the Equal Treatment Commission to call the school board to order, which it duly did. The Commission ruled that the diversification policy of the school board illegally discriminated against individuals on the grounds of cultural background.<sup>37</sup>

The school board of a group of Protestant schools in Ede attempted to implement an admissions policy on the basis of the language spoken in the home (which is different from the criterion of ethnicity). Children for whom Dutch was a second language (called 'NT2 students') were spread as much as possible across the various affiliated schools, after consultation with the parents. A quota of 15 per cent NT2 students per class was adhered to. Experience had taught the school board that exceeding this quota would

prompt a brisk exodus of the white students; native Dutch parents would start to transfer their children to a different school. In this case, the Equal Treatment Commission was milder in its judgement, as the NT2 criterion could be defended in terms of educational motives. Nonetheless, the school board in Ede lost the case in the end, as it was unable to provide conclusive evidence that schools with more than 15 per cent NT2 students per class delivered a poorer educational performance. The Commission also found it unreasonable to continue to designate immigrant students in more advanced classes (who had therefore attended Dutch schools for a number of years) as NT2 students. The fact that the Commission did not immediately label the NT2 criterion a 'dubious distinction' may seem hopeful. Yet, the conditions laid down by the Commission for invoking this criterion were formulated so strictly that, in practical terms, a successful appeal for diversity on the grounds of NT2 was virtually ruled out.<sup>38</sup>

Indeed, at least for the time being, the Equal Treatment Commission appears determined not to stray from its very narrow path. As recent as 18 February 2005, the Commission reprimanded the municipality of Tiel for having allowed local schools to refer immigrant parents who had applied for a place for their children to other local schools whenever the percentage of black kids at the schools in question had equalled the percentage of black people in the neighbourhood. Over the last ten years, these arrangements had succeeded in reducing the number of black schools to zero, as well as in stopping the previous 'white flight' from the municipality. Yet, the Commission ruled that these policies are too discriminatory to be allowed to continue.

The case law of the Equal Rights Commission with respect to private schools that are seeking to retain their identity again poses a bitter dilemma. According to the Equal Treatment Act, private schools are entitled to refuse students on the basis of the religious or life principles of the parents. If a school chooses to adhere to this principle, it is required to be consistent and to refuse all children holding alternative beliefs. A school, which presumes that a quota of, say, 15 per cent of children with different religious beliefs poses no danger to its identity, is not permitted to implement this reasoning. The choice is stark: either apartheid based on religious beliefs and convictions, or an open admissions policy with the corresponding risks of becoming a black, segregated school from which white students have fled.<sup>39</sup>

## All or nothing?

### Segregation through anti-discrimination

It therefore appears that there is indeed a correlation between the high degree of segregation in the Netherlands on the one hand, and the anti-discrimination policies pursued over the past three decades on the other. As far as housing is concerned, this cannot be directly attributed to the case law



of the Equal Treatment Commission, or of the regular courts. Instead, urban segregation seems to be due to a self-imposed reticence on part of the Dutch state, which, at all levels, has remained very afraid that any attempt to spread ethnic minorities across the country would amount to discrimination. After the city of Rotterdam was once reprimanded by the courts (in 1974) for pursuing a quota policy in the allocation of public housing, many an administrator has been content to assume that diversification was ruled out by law. This assumption recurs in reports from advisory bodies, politicians' speeches and government documents without the involvement of the courts, or semi-judicial authorities like the Equal Treatment Commission.

The situation in education is somewhat different. Twice, the Equal Treatment Commission forbade well-meaning school boards from implementing a quota policy that was intended to keep the schools mixed. In particular, private schools have been compelled by the Equal Treatment Commission to choose between all or nothing. Private schools have been permitted to set limits on the number of minority pupils they admit, but only if they stringently guard their – in most cases, Christian – identity. As a result, these schools have remained wholly white.

The anti-discrimination logic that has been applied by the Equal Treatment Commission has thus achieved the exact opposite of what was intended. On the one hand, schools have been allowed to stringently preserve their religious identity, corporations have been free to demolish subsidized housing for luxury villas, and football clubs have been allowed to charge high admission fees – all measures that have de facto excluded minorities. On the other hand, the use of explicit quotas in order to promote mixed schools, mixed neighbourhoods and mixed clubs has remained taboo – even when the proposed percentages for minorities have been considerably higher than the percentages of ethnic minorities living in the area.

The Dutch anti-discrimination policies relating to the fields of housing and education have not nearly been clumsy enough. In fact, the extent to which these policies have backfired again illustrates the thesis that when attempts to solve (or pre-empt) pressing social issues are not creative combinations of all the ways of organizing, perceiving and justifying social relations, then these efforts tend to be self-defeating. However, contrary to the failures analysed in chapters 2, 3 and 6, in this case there was not an overabundance, but rather a dearth of hierarchical measures. This becomes clear when we spell out which ways of organizing and thinking were present, and which ones were not. Any individualistic perspective on integration and immigration would seek to increase unlimited, free choice. As such, it would first and foremost play down the extent to which immigration would create social tensions. In addition, it would assume that any tensions that might have arisen could easily be solved by offering individual people as much choice and opportunity – in housing, education, professions, and the like – as possible. (For instance, the archetypically individualistic Cato

Institute in Washington, DC has advocated opening the United States labour market to foreign workers, arguing – among other things – that this would *not* lead to a massive influx of workers.)<sup>40</sup> There is one proviso, though: as individualism puts individual choice on a pedestal, it would also be inclined to respect the right of individuals to form a school or sports club that would reserve the right to exclude other individuals from becoming members; this riddle is, of course, a perennial dilemma in individualistic thinking. Still, it is possible to unearth traces of individualism in the policies that have contributed to the emergence of the high levels of segregation in the Netherlands over the past three decades – in particular in the ongoing privatization of Dutch housing. The continuing shift from public to private housing in the Netherlands has obviously reduced the possibilities for a more hierarchical steering towards integration of immigrants coming into the country. Another individualistic element was present in the emphasis that, back in 1983, the then State Secretary for Public Housing put on individual freedom to choose where to live. Yet, these are trace elements. The main thrust of the Dutch anti-discrimination policies has been egalitarian. Egalitarianism is of course the way of organizing, perceiving and justifying that stresses solidarity and similarity between people, and that is constantly engaged in uncovering, protesting and reducing power inequalities and hidden forms of discrimination. The absolute refusal by the Dutch government to allow the making of any *distinctions* along ethnic or linguistic lines, on the assumption that any such distinctions could only serve divisionary or racist purposes, evinces one particular version – a ‘politically correct’ one – of this egalitarian spirit. The odd one out is therefore the hierarchical way of organizing, perceiving and justifying social relations. Differentiating the whole population into precise segments, and then prescribing, and imposing, the desired representation of these segments in schools, neighbourhoods, dwellings and sport clubs is a quintessentially hierarchical undertaking. As the Dutch integration and anti-discrimination policies have not left any room for these hierarchical measures, they have achieved the opposite of what has been intended: the emergence of a highly segregated society divided between more affluent, white neighbourhoods, schools and sports clubs, and much poorer and more desolate black urban areas, schools and clubs, in which resignation and fatalism have taken hold. The emergence of these divisions has done nothing for the abatement of discrimination in the Netherlands. A recent report of the National Bureau against Racial Discrimination concludes that there has been no general, long-term decline of racism within the Netherlands, while acts of anti-Semitism have risen in recent years.<sup>41</sup>

### Desegregation through affirmative action

A clumsier approach – with at least some room for hierarchical solutions – may help to reverse the trend towards ever more segregation in the Netherlands. Let us first examine the field of education, where some case law has already

been accumulated. We propose that the Equal Treatment Commission starts allowing schools to apply quotas under certain circumstances. The simplest way would be through invoking article 2, paragraph 1, of the Equal Treatment Act, which permits an indirect distinction to be applied whenever this can be justified.<sup>42</sup> On this legal basis, the Equal Treatment Commission could begin to relax the requirements relating to quotas for the so-called 'NT2' students. Thus, an objective criterion could be developed that would not discriminate along specifically ethnic lines: second- and third-generation immigrant students who speak Dutch at home will not be far behind in language skills, while children of newly arrived asylum seekers will be, regardless of their ethnic heritage. Too many students with very poor Dutch language skills tend to drag down the performance level of the whole class, and typically place an enormous burden on teachers. It is therefore a legitimate aim for schools to set limits on the share of children with poor Dutch language skills. A positive side effect would presumably be that – under this arrangement – white parents would become less interested in sending their children to predominantly white schools, thus preventing other schools from becoming entirely black.

Another option is offered by article 2, paragraph 3, of the Equal Treatment Act – the affirmative action article. This article permits a direct or indirect distinction to be made whenever this grants an ethnic or cultural minority a privileged position through which actual inequalities are eliminated. There is sufficient evidence to conclude that minority students would benefit from attending mixed schools, and that the existence of integrated schools would thus help to level the playing field for the various ethnic groups. However, several hurdles remain to be overcome. For example, paragraph 3 of Article 2 states that the objective of the distinction must be to grant a privileged position to individuals belonging to a minority group. This could be interpreted as implying that the school quota for ethnic minorities should be higher than the percentage of ethnic minorities living in the neighbourhood. This would also prevent any school boards from using the quotas for the less lofty purpose of keeping the school relatively white. A trickier problem could arise if minority parents wanting to register their children at a particular school that had already met its quota were to argue that they had been placed at a disadvantage compared to native Dutch parents for whose children there would still be places available. A quota policy could only be justified in terms of ethnic groups as a whole, as these groups would be better off than in the case of segregation, but would not always be a boon to each individual member of every minority group. To assuage this problem, municipalities or school boards should arrange to have the children who could not be offered admission to their preferred school placed at other, comparable schools close by.

In the near future, the city of Rotterdam will offer a very interesting test case. The municipal executive has announced a change in policy with regard to admissions to primary schools. It has identified all the primary schools

which do not mirror the ethnic composition of the neighbourhood population – according to this criterion, 18 schools in Rotterdam are too white, while 20 are too black. The alderman responsible for education has proposed that these schools will work with quota, for native Dutch pupils and immigrant pupils respectively, in order to get a more balanced student population.<sup>43</sup> The proposal has met with some opposition, with critics referring to the Equal Treatment Act, but it has been favourably received by the municipal council, and will be put into practice in the coming years.

With regard to public housing, there have thus far been very few judicial decisions that have explicitly prohibited the striving for integration and diversity. Moreover, there are numerous socially accepted instances where a representative composition has been aimed for, and which have rarely been held up for review by a judicial institution. For instance, in student housing an equal number of girls and boys is usually considered desirable, and personnel managers tend to prefer an even mix of older and younger employees. The desire to achieve a balanced representation of all the relevant groups within a population is also often decisive to the composition of innumerable public participation and advisory bodies, while the editorial boards of academic journals frequently attempt to attract a larger number of younger and female members. Maintaining or achieving a balance is accepted in all these instances, and virtually no one has ever thought of calling in the law. Furthermore, housing is characterised by a host of other restrictions on the choice of places to live, such as safety, nature, habitat or income requirements, all of which are generally accepted.

The housing corporations should break with their overly restrictive and largely self-imposed interpretation of the law, and instead begin to apply representativeness, or social cohesion, as the appropriate criterion with which to limit the freedom of people to choose where to live. It is by no means certain that the courts, or the Equal Treatment Commission, would not permit this.<sup>44</sup> Should a case of this kind be brought before the Equal Treatment Commission, again either paragraph 1 or 3, of Article 2 of the Equal Treatment Act would offer the best legal recourse, as these paragraphs allow for various criteria (such as the promotion of social cohesion) that justify affirmative action-policies.

Finally, the football clubs in Blerick and Rijswijk: what admissions policy should they pursue? As far as we are concerned, setting quotas is perfectly legitimate, provided the clubs are able to meet a few requirements. In order to avoid any semblance of discrimination, the quota would have to be higher than the share of ethnic minorities in the clubs' catchment areas. Furthermore, the clubs should have first tried out other alternatives. Have they seriously attempted to recruit minority parents as volunteers? Some clubs allow new members to join only after the prospective members, or their parents, have committed themselves to undertaking a number of services or jobs for the club. If these clubs could show that this admission

rule has not had its desired impact, temporary quotas should be allowed as a legitimate choice. Better to have a football club with a quota than no football club at all. So far, the events in Blerick and Rijswijk appear to have proven us right. In Blerick, the number of immigrant volunteers rose from three to twelve once the club installed a quota.<sup>45</sup> The football club RVC/Rijswijk, on the other hand, has recently announced a merger with FC Kranenburg and will cease to exist as an independent club.

The solutions that we propose are eminently clumsy. By bringing quotas back in we restore a pride of place to the hierarchical way of organizing. Yet, by insisting that these quotas be accompanied by arrangements (such as cooperation between schools) that would ensure that any quotas would not significantly impinge on individual choice, we also cater to the individualistic perspective (which, in any event, is already being taken care of by the ongoing privatization of Dutch housing). Last, we assuage egalitarian concerns regarding lack of solidarity and the dangers of social stigmas by arguing that quotas for ethnic minorities in urban areas, schools and clubs should only be allowed after less drastic measures have failed, and should always be higher than the proportion of ethnic minorities in the immediate area.

## Notes

1. All quotes from the Dutch have been translated by the authors.
2. *Dagblad De Limburger* (11 December 2003).
3. *Haagse Courant* (21 January 2004).
4. *Haagse Courant* (22 January 2004).
5. Please note that in the Netherlands, unlike for instance in the United States, it is widely acceptable to refer to citizens from a non-western ethnic background as 'black' people, and those from a western background as 'white people'. In the Netherlands, to the best of our knowledge, virtually nobody has ever protested these terms. They are not perceived to be pejorative in any shape or form, and they are routinely used in academic discourse, as well as civil (in both senses of that term) discourse. The same applies to 'black/white' schools, and 'black/white' neighbourhoods.
6. Thomas C. Schelling, *Micromotives and Macrobehavior* (New York: W.W. Norton, 1978), pp. 147–55.
7. For the formal model, see for instance: <http://www.econ.iastate.edu/tesfatsi/academos.htm>. Accessed 19 May 2006.
8. Arend Lijphart, *Verzuiling, Kentering en Pacificatie in de Nederlandse Politiek* (Amsterdam: De Bussy, 1968).
9. F. Bovenkerk, K. Bruin, L. Brunt and H. Wouters, *Vreemd Volk, Gemengde Gevoelens: Etnische Verhoudingen in een Grote Stad* (Meppel: Boom, 1985).
10. Silvia Dominguez Martinez and Annemiek Vreeswijk, 'Ruimtelijke Concentratie van Allochtonen', in: Justus Veenman (ed.), *De Toekomst in Meervoud: Perspectief op Multicultureel Nederland* (Assen: Van Gorcum, 2002), pp. 38–42.
11. David Rusk, Dirk Frieling and Leon Groenemeijer, *Inside Game/Outside Game: Segregation and Spatial Planning in Metropolitan Areas*, study commissioned by the ministries of the Interior, Economic Affairs and Agriculture, Nature Management and Fisheries and the cities of Arnhem and The Hague (2001).

12. Ruud Koopmans, 'Het Nederlandse Integratiebeleid in Internationaal Vergelijkend Perspectief: Etnische Segregatie onder de Multiculturele Oppervlakte', in: Huib Pellikaan and Margot Trappenburg (eds), *Politiek in de Multiculturele Samenleving* (Meppel/Amsterdam: Boon, 2003), pp. 64–100.
13. Dominguez Martinez, and Vreeswijk, op. cit.
14. Verwey Jonker Instituut, *Bronnenonderzoek Integratiebeleid* (Utrecht, 2003).
15. Dominguez Martinez and Vreeswijk, op. cit., p. 38, and The Blok Commission, *Bruggen Bouwen: Report of the Parliamentary Commission on Integration Policy* (The Hague: Tweede Kamer der Staten-Generaal, 2004), p. 382. Available at: [http://www.tweedekamer.nl/organisatie/voorlichting/commissies/eindrapport\\_integratiebeleid.jsp](http://www.tweedekamer.nl/organisatie/voorlichting/commissies/eindrapport_integratiebeleid.jsp). Accessed 19 May 2006.
16. Blok Commission, op. cit., p. 352.
17. Blok Commission, op. cit.
18. Blok Commission, op. cit.
19. Blok Commission, op. cit., p. 371.
20. Blok Commission, op. cit.
21. Verwey Jonker Instituut, op. cit., p. 143.
22. Verwey Jonker Instituut, op. cit., p. 151.
23. Blok Commission, op. cit., p. 374.
24. Verwey Jonker Instituut, op. cit., p. 155.
25. This report can be downloaded from the Website of the Ministry of Housing, Spatial Planning and the Environment. See: <http://www.vrom.nl/pagina.html?id=2706&sp=2&dn=13542>. Accessed 19 May 2006.
26. Blok Commission, op. cit., p. 393.
27. Blok Commission, op. cit., p. 393.
28. Based on information taken from the overview provided on the website of the National Bureau against Racial Discrimination ([www.lbr.nl](http://www.lbr.nl)), in the section on law and legislation, subparagraph 'housing'. Accessed 19 May 2006.
29. Koninklijk Besluit (Royal Decree) of 19 June 1974, *Bulletin of Acts, Orders and Decrees* 1974, 496.
30. Decision dating from 10 April 1981, NJ 1981, 359.
31. Decision Ombudsman Municipality of Utrecht, 4 September 1990, summarized on the website of the National Bureau against Racial Discrimination, op. cit.
32. Monique Kremer and Shervin Nekuee, 'Overheid Moet Segregatie Aanpakken', *De Volkskrant* (21 November 2003), p. 7.
33. Blok Commission, op. cit., p. 329.
34. Blok Commission, op. cit., pp. 320–1.
35. Rusk, Frieling and Groenemeijer, op. cit.
36. *Ibid.*, p. 79.
37. Equal Treatment Commission Decision 2001-99, available at <http://www.cgb.nl/oordelen.php>. Accessed 19 May 2006.
38. Equal Treatment Commission Decision 2003-105, available at <http://www.cgb.nl/oordelen.php>. Accessed 19 May 2006.
39. Bart Vermeulen, *Witte en Zwarte Scholen: Over Spreidingsbeleid, Onderwijsvrijheid en Sociale Cohesie* (The Hague: Elsevier, 2001), Margot Trappenburg, 'Schoolkeuze en Apartheid in Nederland', *Krisis* (Vol. 4, No. 4, 2003), pp. 74–84.
40. See, for instance, Daniel Griswold, 'Willing Workers: Fixing the Problem of Illegal Mexican Immigration into the United States' (Washington, DC: The Cato Institute, 2002). Available at: <http://www.freetrade.org/pubs/pas/tpa-019.pdf>. Accessed 19 May 2006.

41. Landelijk Bureau ter Bestrijding van Rassendiscriminatie, *Racisme in Nederland: De Stand van Zaken* (Rotterdam: February 2004), available at: <http://www.lbr.nl/?node=1231>. Accessed 19 May 2006.
42. The Equal Treatment Law seeks to forbid discrimination on the basis of religion, world view, political conviction, race, gender, nationality, sexual identity or marital status. Article 2, paragraph 1 states that making distinctions can be justified if there is a legitimate goal and the means to accomplish that goal are suitable and necessary. Article 2, paragraph 3, states that making distinctions can also be justified if they are part of a policy that aims to favour women or members of an ethnic minority group, provided the policy is reasonable given its goals.
43. See: [www.rotterdam.nl/smartsite2044732.dws?MainMenu=0](http://www.rotterdam.nl/smartsite2044732.dws?MainMenu=0) (22 November 2004).
44. However, compare Equal Treatment Commission 1998–105. This case related to a white male candidate who had been rejected by the programme council of a cable company. The cable company strove to achieve an evenly representative programme council (male, female, old, young, native Dutch and ethnic minority members). Not an entirely unreasonable striving for a programme council, but nonetheless designated by the Equal Treatment Commission as being inconsistent with the Equal Treatment Act.
45. 'De Allochtone Ouders Helpen de Club Nu Ook', *NRC Handelsblad* (28 December 2004).

# 5

## What Russia Can Learn from China in its Transition to a Market Economy

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The new Russia began its attempted transition from a centrally planned economy to a market economy in January 1992, just days after the dissolution of the Soviet Union on Christmas Day 1991. It was not alone in its efforts to meet this daunting challenge. The Administration and Congress of the United States hoped to build a positive economic and political relationship with its former adversary. International financial institutions and Western donors pledged hundreds of millions of dollars in loans and assistance. Prominent economic advisers converged on the scene to offer their services. Unfortunately, thirteen years later, many Russians are worse off in a large number of ways than they were under the Soviet system, while the need for structural reform of the economy is as great as ever. Life expectancy and living standards have fallen, while crime, corruption, alcoholism, drug abuse and inequality of income have risen.<sup>1</sup> The positive developments in the economy in the past few years mainly stem from the boosts that the Russian economy received from the devaluation of the rouble following the currency crisis in August 1998, and from the more recent trebling of the oil price on the world markets.

Misguided economic policies and ill-conceived aid strategies have damaged prospects for the emergence of a healthy economy and society. Rather than ushering in a competitive and well-functioning market economy, the transition policies followed in Russia have created a 'rentier' economy in which the allocation of wealth and economic power is hugely skewed, and mafia-like organizations wield tremendous power. In this chapter, we explain why the transition policies chosen have had such perverse effects, and how they came to be chosen in the first place. We argue that the Russian transition strategy failed to achieve its goals, because it was based on a singular view – the individualistic perspective – on what the obstacles to a flourishing market economy are and how they can be overcome. This singular view on how to achieve the Russian economic reform prevailed over alternative perspectives by the remarkable lock on domestic and international decision-making that a small group of Russian reformers was able to



attain with the help of Western institutions and individuals, including a group of Harvard-affiliated economists.

### **Why the transition to capitalism in Russia failed (in comparison to China and other countries)**

The remarkable extent to which Russia's transition policies have failed, and why they have done so, is brought out by a comparison of these policies – and their outcomes – with the transition strategies adopted in other countries, particularly China. Market reform had begun in China under Deng Xiaoping in 1978, and in Russia (then part of the Soviet Union) under Mikhail Gorbachev in 1985. At the end of the 1980s, it would have been reasonable to expect that in their attempts to make a transition to a market economy, Russia would succeed whereas China would falter. By the late 1980s, Russia had successfully used central planning to build the second biggest economy on the globe with the largest production of oil, gas, coal, steel, wheat, shoes and many other products. It had a huge internal market and a complete infrastructure, including transportation, communication, universities and research facilities. It had a 90 per cent urbanized, literate and educated population, a trained workforce, managers skilled in production and the world's largest pool of scientists and engineers. Despite its insistence on being 'classless', the country also had a large middle class with rising incomes and substantial assets, including (in the Soviet Savings Bank) the greatest pool of personal savings in the world. It possessed enormous reserves of natural resources, particularly in Siberia and the Urals, as well as a large hinterland in Eastern Europe that also provided resources and markets.

China, by contrast, had a very low per capita income, a small internal market, and little by way of industrialization or infrastructure. Eighty per cent of its population, largely uneducated and illiterate, lived in rural areas and got by on subsistence agriculture. Its industrial workforce remained largely untrained and included few scientists, engineers or technicians. It possessed limited natural resources and had only a very small middle class.

Of course, China also held several advantages over Russia. It had experienced a shorter period of socialism and benefited from assistance from overseas Chinese and from its large, low-wage workforce. Yet overall, the initial conditions were more favourable to Russia, and one could have reasonably anticipated that Russia would succeed and China would falter in their respective transitions. In contrast to these expectations, however, market reform has been a relative success in China and a clear failure in Russia, according to a variety of measures of economic success.

### **Growth**

A fundamental measure is the economic growth rate. China has been enjoying a boom with an average annual growth rate of over ten per cent since

1985. This is a stunning figure, representing the largest continuous increase of any major economy in the world. China's current growth rate is steady at almost ten per cent for gross domestic product (GDP) per capita and 16 per cent for industrial production. The country is rapidly becoming a leading industrialized nation. In contrast, between 1991 and 1998, the Russian economy shrank dramatically, by almost 60 per cent in terms of GDP. From being the second largest economy in the world, it dropped to number 11 or 12: about the size of Brazil or Mexico. During the last five years, the Russian economy has recovered somewhat with its GDP growth averaging more than five per cent per year. But, this recent recovery has been mainly due to the dramatic fall of the rouble in August 1998, which has made Russian exports much cheaper, and to the tripling of oil prices (Russia, after all, is a major exporter of oil), rather than any fundamental restructuring of the economy. A dip in the oil prices – or the rise of the renewables described in Chapter 2 – would seriously endanger the country's come-back. And, the economy still has a long way to go. While GDP per capita amounted to \$4294 in 1990, in 2003, despite five years of continued growth, it still only came to \$3528.<sup>2</sup> Indeed, Joseph Stiglitz has ventured to argue that even under optimistic growth assumptions, Russia may have to wait until the twenty-third century before its actual GDP overtakes the GDP that it would have enjoyed if the economy had kept growing at pre-transition rates.<sup>3</sup>

## **Inflation**

Another measure of economic success is the absence of inflation. China's inflation rate is relatively low compared to other transitional economies, and currently hovers around five to six per cent per year. In contrast, during its transition period Russia experienced several years of high inflation, bordering on hyperinflation. In 1992, inflation came to 1490 per cent; one year later, the rate decreased to 888 per cent; and by 1994, inflation levelled at 307 per cent.<sup>4</sup> These high inflation rates destroyed the savings of the middle class – and indeed, the middle class itself – and led to the collapse of the rouble as a viable currency, with other currencies (and especially the dollar) taking its place as the medium of exchange. Although the Russian inflation rate has decreased to approximately 16 per cent over the last three years, this has partly been due to a failure to pay out wages.

## **Investment and banking**

A third measure is investment and banking. The rate of investment in China is enormous and primarily originates from two sources: large-scale domestic savings and capital flowing in from all over the world. Investment in Russia, on the other hand, has collapsed with overall net investment being negative, that is, depreciation more than offsetting gross investment. While capital is pouring into China, Russia has little productive investment. Rather there is substantial capital flight to offshore accounts in Cyprus, the United Arab

Emirates, and other offshore banking centres (and even into one of England's premier league football teams: Chelsea is now nicknamed Chelski).

As to the banking sector, Russian banks do not engage in commercial lending. This has caused an inter-enterprise arrears' crisis, as companies are forced to borrow from their suppliers to obtain working capital. In addition, Russian banks do not provide investment banking through long-term loans. Instead, many engage in short-term speculation, loan sharking, capital flight and money laundering. Russia spends its foreign exchange earnings, derived mainly from sales of oil and gas, largely on luxury imports and food. China, by contrast, uses its balance of trade surplus to import capital goods and technology and has already accumulated foreign exchange reserves of more than \$100 billion.

### **Real wages and living standards**

A fourth way of measuring economic success is in terms of real wages and living standards. Both have been rising in China with the emergence of a middle class and an internal market – neither of which existed previously. At the same time, real wages and living standards have fallen in Russia, which has further contributed to the destruction of its middle class and internal market. Other social indicators underline this decline in Russia. Between 1990 and 2002, for instance, life expectancy fell from 69 years to 66 years.<sup>5</sup> In China, during the same period, life expectancy increased by three years (to 71 years).

### **Shocking transition therapy**

Judged by all these measures, the Chinese economy has surged ahead, while Russia's economy has declined. Since Russia enjoyed significant advantages over China when the reforms began, it must be concluded, barring other intervening factors, that the Chinese transition strategy has been superior to the Russian policies. The questions, therefore, are: in what specific ways has the Russian transition strategy differed from the Chinese reform programme, and how has this impaired the Russian economy?

Under Boris Yeltsin, the government enacted with religious fervour, the one-sided policy perspective prescribed by the international financial institutions (notably the World Bank and International Monetary Fund). A group of Harvard-affiliated economists, with backing from the US Treasury and loaded with millions of dollars in US assistance, helped to operationalize parts of this perspective. This policy perspective has come to be known as Russia's 'shock therapy' – and its results have indeed been deserving of that prefix.<sup>6</sup> Shock therapy was characterized by the naïve belief that markets would flourish if, and only if, the role of the Russian state in the domestic economy was rolled back. This policy, however, overlooked the many state activities that are necessary for the development and growth of markets. Shock therapy, resting on a singular belief in privatization and unfettered market forces, dovetailed with the so-called 'Washington consensus', which

was espoused at the time by the international financial institutions and many prominent western economists, and which represented an almost stereotypically individualistic perspective on how the world economy should be organized.

The administration of shock therapy began shortly after the dissolution of the Soviet Union and involved a rapid, wholesale retreat of the state in three steps: *liberalization*, *stabilization*, and *privatization*. Each of these steps, contrary to their intended purposes, served only to further Russia from its goal of fostering markets.

Liberalization simply meant allowing prices to be set by supply and demand. In the Soviet Union, prices had only been used as accounting devices by central planners, who among themselves had decided upon the price levels of all (legally traded) goods and services. The rationale for freeing up the prices of most commodities was clear. Prices should start to reflect the relative scarcity of commodities, thus serving to increase the efficiency of the economy. Unfortunately, in the end (as we will explain in a moment), this plan was thwarted by the misapplication of the third component of the shock therapy, the privatization programme. In the short run, the advent of market prices – in combination with large government deficits – sparked hyperinflation. In its turn, hyperinflation wiped out the savings of the majority of Russian citizens, made the planning of business investments nearly impossible, impaired the prospects for commercial banking, and – after the liberalization of capital markets – instigated a stampede for foreign currencies.

All this necessitated, or so it was felt at the time by the Russian reformers and their foreign advisors, the delivery of the second shock: monetary stabilization. This shock consisted of two jolts: (1) slashing the government deficit by reducing state expenditures; and (2) greatly raising interest rates as well as the value of the rouble. Both jolts were intended to bring hyperinflation under control. The reduction of the governmental deficit was supposed to enable the government to print less money, thus dampening inflation. It was hoped that higher interest rates would have the same effect by reducing the domestic demand for goods and services, while they would also lead to a stronger currency, which would curb foreign demand for domestic products. Unfortunately, in reality these measures did not cure the Russian economy, but resulted in a malady instead. The decrease in government expenditures removed the safety net of social services (such as education and health services) at the very moment that a large part of the Russian population became impoverished. Today, for instance, some 25 per cent of the Russian population lives below the poverty line – compared to less than ten per cent in 1990. In China today, ten per cent of the population lives below the poverty line.<sup>7</sup> In addition, the combination of high interest rates and a strong rouble threatened the very sectors, such as science and technology, in which Russia had previously enjoyed a comparative advantage. Moreover, it

demolished the incentive to expand (or even continue) production. As a result, investments, particularly in manufacturing and foreign exports, collapsed, and capital flight soared.<sup>8</sup>

Privatization, the final shock of the reform therapy, meant converting state-owned enterprises to privately owned firms. This measure, though intended to usher in a competitive and efficient economy, did nothing of the sort. Rather, the Russian privatization programme helped to create an uncompetitive and inefficient economy that was characterized by institutionalized corruption and huge disparities in wealth. The first flaw of the privatization programme was that its underlying view of how the economy worked was too simplistic. State control was perceived as a malady preventing the blossoming of markets. As a consequence, freeing industries from state control was seen as a remedy. During the 70 years of centralized communist rule, however, the Russian economy had become monopolistic and oligopolistic. Hence, the privatization of monopolies and oligopolies did not, by itself, create competition. After privatization, Russia's state enterprises still had tremendous market power due to the complete absence of rival companies.<sup>9</sup>

Another flaw of Russia's privatization programme was the failure to take into account the legal and financial environment in which privatized companies had to operate. The great majority of companies were privatized in a legal vacuum: no proper commercial code, no anti-trust legislation, no accounting and insurance systems, no labour exchanges, and no spot and forward markets were in place. There was little regulation and oversight of banks. Property rights and market contracts were not enforced. Racketeering and extortion were rampant, and even contract killings took place.<sup>10</sup> Judges and state officials could be bought,<sup>11</sup> and banks (as we have already mentioned) focused on facilitating capital flight rather than commercial investment. Furthermore, hyperinflation made planning very difficult. All these factors made day-to-day commercial activities increasingly difficult to pursue. These factors also convinced employees of many firms that it was in their best interests to carry off company property.<sup>12</sup>

The final flaw in the privatization of Russia's state companies concerned the specifics of the process itself, the very way in which it was implemented. By the end of 1994, some two-thirds of Russian employment had already been shifted to the private sector. A few years later, almost all companies in Russia had been spun off to the private sector. This ultra-swift privatization process had taken place in three successive rounds. With each subsequent round, a group of reformers in Yeltsin's government (led by the then deputy prime minister Anatoly Chubais), working together with their Western advisors, managed to increasingly insulate their activities from political accountability.<sup>13</sup>

The first privatization round began in 1991 and concerned small enterprises (i.e., companies with fewer than 200 employees). These were either bought by their employees, or sold to outsiders for nominal prices. By the

end of 1992, 30 per cent of the country's small businesses had thus been privatized. 'Employee privatization' usually meant complete control by enterprise managers or bureaucrats, who were well-positioned in the state planning system, and whose connections allowed them to step in and take advantage of a fluid environment. This first wave, dubbed 'nomenklatura privatisation', helped set the stage for subsequent looting.

In late 1992, the second round got underway with the privatization of large enterprises. Contrary to the first round in which small businesses were usually converted in a single step, in this next round large state-owned enterprises were first turned into joint stock companies. Managers and employees were allowed to gain a 51 per cent stake in their companies free of charge or for low prices, thus making them the major shareholders of the firms for which they worked. A first negative consequence of this 'insider privatization' was that it deprived the state of much needed funds, thus necessitating the government to borrow and print even more money, and forcing it to further cut back on law enforcement and social services. Furthermore, by giving power to the existing management and workers, insider privatization scuttled the many changes that were needed to make these enterprises more efficient, competitive and up-to-date. Redundant employees were not laid off, new managerial talent did not come in, novel technologies were not imported, risks were not taken and prices and production were kept artificially high. The impact of insider privatization is evident in the low levels of unemployment (and correspondingly high levels of underemployment) within Russia. In 1994, the year in which privatization proceeded most frenetically, the official unemployment rate stood at a mere 6 per cent. In comparison, 16 per cent of the workforce in Eastern Germany and Poland was laid off during their privatization processes.<sup>14</sup> Moreover, in order to be able to sustain artificially high levels of production and employment, firms started to delay paying their workers and suppliers, thus effectively creating a huge debt system, and further increasing the country's financial woes.

Yet, these were not the only negative impacts that the second privatization round had on the Russian economy and society. In addition to offering company shares at low prices to managers and employers, 150 million vouchers were distributed among the entire Russian population. The citizens of Russia could either sell these vouchers or save them for use in future bidding for shares of the companies that were going to be privatized. Initially, the voucher scheme had much public appeal. Through this 'people's privatization', state property would be divided among citizens whose sacrifices had created the Soviet system. 'We need millions of owners', Yeltsin proclaimed, 'rather than a handful of millionaires'.<sup>15</sup> Yet despite Yeltsin's promise that everyone would have an equal opportunity in this undertaking, the 'crown jewels of Russian industry' were kept from the voucher programme.<sup>16</sup> The latter included the natural resource companies and the telecommunication behemoths. In their stead, it was mostly antiquated industries in need of

disassembling that were conveniently sold off through the vouchers.<sup>17</sup> Sometimes, 'real wealth' was available through vouchers, but more often than not, auctions were rigged.<sup>18</sup>

Moreover, in the financially dire situation in which the great majority of Russians found themselves after several years of hyperinflation and bank scandals had wiped out their savings, many citizens decided to swap their vouchers for some barter or a bit of cash.<sup>19</sup> The only Russians who were in a position to buy up vouchers and purchase the few valuable enterprises available in the voucher program were those few movers and shakers who had amassed large personal fortunes by exploiting the opportunities for economic arbitrage that had been created by the 1985 reforms of Mikhail Gorbachev, the then president of the Soviet Union. Under Gorbachev's *perestroika*, prices had been liberalized in some sectors of the economy, but not in others. This had opened up many opportunities for economic arbitrage (i.e., for buying up goods for an 'official', state-controlled low price, and then selling them for a higher, market price elsewhere). A small group of entrepreneurs had exploited these and other legal loopholes to become very wealthy, often founding their own private banks in the process.<sup>20</sup> It was these entrepreneurs and private bankers, who were in a position to buy up a substantial amount of the vouchers issued by the Russian government.<sup>21</sup> In this way, the second round of privatization contributed significantly to the concentration of wealth and economic power in the hands of a tiny group of Russian citizens.<sup>22</sup>

The third privatization round – the infamous 'loans-for-shares' deals – took off in 1995 and brought more of the same. The largest and most valuable assets were reserved for this round. Behind in the opinion polls for the looming elections, President Yeltsin and his economic advisors devised a rather devious solution. In exchange for offering cheap loans to the state, a very small number of companies (owned by an even smaller number of individuals) were allowed to exclusively bid for the acquisition of controlling stakes in key state-owned enterprises that had been slated for privatization.<sup>23</sup> The shares of these enterprises were to be collateral and, if the loans were not repaid within a year, the lenders would acquire title to the stock. This plan allowed the Yeltsin government to pay out state pensions, wages and subsidies (and ultimately helped it to win re-election), while offering the crown jewels of the Russian economy – the mining and natural resource companies, and the telecommunication firms – on a cheap platter to Russia's new business tycoons. For instance, control over 45 per cent of the shares in the Yukos oil conglomerate – the country's second largest oil company – was transferred to Mikhail Khodorkovsky's Menatep Bank for a \$159 million loan. At the time, Yukos accounted for about 20 per cent of Russia's oil exports.<sup>24</sup> Likewise, 38 per cent of Norilsk Nickel – a company that produces virtually all of Russia's nickel and 60 per cent of its copper, and also delivers more than 40 per cent of platinum to the world market – cost only

\$180 million. The management of Norilsk Nickel – which at the time boasted a yearly profit of about \$1.5 billion, and a work force of more than 150,000 people – was taken over by a private investment company backed by Onexim Bank named Interros.<sup>25</sup> Interestingly, the president of both Interros and Onexim Bank was Vladimir Potanin, who several months earlier had offered the government a ‘loans-for-share’ deal on behalf of a banking consortium.<sup>26</sup> The year following the auctions, the Russian state defaulted on its loans, and from then on the lenders owned many of Russia’s most valuable industrial assets.<sup>27</sup> More than anything else, these shady deals have convinced many Russian citizens that ‘might is right’ and that the only way to get ahead in the new capitalist Russia is by crippling others: a far cry indeed from Adam Smith’s ‘invisible hand’ that ensures that people only do well when others benefit. In terms of cultural theory, the ‘loans-for-shares’ deals, probably more than any other single event or policy, had a significantly fatalising impact on Russian society.<sup>28</sup>

Taken together, the three privatization rounds in Russia concentrated company ownership in the hands of a very small number of so-called ‘oligarchs’, who amassed their wealth through political patronage and even had connections with organized crime. Rather than spreading state property more equally among the whole of the Russian population (and thus constructing deep and widespread support for property rights and the rule of law), some 40 per cent of the economy (measured in terms of employment or sales) is now in the hands of not more than 22 oligarchs, and more than 60 per cent of the Russian stock market is owned by all of ten families.<sup>29</sup> Instead of a competitive economy, a highly unequal ‘rentier economy’ (as can presently be found all over Latin America and Africa) has been created.<sup>30</sup> In such an economy, liberalization of prices (the first jolt of the shock therapy) cannot reach its intended goals. Instead of reflecting relative scarcity, prices reflect relative monopoly and mafia power since they are set by the monopolists, the corrupt officials, and the mafia-like groups that control large parts of the economy.

In these various ways, the shock therapy implemented by the Yeltsin government reduced the state’s involvement with the economy quickly and comprehensively. In fact, the government followed a *laissez-faire* model that Western governments had long ago abandoned in favour of a mixed economy. In the words of Joseph Stiglitz:

[E]conomists such as Andrei Shleifer [a Harvard economist who served as advisor to ‘privatisation’ czar Anatoly Chubais], who recognized the importance of the institutional infrastructure for a market economy, believed that privatisation, no matter how implemented, would lead to a political demand for the institutions that govern private property. Shleifer’s argument can be thought of as an (unwarranted) extension of Coase’s theorem. The economist Ronald H. Coase, who was awarded a



Nobel Prize for his work, argued that in order to achieve efficiency, well-defined property rights are essential. Even if one distributed assets to someone who did not know how to manage them well, in a society with well-defined property rights that person would have an incentive to sell to someone who could manage the assets efficiently. That is why, advocates of rapid privatisation argued, one didn't really need to pay close attention to how privatisation was accomplished. It is now recognized that the conditions under which Coase's conjecture is valid are highly restrictive – and certainly weren't satisfied in Russia as it embarked on its transition. Shleifer and company, however, took Coase's ideas further than Coase himself would have done. They believed that political processes were governed in the same way as economic processes. If a group with vested interests in property could be created, it would demand the establishment of an institutional infrastructure necessary to make a market economy work, and its demands would be reflected in the political process. Unfortunately, the long history of political reforms suggests that the distribution of income does matter. It has been the middle class that has demanded the reforms that are often referred to as 'the rule of law'. Today, in Russia, we do not see demands for strong competition policy forthcoming from the oligarchs, the new monopolists.<sup>31</sup>

In other words, the Russian 'reformers' and their Western underwriters and advisors actually believed, or at least argued, that any private *possession* of companies would magically transform itself into private *property* – with all the state regulation and enforcement that the notion of property rights entails. This extreme (and extremely naïve) view – dubbed 'market Bolshevism' by Peter Reddaway and Dmitri Glinski<sup>32</sup> – backfired. Again, in the words of Stiglitz:

The radical reformers in Russia were trying simultaneously for a revolution in the economic regime and in the structure of society. The saddest commentary is that, in the end, they failed in both: a market economy in which many old party apparatchiks had simply been vested with enhanced powers to run and profit from the enterprises they formerly managed, in which former KGB officials still held the levers of power. There was one new dimension: a few new oligarchs, able and willing to exert immense political and economic power.<sup>33</sup>

Translated into the language of clumsiness: the reform programs, being singularly based on an extreme individualistic logic, did not promote any of the ways of organizing, perceiving and justifying social relations (except for fatalism). Economic growth and freedom – prime goals of the individualistic view of organizing – were not delivered, and the sharp increases in poverty, crime and inequality undermined the legitimacy of the hierarchical way of

life, while at the same time outraging those who spoke with the egalitarian voice. Only fatalism was set to flourish.

The economic and social situation in Russia, which had continuously deteriorated since the start of the 'transition', reached its nadir on 17 August 1998 when the rouble went over the cliffs. Frightened by the Asian financial crisis that was raging at the time, foreign investors in Russia took another, closer look at the state of the economy in the country, and within three weeks, the rouble had lost 70 per cent of its value (as compared to the US dollar). As a consequence, the Russian government could no longer service its foreign debts, a number of banks had to be closed down, employees in foreign companies could no longer be paid, and the government was dismissed.

Since the financial crisis of August 1998, the Russian economy has recovered somewhat. The recent five-year period of moderate economic growth in Russia, however, has led many to ignore the need for far-reaching structural reforms that would keep this growth going – hoping that they can be postponed or avoided altogether. Yet, it is precisely in such a period that the Russian government can most easily take the steps needed for such reform. The Chinese experience provides a model of how to do so.

The China transition strategy was akin to the ones that Japan, Taiwan, South Korea and other countries had earlier followed in making a successful transformation from a war-shattered, or underdeveloped economy to a market economy. It focused on structural economic reform, the creation of new enterprises that would bid resources away from the state-owned enterprises, and the establishment of new markets for goods and services before allowing prices be set on markets.

China started with agricultural reform, breaking up the large collective farms into smaller and more efficient units, while introducing the 'household responsibility system' for these smaller farms. The result was an increase in productivity and savings that had profound effects, given that some 80 per cent of the population was living in rural areas. Peasants became less destitute and started to emerge from traditional subsistence agriculture. They began to trade with the cities, thus creating a large internal market for consumer goods that had not previously existed. This reform also led to a mass movement of the population from rural areas to cities, which created a virtually unlimited supply of labour. Russia, by contrast, largely ignored agriculture and related issues, such as those of land ownership, rural education and the role of local governments. Meanwhile (as we mentioned before) its formerly huge internal market was destroyed as a result of the long period of high levels of inflation and the still continuing non-payment of wages and pensions.

In addition, China established coastal 'free economic zones'. In the south, it built on the success of Hong Kong, both in Guangdong and in Shenzhen. In the east, in Fujian province, it created another free economic zone, this

time trading on the success of Taiwan. These economic zones stimulated export-oriented industries, which began to bring in much-needed foreign exchange. Capital flows that originally came from Hong Kong, Taiwan and the overseas Chinese, eventually started to flow into China from the entire world. By taking advantage of its 'most favoured nation'-status within the World Trade Organization, which enable the export of goods to consumer markets in the West, China was able to build up a huge, low-cost export sector that created many new jobs. As China's own internal market developed, it was also able to start producing for its growing domestic market. In contrast, the Russian economy is not export-oriented, apart from exports of gas, oil, other mineral products and arms. The Russian government tried to set up free economic zones, but so far, these have not been successful.

Moreover, China eased central control and focused on the 'new economy' rather than wasting scarce resources on privatizing the old economy. It encouraged the development of new economic establishments at the national, province, township and village levels. Local initiatives have been very successful, in particular the creation of new private and township and village enterprises. These new companies have been able to make use of the virtually unlimited supply of labour coming from rural areas, the latest technology and design (borrowed or imitated from abroad) the best managers in the country, and global capital – thus receiving all the factors required for industrial production. These new economic entities were able to bid away the resources of labour and capital from the state-owned enterprises.

There are, of course, many problems in China's transition to a market economy. These include: large regional disparities; cyclical agricultural performance, with poor harvests typically triggering inflation through price incentives offered to farmers to increase production; inefficient state enterprises, which make losses and do not repay bank loans; periodic credit crunches that lead to bankruptcies; chronic underemployment and the challenge of continued job creation for workers coming from the rural areas, and for displaced workers; problems of housing and social services for recent arrivals in the villages and cities; vast environmental pollution; and the problems of succession and political reform in the transition to a new generation of leaders. Almost everything, however, is relative, and the current economic and social situation in China looks far better than in Russia. Moreover, the stellar economic performance of China should help in tackling these economic, political and environmental problems.

China succeeded, in part, where Russia failed because it retained a host of state regulations and policies that supported its transition to a capitalist economic system. Demolishing the state's involvement with the economy as rapidly and as extensively as possible, as was attempted by the Yeltsin government, will not do the trick. As a result, any attempts to replace Russia's phantom markets with vibrant, competitive markets must make room as well for a strong, active government. We would advocate the following steps.

First should come the creation of the market institutions that form the basis of a capitalist economy. These include property rights, a legal system, a stable currency, commercial and investment banks, as well as a commercial code that lays down clear rules for accounting, insurance, finance and advertising. The next step should then be the founding of new, competing enterprises and the reorganization of old enterprises into viable and profitable firms. These firms can be either state-owned or private. As Deng Xiaoping famously observed, it does not matter what colour the cat is (state-owned or privately owned) as long as it catches the mice (produces goods and services and makes a profit). In our view, Russia needs to become the much more inventive and colourful cat that China has been. The next step could then be the privatization of state-owned firms. Privatization, however, should be delayed until companies are viable and valuable to make good use of the institutions of the market economy; only then is such a transition feasible. Last, the Russian government should provide the means for financing transactions between firms and should establish markets for intermediate goods.

If these steps are taken, then Russian transition might finally start to resemble not only the successful transitions in China and the 'Asian Tigers' but also those of Poland, Hungary, the Czech Republic and the Baltic states – Russia's former allies/vassals in the Soviet Bloc. In these countries, the steps sketched above have already been taken, and they have experienced a notably more successful transition to capitalism.<sup>34</sup>

### ***Kto Vinovat? Who is to blame?***

The insight that markets cannot flourish without a well-functioning state is an ancient one, of course. Adam Smith – often hailed as the patron saint of free markets – was well aware of this.<sup>35</sup> It is a specification of the more general rule that individualism needs hierarchy (as well as egalitarianism and fatalism). The question, therefore, arises: how has it been possible that so important an economic and social process as the Russian transition to capitalism came to be based on such a singularly individualistic logic?

The answer lies somewhere hidden within the inchoateness of two groups, one in the United States and the other in Russia, which colluded together for the privileges of power and pelf. As the vast Soviet state was collapsing in late 1991, several economists from the Harvard Institute for International Development, including professors Jeffrey Sachs and Andrei Shleifer (against whom Stiglitz's diatribe quoted above was directed), participated in a series of meetings at a dacha outside Moscow. There, young, would-be Russian 'reformers' were devising a blueprint for economic and political change. Boris Yeltsin, then president of what was still Soviet Russia, was putting together his team of economic advisers. Chief among them were Yegor Gaidar, the first 'architect' of economic reform in post-communist Russia,

and Anatoly Chubais, who was part of Gaidar's team and would later replace him as the 'economic reform czar'. A long-standing group of associates, centred around Chubais and mostly from his hometown St. Petersburg, was to figure prominently in Chubais's team.<sup>36</sup> As a chief deputy to Yeltsin, Chubais was to play various pivotal roles both in and out of government: first, beginning in November 1991, as head of Russia's new privatization agency, the State Property Committee; then in 1992 additionally as deputy prime minister in charge of privatization, assuming the title of first deputy prime minister in 1994; in March 1997 as first deputy prime minister and minister of finance; and finally in June 1998 as Yeltsin's special envoy in charge of Russia's relations with the international lending institutions, despite having been fired by Yeltsin in March of that year.<sup>37</sup>

Across the Atlantic, with high hopes for a favourable relationship with its former Cold-War adversary, the US Congress allocated funds through the US Agency for International Development (USAID) to promote economic reform in Russia. Maintaining that Russian economic reform was so important and the 'window of opportunity' so narrow, Harvard-connected officials in the Clinton administration saw to it that the Harvard Institute for International Development was granted special treatment.<sup>38</sup> The Harvard Institute secured funding without the usual competitive bidding, and from 1992 to 1997 managed virtually the entire Russian economic aid portfolio – more than \$350 million – in addition to the \$40 million it received directly. Its portfolio encompassed privatization, legal reform, capital markets and the development of a Russian securities and exchange commission. In 1996, the US General Accounting Office, the governmental body that monitors how appropriated monies are spent, found that the Harvard Institute had 'substantial control of the US assistance program'.<sup>39</sup>

As the first head of the State Property Committee, Chubais, together with his team of St. Petersburg and Harvard associates, drew up plans to privatize some 15,000 state enterprises. The team designed and coordinated the mass-voucher privatization programme, launched in November 1992, in which citizens were given shares, or 'vouchers', in state-owned enterprises. This initiative, as we explained above, turned out to have little or no consequence in terms of average citizens' acquisitions of assets. USAID spent \$58 million to underwrite this privatization programme, including its design, implementation, and promotion. The Harvard Group was centrally involved in these tasks and mobilized multiple sponsorships for it. Project documents of Jeffrey D. Sachs and Associates submitted to the Finnish government, one of several sources lending support to the Harvard-Chubais team, state that 'The [Sachs] team has had an extensive interaction with the [Russian] State Committee on Privatisation and has helped in the design of the mass privatisation program legislation recently enacted by Parliament'.<sup>40</sup> The documents further state that Andrei Shleifer 'has played a central role in the formulation of the Russian privatisation program'.<sup>41</sup>

Providing invaluable support to the Harvard-Chubais alliance was Lawrence Summers, earlier a member of the Harvard faculty and chief economist at the World Bank from 1991 to 1993 (and later president of Harvard University). He had strong ties to the Harvard team, notably to Shleifer. Summers would play a principal role in designing US and international economic policies at the US Treasury, where he would occupy the posts of undersecretary, deputy secretary and, finally, secretary through much of the 1990s.<sup>42</sup>

The Chubais team was advertised by its Western promoters as the 'Young Reformers'. The Western media built up their mystique and overlooked other reform-minded groups in Russia. Donors tended to identify Russians as reformers not only on the basis of their commitment to the free market, but also on how they possessed personal attributes to which the Westerners responded favourably. The latter included proficiency in English, a Western look, facility in the vernacular of 'markets', 'reform' and 'democracy', and name recognition by well-credentialed fellow Westerners. The members of the Chubais team possessed all of these qualities. By their sponsors in the West, they were depicted as enlightened and uniquely qualified to represent Russia and usher it down the road to capitalism and prosperity. Summers dubbed them a 'dream team', which, given his influence in the US Administration and IMF, was a particularly useful endorsement.<sup>43</sup>

In Russia, however, the Chubais team's primary source of clout was neither ideology nor even reform strategy, but precisely its standing in, and ability to get resources from, the West. As the Russian sociologist Olga Kryshatanovskaya explained:

Chubais has what no other elite group has, which is the support of the top political quarters in the West, above all the USA, the World Bank and the IMF, and consequently, control over the money flow from the West to Russia. In this way, a small group of young educated reformers led by Anatoly Chubais transformed itself into the most powerful elite Clan of Russia in the past five years.<sup>44</sup>

The support of the United States proved decisive in this transformation. The administration's 'dream team' seal of approval bolstered the Chubais Clan's standing as Russia's chief brokers with the West and with international financial institutions, and as the legitimate representatives of Russia.<sup>45</sup> One of the main arguments invoked was that the Communist Party was on the brink of regaining either parliamentary or presidential control and would undoubtedly block any further progress on the road to capitalism. In the political, legal, administrative, economic and social flux that accompanied the collapse of communism, the Chubais Clan acquired broad powers, ostensibly to carry out the complex tasks of economic reform and controlled the ministries responsible for privatization and the economy.<sup>46</sup> Thus, by closely

collaborating, indeed colluding, the Chubais Clan and Harvard Group were able to carve out a hegemonic role for themselves on their respective home fronts. Together, they skilfully skirted governmental bodies that might have stood in their path, created new bodies that wielded more power, and secured influence on their respective sides. Pointing to its special relationship with, and unique access to, key Russian decision-makers, the Harvard Institute secured the lead role in helping to devise and implement economic 'reform', notably privatization.

USAID's delegation of its Russia economic assistance portfolio to the Harvard Institute built on a tradition in which much work of government (including development assistance) is outsourced to private contractors. Yet, for the United States government to put one of its most important foreign policy initiatives in the hands of a private entity was a departure from established practice. (That portfolio involved 'the conduct of foreign relations and the determination of foreign policy', which, according to regulations issued by the US Office of Management and Budget, is an 'inherently governmental function'.<sup>47</sup> Such functions are to be carried out by government officials, not contractors.) Harvard largely bypassed the usual public bidding process for foreign aid contracts through waivers to competition endorsed by Harvard associates at the highest levels of the Clinton administration. Alternative proposals made by different universities (such as Stanford) were not funded. This was highly unusual (at least according to US government procurement officers and officials from the US General Accounting Office), as was the justification given for the waivers ('foreign policy considerations') that granted Harvard preferential treatment.<sup>48</sup>

The collusion between the Harvard Group and Chubais Clan went far beyond providing a helping hand in the usual battle for control of budgets and decision-making. Together, these groups set up and ran a network of aid-funded private organizations, the ostensible purpose of which was to conduct economic reform. This network allowed members of the Harvard-Chubais team to move back and forth between state and private spheres and to attain advantages in one sphere for use in the other. The flagship organization of this network was the Moscow-based Russian Privatization Centre. Chubais served as chairman of the board, while Harvard's Shleifer served on the board of directors. The Center was supported by the IMF, the World Bank, the European Bank for Reconstruction and Development, the United States, the European Union, Germany, Japan and others. This Center could switch its identity and status according to each particular situation. Legally, it was a non-profit non-governmental organisation (NGO). Yet it was established by a Russian presidential decree and helped carry out government policy on inflation and other macroeconomic issues. It negotiated with, and received loans from, the international financial institutions *on behalf of the Russian government*, despite the fact that these institutions typically lend only to governments.<sup>49</sup>

Indeed, the Russian Privatisation Centre circumvented Russia's democratically elected parliament, as well as the Russian government agency formally responsible for privatization. According to documents provided by Russia's Chamber of Accounts, the Centre wielded more control over certain privatization directives than did the government agency.<sup>50</sup> Two of its officials, its CEO (Maxim Boycko from the Chubais Clan) and Harvard's Moscow director (Jonathan Hay), were authorized to sign off on high-level privatization decisions of the Russian government. Thus did a Russian and an American, each of them officially working for a *private* entity, come to act as representatives of the Russian state.<sup>51</sup>

The network of organizations set up by the Harvard Group and the Chubais Clan also allowed its individual members to switch the side that they represented back and forth as the occasion demanded. At various times Harvard director Hay acted as a representative of the United States (with formal management authority over other US contractors), of Russia (in approving state privatization decisions), and of his girlfriend's (now wife's) private financial interests. It was (and is) difficult to glean exactly which side, at any given time, prominent consultants on the international circuit represented, for whom they actually worked, their sources of funds, and where their loyalties and ambitions lay. Jeffrey Sachs, who served as director of the Harvard Institute from 1995 to 1999 and conducted advisory projects in eastern Europe (sometimes under the umbrella of Jeffrey D. Sachs and Associates, Inc.), provides a case in point. According to the journalist John Helmer, Sachs played both the Russian and the IMF sides of the street. During negotiations in 1992 between the IMF and the Russian government, for example, Sachs and his associates appeared as advisers to the Russian side. Helmer, however, writes that 'they played both sides, writing secret memoranda advising the IMF negotiators as well'.<sup>52</sup> The financial arena yields additional examples of such ability to switch identity and sides in which members of the Chubais team appointed Harvard academics to act as Russians.<sup>53</sup>

One major advantage that the Chubais Clan and Harvard Group derived from this ability to switch roles was a greatly reduced accountability. For example, because Harvard adviser Hay was given signature authority over certain privatization activities he could, if questioned by US investigators, legitimately claim that he conducted those activities 'as a Russian', and thus with respect to those transactions should not be constrained by US norms or regulations. Likewise, if the Russian Privatisation Centre came under fire for its activities as a state organization, it could legitimately claim to be a private one.

By colluding, collaborating and pooling the collection of roles they played,<sup>54</sup> the members of the Chubais Clan and the Harvard Group were able to monopolize the decision-making regarding Russia's economic reform. And thus it was their narrow ideological vision, and private interests, that came to prevail. In various ways, their collusion greatly contributed to the fact that the governments of both the United States and Russia did not reach



their stated goals of building democracy, a market economy and a constructive, new relationship.

First, in using exclusionary mechanisms, the Harvard-Chubais team hindered true market reform. Without support from a broad array of Russian parties and organizations, reforms were likely to be ignored or even subverted in the process of implementation. Some reforms, such as lifting price controls, were achievable by presidential decree. But many others depended on changes in law, public administration or mindsets, and required working with the full spectrum of legislative and market participants, not just one small group.<sup>55</sup>

One example is provided by USAID's showcase effort to reform Russia's tax system and to set up clearing and settlement organisations (CSOs), which form an essential ingredient of any sophisticated financial system. Those efforts failed primarily because they were put largely into the hands of the Harvard-Chubais team, which declined to work with other market participants. In Moscow, for example, despite millions of USAID dollars, many of the Russian brokers were excluded from the process and declined to use the Moscow CSO.<sup>56</sup> Thus, very little evidence of progress has emerged since 1994, when consultants (working under USAID contracts that totalled \$13.9 million) set out to design and implement CSOs in five Russian cities. The US General Accounting Office called the CSO effort 'disappointing'.<sup>57</sup>

Key Harvard players sometimes obstructed reform initiatives that originated outside their own group. When they failed to receive additional USAID funds, for example, they blocked legal reform activities in title registration and mortgages – programmes that were launched by agencies of the Russian government. This interference put the Harvard economists at cross-purposes with their own purported aim of fostering markets. As General Accounting Office-investigator Louis Zanardi observed: 'The Harvard people were motivated to keep power within their own structure.'<sup>58</sup>

The very individuals who were made responsible for creating the regulatory infrastructure in the image of Western institutions (such as the US Securities and Exchange Commission, one of whose functions is to eliminate insider trading) were those who invested in the lucrative securities market, oil and aluminium companies, real estate and mutual funds. According to the US Department of Justice, these areas 'were within the scope of their [i.e., Harvard's] economic and legal advice on behalf of USAID'. The Department concluded that:

Harvard's actions, instead of fulfilling their intended purpose of fostering trust and openness in the nascent mutual fund market, in fact involved exactly the type of favouritism and perceived and actual barriers to entry and success that the United States was spending hundreds of millions of dollars to dispel.<sup>59</sup>

Furthermore, the collusion between the Harvard-Chubais team stunted the development of accountable and democratic institutions. Within Russia, they

operated by presidential decree and through a complex network of not-quite-state, not-quite-private organizations. This was contrary to the aid community's stated goal of consolidating Russian democracy. Moreover, USAID's sponsorship of these organizations exported the very model that the Harvard Group had perfected – that of private organizations performing inherently governmental functions, hidden from and unaccountable to taxpayers. This encouraged an opaque and unaccountable system of operating, precisely at a time when donors and the international financial institutions should have been demanding property rights, the sanctity of contracts and other institutional safeguards.<sup>60</sup>

Also damaging was the broader message about democratic process that this collusive mode of organizing conveyed to the broad array of stakeholders close to the aid process and to the Russian people at large. A virtual blank cheque to the Harvard-Chubais team sent a message of unrestricted licence, while neglecting the creation of a legal and regulatory backbone for Russia's market economy. In addition, by systematically bypassing the democratically elected Duma, the United States Administration flouted a key feature of Western civilization: parliamentarianism.<sup>61</sup>

The third problem caused by the Harvard-Chubais team is the damage that it inflicted upon the Russian-American relationship. Tellingly, when the rouble collapsed so dramatically in 1998 and when it became clear that the Harvard-Chubais partnership had failed, there was no one waiting in the wings to replace it. US policy became, at best, 'muddling through', and Russia turned to more decisive leadership. The United States had lost the moral authority with which many Russians had credited it during the Cold War,<sup>62</sup> and Russia, after more than a decade of 'reform', is far from the stable and prosperous American ally that US policymakers had envisioned. The reforms of the 1990s left many Russians worse off than they had been under decades of communist rule, and many Russians have blamed the Western aid and advice they have received for this state of affairs.<sup>63</sup>

In the end, even the collusion itself ended in disarray. Members of the Harvard-Chubais team faced legal problems for alleged misconduct. In the fall of 2000, the US government filed a \$120 million lawsuit against Harvard University along with the Harvard project's two leaders, Andrei Shleifer and Jonathan Hay, and their wives.<sup>64</sup> The lawsuit alleged that Harvard defrauded the US government of \$40 million and that its two principals 'were using their positions, inside information and influence, as well as USAID-funded resources, to advance their own personal business interests and investments and those of their wives and friends'.<sup>65</sup> Those interests allegedly entailed investments in many of the same areas in which the Harvard advisers were being paid to provide 'impartial' advice to help develop a legal and regulatory framework for the Russian economy. The investments, which the defendants do not deny, included securities, equities, oil and aluminium companies, real estate and mutual funds.<sup>66</sup> Harvard was also accused of defrauding an American mutual funds firm working in Russia.<sup>67</sup>

Although US prosecutors charged that the investments of the Harvard advisers violated federal conflict-of-interest regulations, Harvard's lawyers contended that these activities did not defy the university's agreements with the US government.<sup>68</sup> Andrei Shleifer, project director of Harvard Institute's programme in Russia, maintains that he was a 'mere consultant' on the project (although he, with Jonathan Hay, ran it) and that there was no conflict of interest.<sup>69</sup> In any case, in June 2000, Harvard University decided to close down its once prestigious Institute for International Development. And on 28 June 2004, a US District Court for the District of Massachusetts ruled that Shleifer and Hay had conspired to defraud the US government, while helping to run the nearly \$400 million US-funded flagship project to reform Russia's economy. Although Hay and Shleifer were supposed to be providing impartial advice to the Russian government, they were also making personal investments with the benefit of insider knowledge.

Nearly five years after the Department of Justice launched its False Claims Act suit, a total of \$31 million has been recovered from Harvard for its work in Russia, with Harvard agreeing to pay \$26.5 million, Shleifer paying \$2 million, and Hay between \$1 and \$2 million – the exact amount being contingent upon his earnings over the next decade. The presiding judge over the case, Judge Douglas P. Woodlock, determined that Harvard had (unknowingly) violated its contract through the misconduct of Shleifer and Hay. Harvard has been prohibited from paying on behalf of either Shleifer or Hay. In a related case, Nancy Zimmerman, Shleifer's wife, also agreed to pay \$1.5 million for allegedly using her investment firm to misuse USAID staff and resources with the purpose of establishing a Russian company to circumvent the Russian tax system. Shleifer, Hay, and Harvard University refused to admit liability as part of the settlement, and issued separate statements claiming that they had agreed to settle to avoid the costs of a lengthy litigation.<sup>70</sup>

To sum up, the remarkable lock on policy-making that the Harvard-Chubais teams were able to forge – and their narrow views on how to achieve economic reform – helps explain why such a predominantly individualistic transition strategy was followed in Russia. Although market reform-oriented groups in Central Europe garnered much of the development assistance on offer (such as the circles associated with the reform agenda of Finance Minister Leszek Balcerowicz in Poland), they were not able to fully dominate the transition process. And, of course, the Chinese government is well known for its aversion to rely on foreign advisors.

## **The egalitarian contribution to the transition process**

Up till now, we have argued that the Russian transition to capitalism foundered because it overlooked the many regulatory and redistributive activities – essentially hierarchical interventions – that states need to undertake for markets to flourish. This leaves out one important aspect of the

story: why egalitarian views and practices are also crucial to a successful transition to capitalism.

The case for including egalitarian perspectives and practices is not hard to make. Just consider the many urgent social problems that are plaguing Russia and China, and that are threatening to unravel the very fabric of these societies, thus also endangering their attempted transitions to capitalism. In Russia, besides poverty, there are many such problems, including endemic corruption at all levels of government, suppression of human rights, curtailment of media and other political freedoms,<sup>71</sup> a huge gap between the few 'haves' and the multitudes of 'have-nots', rampant alcoholism and drug abuse, scant support for the poor, unemployed, sick and disabled, discrimination of ethnic and sexual minorities, human trafficking, domestic violence and pervasive environmental destruction.<sup>72</sup> Not to mention the horrors of the war in Chechnya.<sup>73</sup> In China, despite (and sometimes because of) its much better economic record, a plethora of pressing social problems abounds as well. These encompass massive corruption (in particular at regional and local levels), suppression of religious media and political freedoms, the emergence of large-scale unemployment, stark inequalities between those who have prospered from, and those who have been left behind by, the introduction of markets, discrimination of HIV/AIDS patients, repression of the people of Tibet, as well as tremendous environmental degradation.<sup>74</sup> And then there is the continuing row over the status of Taiwan, which remains a serious threat to the cities of Beijing and Shanghai (at which Taiwan's rockets and bombs are directed), as well as to the island itself.<sup>75</sup>

As surely has become clear by now, egalitarianism stresses (more than other ways of life): equality of condition, solidarity with the oppressed, down-trodden, discriminated, sick and left-behind, transparency and honesty in government, full compliance with human rights, environmental protection; consensual, participatory and local decision-making, respect for ethnic, religious, sexual or any other minorities and (often) anti-militarism. These concerns overlap, to a significant degree, with the grave social ills that are currently besetting both Russia and China. It is therefore imperative for the ongoing modernization in both countries that space will be made for non-violent, but vigorous, individuals and grassroots movements proclaiming egalitarian ideals and proposing egalitarian solutions. In these countries, as elsewhere, only a manifold of never-ending, constructive and lively interactions between the upholders of alternative ways of organizing, perceiving and justifying can make for a vibrant economy.

## Notes

1. As for instance reflected in the decline of the Russian development index between 1985 and 2001. See: [http://hdr.undp.org/reports/global/2003/pdf/presskit/HDR03\\_PR4E.pdf](http://hdr.undp.org/reports/global/2003/pdf/presskit/HDR03_PR4E.pdf). Accessed 19 May 2006.

2. Figures taken from the *World Development Indicators* published by the World Bank. See: <http://devdata.worldbank.org/dataonline/>. Accessed 14 February 2006.
3. Joseph E. Stiglitz, 'Lessons and Challenges in Transition', seminar given at the Czech Central Bank in Prague (22 September 2000), Figure 2c. Available at: [http://www.cnb.cz/pdf/mmf\\_stiglitz.pdf](http://www.cnb.cz/pdf/mmf_stiglitz.pdf). Accessed 22 September 2005.
4. Ibid.
5. Ibid. Also: 'Belaya kniga. Ekonomicheskie reformy y Rossii 1991–2001, (White Book. Economic Reforms in Russia 1991–2001), in S.G. Kara-Myrza (ed.), *Algoritm-Kniga* (2002). Between 1986–87 and 1994, life expectancy fell from 70 to 64. In 2000, it was up to 65.
6. Critiques of Russia's shock therapy include: Joseph Stiglitz, *Globalization and its Discontents* (New York: W.W. Norton, 2002), chapter 5; and David Ellerman, 'On the Russian Privatisation Debates: What Has Been Learned a Decade Later?', *Challenge* (Vol. 46, No. 2, 2003), pp. 1–23. See also Anne Williamson's testimony before the Committee on Banking and Financial Services of the US House of Representatives on 21 September 1999, under the title: 'The Rape of Russia', available at: [http://www.russians.org/williamson\\_testimony.htm](http://www.russians.org/williamson_testimony.htm). Accessed 19 May 2006. We would also like to flag that our critique does not come after the fact. See Michael D. Intriligator, 'What is the Future of the Russian Economy?' (in Russian), *Business World* in Moscow, 17 February 1993; Michael D. Intriligator, 'Reform of the Russian Economy: The Role of Institutions,' (in Russian), *Business World*, 14 December 1993; Michael D. Intriligator, 'Privatisation in Russia Has Led to Criminalisation,' *Australian Economic Review* (2/1, 1994), pp. 4–14; Michael D. Intriligator, 'The Shocking Failure of Shock Therapy,' *The Russian Magazine*, September 1996, pp. 32–3.
7. See *The CIA World Factbook Russia 2004*, available at: <http://www.cia.gov/cia/publications/factbook/geos/rs.html#People>. Accessed 11 February 2005. Anthony Shorrocks and Stanislav Kolenikov, 'Poverty Trends in Russia during the Transition', paper presented at the WIDER Conference on Development and (Helsinki: Wider, May 2001). Available at: [http://www.wider.unu.edu/conference/conference-2001-1/Shorrocks\\_Kolenikov.pdf](http://www.wider.unu.edu/conference/conference-2001-1/Shorrocks_Kolenikov.pdf). Accessed 19 May 2006.
8. Stiglitz, op. cit., pp. 14–17.
9. Marshall I. Goldman, 'The Russian Ruble and Why It Turned into Rubble', Statement to the Financial Services Committee of the United States Congress on 21 April 1998. Available at: <http://financialservices.house.gov/banking/91498gol.htm>. Accessed 19 May 2006.
10. See, for example, Vadim Volkov, *Violent Entrepreneurs: The Use of Force in the Making of Russian Capitalism* (Ithaca: Cornell University Press, 2002); Peter Reddaway and Dmitri Glinski, *The Tragedy of Russia's Reforms: Market Bolshevism against Democracy* (Washington, DC: United States of Peace Press, 2001), pp. 482–500; Paul Klebnikov, *Godfather of the Kremlin: Boris Berezovsky and the Looting of Russia* (New York: Harcourt Brace, 2000), pp. 13–45.
11. Ibid., p. 33.
12. See, for example, Matt Bivens and Jonas Bernstein, 'The Russia You Never Met'. *Demokratizatsiya* (Vol. 6, No. 4, 1998); Marshall I. Goldman, 'Reprivatising Russia', *Challenges* (May 2000), p. 28; Klebnikov, op. cit., pp. 90–101, 198.
13. Lynn D. Nelson and Irina Y. Kuzes, *Radical Reform in Yeltsin's Russia: Political, Economic and Social Dimensions* (Armonk: M.E. Sharpe, 1995), pp. 43–55.
14. See <http://www.worldhistory.com/wiki/E/Economy-of-Russia.htm>. Accessed 11 February 2005.

15. See 'Programma uglubleniia reform,' *Izvestiia* (No. 244, 9 October 1992), p. 2, and Aleksandr Borisov, 'plius sploshnaia vaucherizatsiia vsei strany,' *Megapolis-Express* (No. 34, 26 August 1992), p. 3.
16. Bivens and Bernstein, op. cit., 16.
17. Bivens and Bernstein, op. cit.
18. Ibid; Klebnikov, op. cit., pp. 205, 214.
19. Many citizens were also swindled through elaborate pyramid schemes. See Reddaway and Glinski, op. cit., pp. 248, 478.
20. Bivens and Bernstein, op. cit.; Reddaway and Glinski, op. cit. pp. 479–81; 492–504; Klebnikov, op. cit., pp. 197–211; Juliet Ellen Johnson. *A Fistful of Rubles: The Rise and Fall of the Russian Banking System* (Ithaca: Cornell University Press, 2000), pp. 173–200.
21. Ibid., pp. 477–9; Marshall I. Goodman, 'The Rule of the Outlaws Is Over', *Transition Newsletter* (2001), p. 23. Available at: <http://www.worldbank.org/transitionnewsletter/dec03apr04/pgs23–26.htm>. 14 February 2005.
22. Sergei Guriev and Andrei Rachinsky, 'The Role of Oligarchs in Russian Capitalism', *Journal of Economic Perspectives* (Winter 2005); Reddaway and Glinski, op. cit.
23. Bivens and Bernstein, op. cit.; Johnson. op. cit.; Fritz W. Ermarth 'Seeing Russia Plain: The Russian Crisis and American Intelligence', *The National Interest* (Vol. 55, No. 5, 1999); Cf., Klebnikov, op. cit.; Stephen F. Cohen, *Failed Crusade: America and the Tragedy of Post-Communist Russia* (New York: W.W. Norton, 2000). *Forbes Russia*-editor Paul Klebnikov was murdered in Moscow in a drive-by shooting on 9 July 2004.
24. Simultaneously, Menatep won additional 33 per cent at the investment contest, thus acquiring 78 per cent of the YUKOS stock. 'Yukos Oil Company,' *RussiaToday.Info*, 18 September 2002. Available at: [http://russiatoday.strana.ru/en/biz/business/lead\\_com/2229.html](http://russiatoday.strana.ru/en/biz/business/lead_com/2229.html). Accessed 19 May 2006. See also: Browder, William. 'Who Do We Trust to Run Russia?', *Global Agenda*, 2004. Available at: <http://www.globalagendamagazine.com/2004/williambrowder.asp>. Accessed 19 May 2006.
25. Yurii Boldyrev, 'O bochkakh meda i lozhkakh degtia', *Krymskii Most-9D* (Moscow, 2003), pp. 45–6.
26. Petr Sapozhnikov, 'Komu prinadlezhit Rossija', *Kommersant Vlas* (No. 42, 23 October 2001). See also: Interros, 'Norilsk Nickel', available at: <http://www.interros.ru/eng/assets/nornikel/>. Accessed 19 May 2006. From August 1996 to March 1997, Vladimir Potanin served as First Deputy Prime Minister supervising economic issues.
27. According to Yuri Boldyrev, then Deputy Chair of the Russia's Accounting Chamber, it was clear from the start that the government had no intention to repay the loans and to redeem property. (The Accounting Chamber conducted an audit of the auctions.) The funds that would have been necessary to repay the loans were not allocated in the 1996 budget proposal. The auctions were sham deals that turned valuable state assets over to a few financial groups 'for a song', as several analysts have noted. See Boldyrev, op. cit., pp. 44, 49–54. See also Goldman, op. cit., p. 24.
28. Ibid., p. 24: 'Indeed, surveys show that 70 to 90 per cent of those polled favour the reconsideration, if not the renationalization, of privatised companies. People are angry at what they see as the theft of the state resources and the underpayment for these valuable assets.'; Klebnikov, op. cit., p. 320: 'on the streets, being called

- a 'democrat' became synonymous with 'crook', 'privatization' became 'grab-it-ization' (prikhvatizatsiya), and 'democracy' became 'shitocracy' (dermokratizatsiya).
29. Guriev and Rachinsky, op. cit.
  30. Perhaps the biggest irony is that the one privatization measure that really worked – Yeltsin's decree of January 1992 allowing Russians the freedom to sell goods without permits on the streets – was quickly withdrawn, as Prime Minister Victor Chernomyrdin ruled in December of that year that Russia 'will not become a bazaar'. This ruling shut down the bustling market activity on the streets of Russia as fast as it had sprung up. Goldman, op. cit.
  31. Stiglitz, op. cit., pp. 15–16.
  32. Reddaway and Glinski, op. cit.
  33. Stiglitz, op. cit., p. 15.
  34. Daniel Gros and Alfred Steinherr, *Economic Transition in Central and Eastern Europe* (Cambridge: Cambridge University Press, 2004).
  35. Robert Heilbrunner, *The Worldly Philosophers* (New York: Simon & Schuster, 1986): chapter 3.
  36. Janine R. Wedel, *Collision and Collusion: The Strange Case of Western Aid to Eastern Europe* (New York: Palgrave, 2001): chapter 4.
  37. Ibid.
  38. See Wedel, op. cit. In brief, the prestige accorded to Harvard, and the privileges that its principals received through their contacts in the administration, facilitated both the practical advantages and the authority and legitimacy that were crucial to the success of the Harvard Institute in the Western policy and aid community. Further, when questions were raised, Harvard projects and players often did not receive close scrutiny for those same reasons. As a US official investigating the conduct of the Harvard Institute observed: 'The [Clinton administration's] excuse [for any alleged or perceived wrongdoing] always was: those [Harvard] guys, we need them; they're the experts.' Wedel interview with Phil Rodokanakis, former senior agent in USAID's Office of the Inspector General, 25 January 2001. USAID Deputy Administrator Donald Pressley acknowledged after the US Justice Department filed its lawsuit: 'We had even more than usual confidence in them [Harvard advisers]'. Interview with Donald Pressley, aired on Monitor Radio, 22 May 1997.
  39. The Harvard Institute gained authority over other contractors, some of whom were its competitors, and recommended US policies while being itself a chief recipient of that aid. The General Accounting Office has confirmed that the Harvard Institute 'served in an oversight role for a substantial portion of the Russian assistance program'. See the US General Accounting Office, *Foreign Assistance: Harvard Institute for International Development's Work in Russia and Ukraine* (Washington, DC: GAO, November 1996), pp. 3, 17.
  40. Project documents submitted by Jeffrey D. Sachs and Associates Inc. to the Finnish government, entitled: 'World Institute for Development Economic Research Project on the Transformation of Centrally Planned Economies: Report on Activities, First Half of 1991', pp. 4 and 7. See chapter 4 of Wedel's *Collision and Collusion* for further details.
  41. Ibid., p. 2.
  42. Ibid.
  43. Ibid.
  44. Olga Kryshchanovskaya 'The Real Masters of Russia', *Argumenty i Fakty* (No. 21, May 1997), reprinted in *Johnson's Russia List*, by David Johnson, Washington, DC: internet newsletter.

45. Wedel, op. cit., chapter 4.
46. Ibid.
47. Office of Management and Budget, Office of Federal Procurement Policy, *Policy Letter 92-1 to the Heads of Executive Agencies and Departments*, Washington, DC, 23 September 1992.
48. Wedel, op. cit., chapter 4.
49. Ibid.
50. Wedel interview with and documents provided by Chamber of Accounts auditor Veniamin Sokolov, 31 May 1998. See State Property Committee order no. 188 (which gave Jonathan Hay veto power over the Committee's projects), 5 October 1992.
51. Wedel, op. cit., chapter 4.
52. John Helmer, 'Russia and the IMF: Who Pays the Piper Calls the Tune', *Johnson's Russia List* (No. 3057, 17 February 1999).
53. See Janine R. Wedel, 'Rigging the US-Russia Relationship: Harvard, Chubais, and the Transidentity Game', *Demokratisatsiya: The Journal of Post-Soviet Democratisation* (Vol. 7, No. 4, Fall 1999), p. 485; and Anne Williamson, *Contagion: The Betrayal of Liberty; Russia and the United States in the Post-Cold War World*, (forthcoming), chapter 13.
54. Janine R. Wedel has called this form of collusion 'transactorship' and 'flex organizing'. See her *Collision and Collusion*, op. cit., pp. 145-53; and 278-81.
55. Ibid.
56. For details of this case, see Janine R. Wedel, 'Clique-Run Organisations and US Economic Aid: An Institutional Analysis', *Demokratisatsiya: The Journal of Post-Soviet Democratisation* (Vol. 4, No. 4, Fall 1996), pp. 592-3.
57. US General Accounting Office, op. cit., p. 8.
58. Wedel interview with Louis Zanardi, 25 January 2001.
59. *United States District Court, District of Massachusetts, United States of America, Plaintiff, vs The President and Fellows of Harvard College, Andrei Shleifer, Jonathan Hay, Nancy Zimmerman, and Elisabeth Hebert, Defendants*, Civil Action No. OOCV11977DPW, 26 September 2000, p. 30.
60. Wedel, op. cit., chapter 4.
61. Ibid.
62. Although the context has changed, some of the people involved continue cross-national relationships with their counterparts, especially around business activities. They appear to have switched their energies from reform efforts supported by Western aid and loans to activities encouraging Western investment, notably in the Russian energy sector.
63. Wedel, op. cit., chapter 4.
64. The wives were later dismissed from the case.
65. United States Attorney, District of Massachusetts, 'United States Sues Harvard and Others for False Claims Relating to USAID Programs in Russia,' *Press Release*, US Department of Justice, 26 September, 2000.
66. Ibid. For details, see *United States District Court, District of Massachusetts, 'United States of America, Plaintiff, vs The President and Fellows of Harvard College', Andrei Shleifer, Jonathan Hay, Nancy Zimmerman, and Elisabeth Hebert, Defendants*, Civil Action No. OOCV11977DPW, 26 September 2000, p. 30; For example, Thanassis Cambanis, 'US Seeking \$102M from Harvard, Pair,' *Boston Globe* (27 June 2002).
67. The suit registered by Forum Financial Group of Portland, Maine, states that Hay and Shleifer used their pull with Russian officials to acquire for the company the



rights to the country's first mutual fund. They then compelled its owner to sell his interest in the fund. When Forum filed suit in fall 2000, Harvard spokesman Joe Wrinn called its claims 'baseless'. Yet, two years later, Harvard and its two co-defendants quietly settled with the company, denying any wrongdoing by it or the co-defendants. See, for example, David H. Gellis, 'Harvard in Settlement Talks with Forum,' *The Harvard Crimson* (30 October 2002); and 'Harvard Settles With Mutual Funds Company Over Fraud Allegations', *Associated Press* (8 November 2002). The Harvard-Chubais associates facilitated investments on behalf of the endowments of Ivy-League universities. Hedge fund manager Nancy Zimmerman, wife of Harvard's Shleifer, managed a portion of the Yale University endowment, see: 'Yale Connection to Harvard Russian Fraud Case', *Yale Insider* (10 January 2002), available at: <http://www.yaleinsider.org/article.jsp?id=16>. Accessed 19 May 2006. Her investment company traded in short-term Russian government bonds, and repatriated the profits to the United States beyond the allowable limits set by Russian law. Zimmerman was ideally placed to time these highly lucrative transactions, because her husband advised the Russian official making decisions regarding the government's backing of these Russian government bonds: 'US Complaint and Jury Trial Demand', pp. 25 and 27, cited in *Yale Insider*, *ibid.* See also Bruce Rubenstein, 'Harvard Accused of Ignoring Russian Aid Scam: Academics Rigged Russian Market', *Corporate Legal Times* (January 2001). Meanwhile, Harvard's endowment, the Harvard Management Company, benefited from some of the most valuable privatisation deals to which it gained access through Harvard-Chubais networks. The deals were officially closed to foreign investors. For details and documentation regarding the Harvard Management Company, see Wedel, *Collision and Collusion*, *op. cit.*, pp. 160–5.

68. See, for example, Cambanis, *op. cit.*
69. *United States District Court, District of Massachusetts, 'United States of America, Plaintiff, vs. The President and Fellows of Harvard College,' Andrei Shleifer, Jonathan Hay, Nancy Zimmerman, and Elisabeth Hebert, Defendants, Civil Action No. OOCV11977DPW, Memorandum in Support of United States' Motion for Summary Judgment Against Defendants Harvard, Shleifer & Hay* (21 June 2002), p. 40.
70. Catherine Tomasco, 'Harvard, Employees Pay \$31 Million to End False Claims Act Suit', *FindLaw* (26 August 2005); Marcella Bombardieri, 'Harvard, Teacher, and Lawyer to Pay US \$30 Million', *The Boston Globe* (4 August 2005).
71. Common methods for controlling the media, exercised by both the government and oligarchs and established well before the 2004 Beslan crisis when a number of journalists were poisoned, include bribery, threats, physical intimidation, and even murder of journalists; see Reddaway and Glinski, *op. cit.*, pp. 484–500, 565–9; and Ermarth, *op. cit.*
72. Freedom House, *Freedom in the World: Russia*, available at: <http://www.freedomhouse.org/research/freeworld/2004/countryratings/russia.htm> (13 May 2005); United Nations Office on Drugs and Crime, *Seventh United Nations Survey of Crime Trends and Operations of Criminal Justice Systems, covering the period 1998–2000*, available at: [http://www.unodc.org/unodc/crime\\_cicp\\_survey\\_seventh.html](http://www.unodc.org/unodc/crime_cicp_survey_seventh.html) (13 May 2005); Thomas Parland, *The Extreme Nationalist Threat in Russia: The Growing Influence of Western Rightist Ideas* (London: Routledge, 2005); 'The New Jews', *The Economist* (17 February 2005), available at: [http://www.economist.com/displayStory.cfm?story\\_id=3672697](http://www.economist.com/displayStory.cfm?story_id=3672697). Accessed 19 May 2006; '80 Per cent of Marriages in Russia End up in Divorce', *Pravda* (25 June 2004), available at: [http://english.pravda.ru/main/18/90/359/13194\\_divorce.html](http://english.pravda.ru/main/18/90/359/13194_divorce.html). Accessed 19 May

- 2006; US State Department, 'Human Trafficking and Modern-Day Slavery: Russian Federation', available at: <http://gvnet.com/humantrafficking/Russia.htm> (13 May 2005); Sarah Rainsford, 'Domestic Violence Plagues Russia', *BBC News World Edition* (26 August 2004), available at: <http://news.bbc.co.uk/2/hi/europe/3601884.stm>. Accessed 19 May 2006; The National Intelligence Council, 'The Environmental Outlook in Russia' (January 1999), available at: [http://www.cia.gov/nic/special\\_russianoutlook.html](http://www.cia.gov/nic/special_russianoutlook.html). Accessed 19 May 2006.
73. Human Rights Watch, 'Russia: Abuses Spread beyond Chechnya', *Human Rights News* (16 July 2003), available at: [http://www.cia.gov/nic/special\\_russianoutlook.html](http://www.cia.gov/nic/special_russianoutlook.html). Accessed 19 May 2006.
  74. Bates Gill, *China's HIV/AIDS Crisis: Implications for Human Rights, the Rule of Law and U.S.-China Relations*, Testimony before the Congressional-Executive Commission on China Roundtable on HIV/AIDS (Washington, DC: United States Congress, 2002), available at: <http://www.csis.org/hill/ts020909gill.pdf>. Accessed 19 May 2006; 'China's Future Depends on Protecting Rights', *Asian Wall Street Journal* (19 July 2004); 'The Yin and Yang of China's Foreign Policy', *Asian Wall Street Journal* (3 May 2005); Freedom House, *Freedom in the World: China*, available at: <http://www.freedomhouse.org/religion/country/index.htm#china>. Accessed 19 May 2006; The House Policy Committee, *The People's Republic of China: A Policy for Freedom Report on Political Freedom in China* (Washington, DC: United States Congress, 2005), available at: [http://policy.house.gov/html/china\\_about.html](http://policy.house.gov/html/china_about.html). Accessed 16 June 2006; Elizabeth C. Economy, *The River Runs Black: The Environmental Challenge to China's Future* (Ithaca, NJ: Cornell University Press, 2004).
  75. 'The Risk of War over Taiwan is Real', *Financial Times* (2 May 2005).

# 6

## The Failure of Seat Belts Legislation<sup>1</sup>

*John Adams*

Letter to *The Times*, 13 July 1908,  
from Colonel Willoughby Verner:

Dear Sir,

Before any of your readers may be induced to cut their hedges as suggested by the secretary of the Motor Union they may like to know my experience of having done so.

Four years ago I cut down the hedges and shrubs to a height of 4ft for 30 yards back from the dangerous crossing in this hamlet. The results were twofold: the following summer my garden was smothered with dust caused by fast-driven cars, and the average pace of the passing cars was considerably increased. This was bad enough, but when the culprits secured by the police pleaded that 'it was perfectly safe to go fast' because 'they could see well at the corner', I realised that I had made a mistake. Since then I have let my hedges and shrubs grow, and by planting roses and hops have raised a screen 8ft to 10ft high, by which means the garden is sheltered to some degree from the dust and the speed of many passing cars sensibly diminished. For it is perfectly plain that there are a large number of motorists who can only be induced to go at a reasonable speed at cross-roads by consideration for their own personal safety.

Hence the advantage to the public of automatically fostering this spirit as I am now doing. To cut hedges is a direct encouragement to reckless driving.

Your obedient servant, Willoughby Verner

From the earliest days of motoring up to the present day it has been obvious that people modify their behaviour in response to perceived changes in risks to their personal safety. This phenomenon, now widely known as *risk compensation*, seems to most people mere common sense. Figure 6.1 illustrates how it works. The model postulates that:

- everyone has a propensity to take risks;
- this propensity varies from one individual to another;

- this propensity is influenced by the potential rewards of risk taking;
- perceptions of risk are influenced by experience of accident losses – one's own and those of others;
- both propensities and perceptions are formed out of information that succeeds in getting through cultural filters;
- individual risk taking decisions represent a balancing act in which perceptions of risk are weighed against propensity to take risk;
- accident losses are, by definition, a consequence of taking risks; the more risks an individual takes, the greater, on average, will be both the rewards and losses he or she incurs;
- Safety interventions that do not alter the setting of the thermostat (propensity to take risks) will be frustrated by behaviour that seeks to restore the balance to its pre-intervention state.

About the only area where the idea of risk compensation still meets resistance is in the work of people with a professional interest in safety. This resistance can be found at its strongest in the debate about seat belts. Seat belt legislation provides a classic example of the cultural construction of risk. The strength of convictions about what this legislation has achieved is remarkably independent of objective evidence.

Around the world hundreds of millions of motorists are now obliged by law to belt up. The seat belt law, with minor national variations, probably affects more people than any other single piece of safety legislation. The first seat belt law came into effect in the state of Victoria in Australia in 1970 and by 1991 over 80 jurisdictions world wide had laws compelling drivers and some passengers to wear seat belts.<sup>2</sup> It is now a 'truth' *almost* universally acknowledged that these laws have saved many thousands of lives. It is a

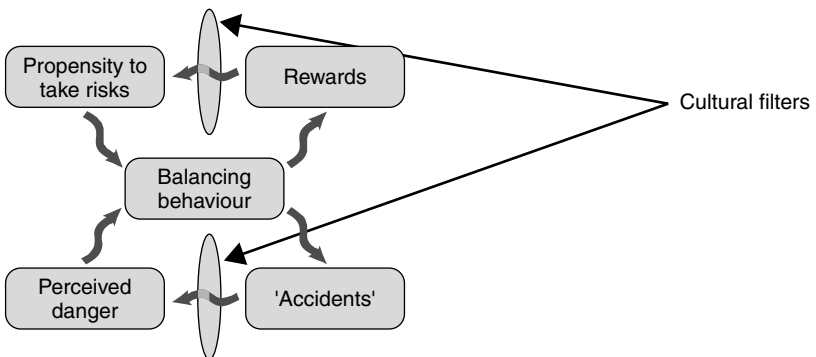


Figure 6.1 The risk thermostat with cultural filters

'fact' endlessly repeated, not only on television and in the popular press, but in the scientific literature. Seat belts feature routinely in discussions of safety as an example of a measure that yields enormous benefits for minimal cost. The 'success' of seat belt legislation in saving large numbers of lives is frequently cited by advocates of other public health measures as an example of the way legislation and regulation can reduce risk.

In a British parliamentary debate about seat belts in 1979 William Rodgers, then Secretary of State for Transport, claimed:

On the best available evidence of accidents in this country – evidence which has not been seriously contested – compulsion could save up to 1000 lives and 10,000 injuries a year.<sup>3</sup>

Although the magnitude of the savings attributed to seat belts around that time varied, the claims made in the scientific literature prior to the passage of the British seat belt law in 1981 were consistently large. A report by the Transport and Road Research Laboratory shortly before the parliamentary debate in 1979 concluded 'seat belts reduce deaths of car occupants by at least 40 per cent'.<sup>4</sup> Hurst, also in 1979, more than doubled this estimate: 'belt use reduces the chances of fatal injury by about 83 per cent for drivers and about 80 per cent for front seat passengers'.<sup>5</sup> The Royal Society for the Prevention of Accidents produced a campaign pamphlet, which claimed that 'for belted occupants the deaths were reduced by 77 per cent in full frontal crashes and 91 per cent in roll overs'.<sup>6</sup> The pamphlet concluded 'no other single practical piece of legislation could achieve such dramatic savings of lives and serious injuries'. In the 1981 parliamentary debates which preceded the passage of the law the claim that 1000 lives and 10,000 injuries a year would be saved was repeated frequently, although some influential supporters of the law advanced even larger claims; David Ennals, a former Secretary of State for Health, informed Parliament that not wearing a belt increased sixfold a motorist's chances of being killed in an accident.<sup>7</sup>

Britain and the United States were among the last of the world's highly motorized countries to implement seat belt laws. Most other countries had done so in the early and mid-seventies. In 1978, in the United States, frustrated seat belt campaigners were presenting similar claims for the life saving benefits of a seat belt law to a Congressional Inquiry:

- Mandatory safety belt usage ... [holds] the potential to save 89,000 lives on the highways over the next ten years.
- The potential for saving lives right now is tremendous with estimates ranging from 10,000 to 20,000 lives a year.
- French police have estimated that seat belts have reduced fatalities in France by 63 per cent.

- Two separate studies [in Sweden] ... found that seat belts reduced fatalities and serious injuries by 50 to 70 per cent, minor injuries by 20 per cent.
- The [German] government estimates that 1700 deaths and 30,000 injuries are prevented annually by the use of seat belts.
- Occupant restraints is the largest highway safety issue that we have ever had since the automobile came on the scene. It is more important than the safety aspects of the Interstate, more important than getting drunk drivers off the road. In my opinion, it is the number one issue, and I base that on the profound benefits that can be obtained from occupant restraint.<sup>8</sup>

By the time of the vote in Parliament in 1981 the seat belt law had acquired an impressive number of influential sponsors: the British Medical Association, the Royal Society for the Prevention of Accidents, the Royal College of Surgeons, the Royal College of Nursing, the Royal Scottish Automobile Club, the Society of Automotive Manufacturers and Traders and the Automobile Association. In the House of Lord's debate, Lord Avebury (11 June 1981) offered this list of sponsors as compelling evidence for legislation. 'Why, after all', he asked, 'would these institutions seek to mislead the public?'

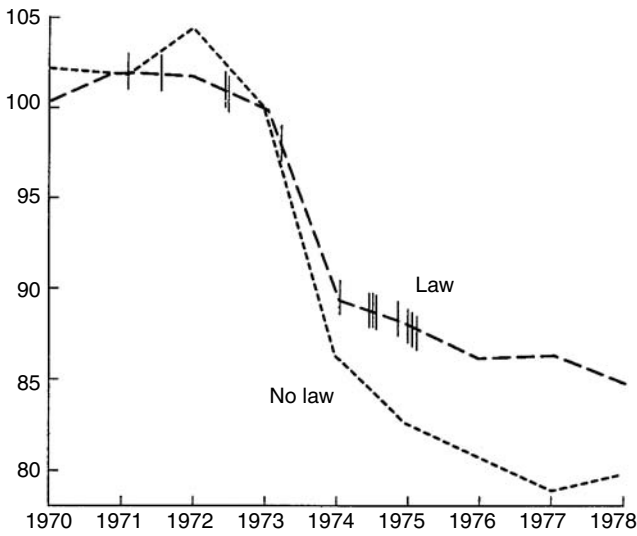
The answer, it appears, is that they misled themselves. At this time none of these institutions appeared to be aware of risk compensation and the possibility that there might be a behavioural response to the compulsory wearing of seat belts. The possibility had not been investigated in any of the studies they cited. Their support for a law rested on two sorts of evidence: the effect of seat belts in crashes, and the effect of legislation in Australia. Britain's Transport and Road Research Laboratory had published a review summarizing the available evidence.<sup>9</sup> It presented abundant evidence that the wearing of a seat belt improves a car occupant's chances of surviving a crash. But it contained a significant caveat; it said that 'for direct evidence on death, however, it is necessary to rely on recent Australian data'. The Laboratory's review did not mention the possibility of risk compensation. None of the prestigious institutions cited by Lord Avebury, and none of the countries that followed the lead of Victoria in passing a seat belt law, produced any compelling new evidence. The law's supporters all cited the original Australian evidence, or other people citing the Australian evidence, or other people citing other people, and so on.

There was other direct evidence of the effect of legislation that could have been consulted, but the Laboratory did not explain why it chose to ignore it. This other evidence did not support the claims made for the law and, as we shall see in a moment, Australia was a particularly unfortunate example on which to rest their case. By 1981 there was evidence available from thirteen countries that had passed seat belt laws. Figure 6.2 compares their road accident records with those of a 'no-law' group of four countries that had not at that time passed a law. Together these 17 countries constituted an impressive

sample; they contained over 80 per cent of the world's car population. The bars on the 'law' graph indicate the dates at which seat belt laws were implemented, beginning with Australia and ending with Denmark, West Germany and Switzerland in January 1976. Around this time all 17 countries with the exception of Australia and Spain, experienced marked decreases in their road accident death tolls. *Collectively, the group of countries that had not passed seat belt laws experienced a greater decrease than the group that had passed laws.*

The decreases shown in Figure 6.2 occurred in the aftermath of the 1973–74 energy crisis when the whole world was anxious about the adequacy of energy supplies, and was being subjected to advice about the energy saving benefits of light-footed driving. The country that experienced the greatest decrease in the mid-1970s was Denmark, *before* its law was passed. As can be seen in Figure 6.3, after its law road deaths increased slightly.

Australia, the case that provided the main justification for most of the world's seat belt laws, stands out as the country whose road death toll varied the least between 1970 and 1978. The analyses that led to the seat belt claims all assumed that the rising trend of the 1960s would have continued, but for the seat belt law. Figure 6.3 is typical of these analyses. But, as Figure 6.4 shows, Australia when compared with most other countries was exceptional in *not* enjoying a substantial decrease in road accident deaths in the 1970s.



*Figure 6.2* The effect of seat belt legislation. Indices of road accident deaths for countries with seat belt laws and without. Indices are set to 100 in 1973 – the year of the 'energy crisis'. Bars indicate the dates at which laws came into effect in the 'law' group

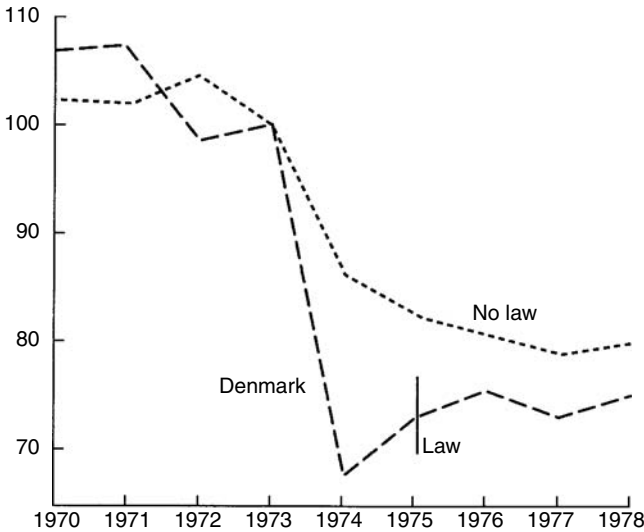


Figure 6.3 The effect of the seat belt law in Denmark

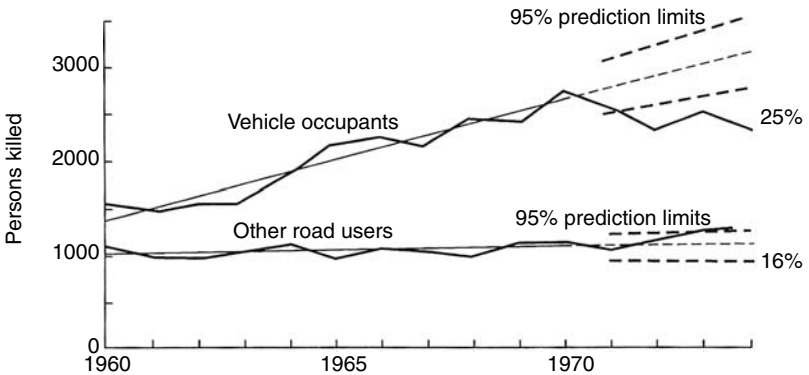


Figure 6.4 Road accident deaths in Australia; the beginning of the myth of seat belt effectiveness

Figure 6.3 is interesting for another reason; it also contains the first suggestion that less careful driving by belted motorists might displace risks to other road users, mainly cyclists and pedestrians. Although the evidence summarized in Figures 6.2 through 6.5 was available before the British Parliament passed its seat belt law, the Department of Transport continued to insist that the only country whose road accident statistics constituted 'direct evidence



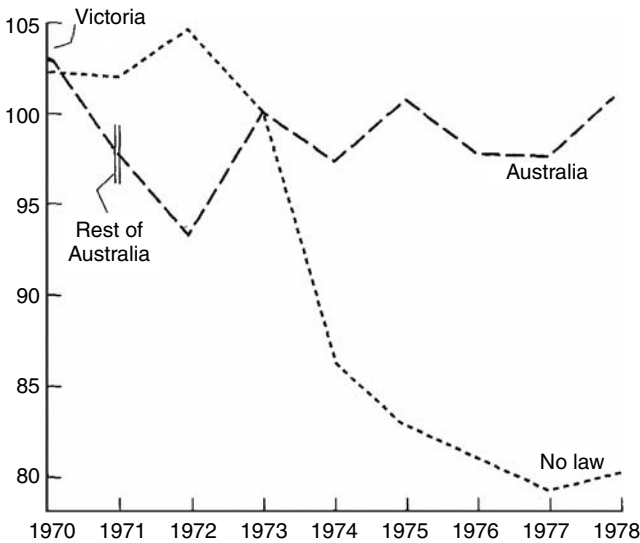


Figure 6.5 Australia's record compared to that of countries without seat belt laws

on death' was Australia, and that this evidence provided compelling support for a British seat belt law.

Now, over ten years later, with laws having been passed in over 80 jurisdictions one would expect the evidence in support of the claims for seat belt legislation to be voluminous, but oddly it has shrunk dramatically. The claims now all rest on the experience of only one country, the United Kingdom. After surveying the global evidence in a comprehensive and widely acclaimed book on road safety, Evans reaches the following conclusion:

The highest precision evaluation is for the UK's law, where belt use rose rapidly from 40% to 90% in a large population of affected occupants. The law reduced fatalities to drivers and front-seat passengers by 20%. For smaller use rate increases, and for smaller populations (that is, in nearly all other cases), it is not possible to directly measure fatality changes. They can be reliably estimated using an equation based on the known when-used effectiveness of the belts together with a quantification of *selective recruitment* effects – the tendency of those changing from non-use to use to be safer than average drivers.<sup>10</sup>

In other words, out of the more than 80 jurisdictions with seat belt laws only in the United Kingdom, according to Evans, was there a fatality reduction

effect that could be measured directly. In all the other jurisdictions the life saving benefits were too small to register in the casualty statistics. (Evans does not name the exceptions to the 'nearly all other cases' to which he refers, and with respect to the Australian claims he simply says 'some estimates now seem to have been clearly too high'; he does not indicate what estimates he would now accept for Australia.) The claims made for seat belt laws in all these other jurisdictions rest on a deduction which *assumes* no risk compensation effect. Evans says 'there is no evidence in the literature of measurable user responses to interventions that influence only the outcome of crashes, such as the use of safety belts or motorcycle helmets'.<sup>11</sup>

No one disputes Evans' evidence concerning the life-saving benefits of seat belts, *if one is in a crash*. The evidence that the use of a seat belt improves a car occupant's chances of surviving a crash is convincing. That a person travelling at speed inside a hard metal shell will stand a better chance of surviving a crash if he is restrained from rattling about inside the shell is both intuitively obvious and supported by an impressive body of empirical evidence. Evans has calculated that wearing a belt reduces one's chances of being killed, *if in a crash*, by 41 per cent. He assumes that this benefit has been enjoyed by all those in the 80 plus jurisdictions who belted up in response to a law, and the laws therefore can be given credit for saving large numbers of lives. But it does seem curious that with such a large effect, the only jurisdiction that he feels he can cite with confidence to demonstrate directly measured fatality reductions is the UK.

Doubt was first cast on the international evidence for seat belt laws in a paper of mine in 1981; Figures 6.2 through 6.5 above were first published in this paper.<sup>12</sup> Britain's Department of Transport commissioned an internal critique of my paper. This critique, entitled *Seat Belt Savings: Implications of European Statistics*, concluded that there was no foundation for the Department's oft-repeated claim that a seat belt law would save 1000 lives and 10,000 injuries a year. It found what I had discovered, and what Evans found ten years later in his review of the evidence world wide – that there were no directly measurable reductions in fatalities that could be attributed to seat belt laws. It said:

Available data for eight western European countries which introduced a seat belt law between 1973 and 1976 suggests that it *has not led to a detectable change in road deaths* [my emphasis]. ... The results are not compatible with the Department's '1000 plus 10,000' estimates.<sup>13</sup>

The author of this report was aware of the risk compensation hypothesis, and hence aware that evidence concerning the effectiveness of seat belts in crashes did not constitute satisfactory evidence about the likely effect of a law compelling people to belt up. He insisted that 'international comparisons provide the only information about the effect of compulsory seat belt

wearing, both on car occupants and on other road users'. Furthermore this report also noted that in all eight countries, as in Australia, the number of pedestrians injured following the passage of a seat belt law increased. Individually none of the increases was statistically significant, but collectively this result was highly significant.

By the time the report was completed (it was dated 9 April 1981) the Department of Transport was already committed to a seat belt law. The report was suppressed and was not permitted to inform the Parliamentary debate which led, a few months later, to the passage of Britain's first seat belt law. The existence of the suppressed report was revealed by *New Scientist* almost four years later (on 7 February 1985). A leaked copy of the report has circulated widely since then, despite never having been published, and its conclusions were authoritatively, if belatedly, confirmed eight years later by an independent analysis by Janssen which concluded:

Time-series analysis was performed on car driver (and passenger) fatality rates for eight Western-European countries that passed seat belt legislation in the seventies. *There was no discernible effect of seat belt legislation on the fatality rate* [emphasis added].<sup>14</sup>

Janssen also conducted what is at the time of writing the only experimental test of the hypothesis that seat belt wearing alters driving behaviour in realistic traffic conditions. He identified habitual wearers and non-wearers of belts and then, under the guise that they were participating in an experiment concerned with seat belt comfort, had them drive an instrumented car on a circuit including public highways and an off-road obstacle course. The habitual non-wearers drove the circuit belted and unbelted. None of the habitual wearers agreed to drive without a belt and Janssen did not attempt to persuade them. Janssen concluded that his experiment

yielded evidence both for selective recruitment and for adaptation effects in connection with seat belt wearing; [habitual] non-wearers drove faster than [habitual] wearers with the belt on; and [habitual] non-wearers showed a speed increase when they wore a belt.<sup>15</sup>

Other studies have attempted to measure differences in the driving behaviour of belted and unbelted motorists in traffic, but none of them constitutes a valid test of risk compensation. In none of these other studies were potential risk compensation effects separated from selective recruitment effects, with the result that they are all inconclusive – the risk compensation hypothesis suggests that people drive more dangerously when belted, while the selective recruitment hypothesis suggests that the safest drivers are the most likely to belt up voluntarily.<sup>16</sup>

Thus despite the fact that hundreds of millions of motorists all around the world are now compelled by law to wear seat belts, there has only been one small experiment (by Janssen) to test whether or not their behaviour is altered as a result. The original Australian claims are no longer accepted, and only one jurisdiction, the United Kingdom, is considered by those who have examined the evidence to have produced an effect that is directly measurable in the accident statistics. Given the significance that is now attached to the United Kingdom result, let us now look at it more closely.

## The UK seat belt law

Unusually, as a concession to the doubts that had been raised at that time, Britain's first seat belt law was passed for a trial three year period. It came into effect in January 1983, but was not made permanent until another vote in Parliament in January 1986. By this time the claim for lives saved had been reduced in a Department of Transport press release (of 15 October 1985) from 1000 a year to 200. This figure was described as a 'net' reduction; the decrease in the numbers of people killed in the front seats of cars and vans in 1983 was partially offset by an increase in the numbers of pedestrians, cyclists and rear seat passengers killed. This shift in fatalities was consistent with the risk compensation hypothesis that predicted that the added sense of security provided by belts would encourage more heedless driving, putting other road users at greater risk. But despite this implicit acknowledgement of risk compensation, the evidence on which Parliament relied when it confirmed the law in 1986 was fundamentally flawed. It ignored the effect of drunken driving.

Figure 6.6a shows what happened to road accident deaths in 1983, the first year of the law. Nothing remotely approaching the originally promised saving of 1000 lives a year can be seen. There appears to have been a small, temporary drop below a well-established downward trend. Most of the analyses presented to Parliament for the 1986 debate assumed that the slight upturn in the graph in 1982 represented a new *upward trend* that would have continued into 1983 and beyond, but for the beneficial effect of the seat belt law. The claims for the effect of the seat belt law are thus inflated by this assumed 'ski-jump effect'; the actual fatalities were compared to the number expected on the assumption that 1982 represented the beginning of a new trend. However, it can be seen in Figures 6.6b and 6.6c that all of the increase in fatalities in 1982 was between the hours of 10 at night and 4 in the morning – the time known in the road safety literature as the 'drink-drive hours'. During the other hours the established downward trend continued. Figure 6.7 pinpoints the 1982 increase even more precisely; almost all of it occurred in non-built-up areas and was associated with drivers who had been drinking.

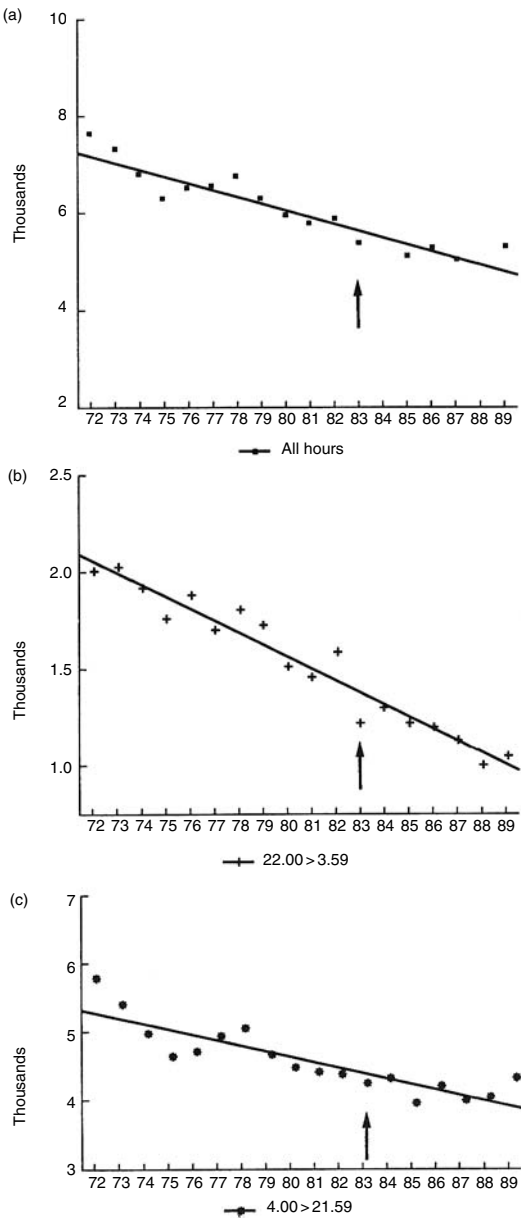


Figure 6.6 Great Britain road deaths by time of day  
Source: HMSO, *Road Accident Great Britain*, published annually.

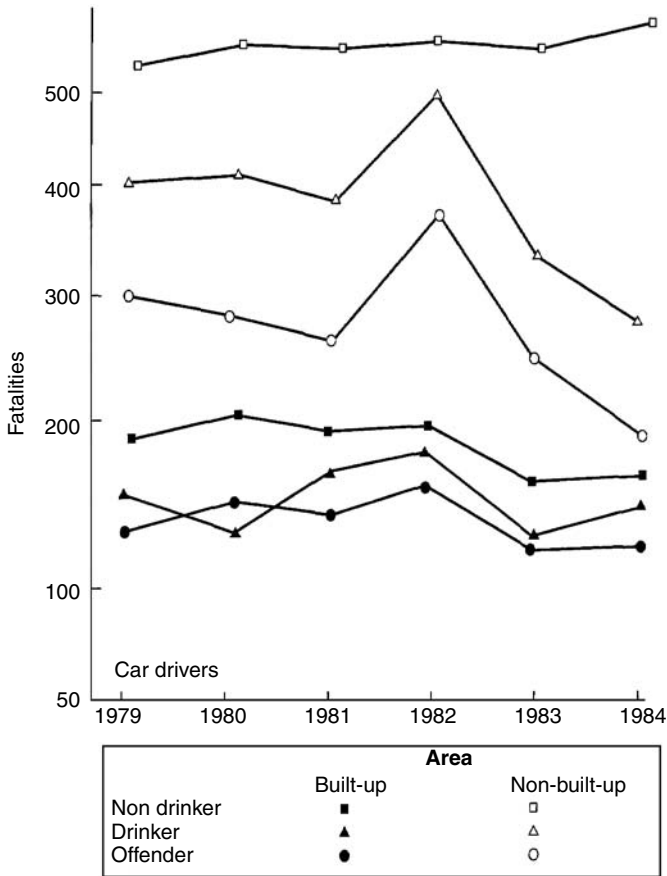


Figure 6.7 Great Britain driver deaths by place and blood alcohol content in dead driver  
Source: J. Broughton and D.C. Stark, *The Effect of the 1983 Changes to the Law Relating to Drink/Driving* (Crowthorne, Berkshire: Transport and Road Research Laboratory, 1986), Report RR89.

The decrease in fatalities in 1983 was clearly related to the campaign against drunken driving. In that year:

- 'evidential' breath testing was introduced;
- unprecedented numbers of breath tests were administered;
- the number of motorists successfully prosecuted for drunken driving increased by 31 per cent;
- the decrease in road deaths between 10 at night and 4 in the morning was 23 per cent, while in all other hours it was only 3 per cent – in line with the prevailing trend;

- the percentage of dead drivers who were over the legal alcohol limit dropped from 36 per cent to 31 per cent.

But the 1982 'alcohol blip' has never been satisfactorily explained. The sharp increase in that year in drink-related road accident deaths in non-built-up areas remains a mystery. According to a Transport and Road Research Laboratory Report, 'the series for drinking car drivers in non-built-up areas shows an increase in 1982 which cannot be related to available explanatory variables'.<sup>17</sup>

In advocating the retention of the law in the Parliamentary debate in 1986 the Department of Transport relied most heavily on the analysis of two statistics professors, James Durbin and Andrew Harvey from the London School of Economics. The time-series models developed by Durbin and Harvey for their analysis of the seat belt effect were impressively sophisticated, but none of them contained alcohol related variables. They attributed all of the decrease in fatalities in 1983 below the projected trend to the beneficial effect of the seat belt law, and none to the campaign against drunken driving. Durbin and Harvey presented their work to a Royal Statistical Society Seminar, and the discussion was published along with their paper. They acknowledged that their analysis had taken no account of alcohol and said 'the study of the effects of alcohol is clearly an important area for future research'.<sup>18</sup>

But no studies have been done so far to explain why, after the seat belt law came into effect in Britain, seat belts have been so extraordinarily selective in saving the lives only of those who are over the alcohol limit and driving between 10 at night and 4 in the morning. It is a question that the Department of Transport has declined to pursue. A subsequent report from the Department on seat belts by Tunbridge still disregards the alcohol effect and claims all of the credit for the reduction in fatalities in 1983 for seat belts.<sup>19</sup> It compounds this error of omission by disregarding the established downward trend of the data. It bases its conclusion, that the law saved lives, mainly on a comparison of data for three years before the seat belt law (1980, 1981, 1982) and two years after (1983, 1984). A glance at Figure 6.6 suggests that the established downward trends before 1983 continued. On the basis of these trends one would have expected fewer fatalities in 1983 and 1984 regardless of any safety measures introduced in 1983. In the Tunbridge report this trend effect is claimed for seat belts.

Further, the report cites Durbin and Harvey in a misleadingly selective way with respect to the effects of the seat belt law on pedestrians. Tunbridge says 'they [Durbin and Harvey] concluded that there was no significant increase in the numbers killed and seriously injured subsequent to legislation'. What Tunbridge fails to note is that the fatality statistics and the serious injury statistics tell different stories. The KSI (Killed and Seriously Injured) statistical series is dominated by the much larger, but less reliable, injury numbers.

Tunbridge does not cite the evidence from Durbin and Harvey with respect to the much more accurate fatality data on their own. Durbin and Harvey estimated that the increases in pedestrians and cyclists killed were 8 per cent and 13 per cent, respectively. They also estimated an increase of 27 per cent for rear seat passengers, to whom the law did not apply. Interestingly, the number of pedestrians and cyclists killed by heavy goods vehicles and public service vehicles (categories not covered by the seat belt law) *decreased* following the law. Using these categories as controls, the estimated increases in pedestrian and cyclist deaths following the law rise to 19.6 per cent and 40 per cent, respectively, although the small control numbers render these estimates unreliable.

The risk compensation hypothesis, and the historical time-series data on cyclist and pedestrian deaths both suggest that the increase in cyclist and pedestrian fatalities following the seat belt law is likely to be a temporary transitional effect. Over the longer term cyclists and pedestrians have responded, and are likely to continue to respond to the increasing threat of motorised traffic by withdrawing from the threat.<sup>20</sup>

In summary, there were two major road safety measures introduced by the British Government in 1983: the seat belt law and the campaign against drinking and driving. Figures 6.6 and 6.7 suggest that in 1983 there was a small, temporary, drop in road accident fatalities below the established trend. The evidence with respect to seat belts suggests that the law had no effect on total fatalities, but was associated with a redistribution of danger from car occupants to pedestrians and cyclists. The evidence with respect to alcohol suggests that the decrease in fatalities in 1983 during the drink-drive hours is accounted for partly by the still-unexplained rise above the trend in 1982, and partly by the drink-drive campaign in 1983. The evidence from Britain, which has been singled out as *the only jurisdiction in the world* in which it is possible to measure fatality changes directly attributable a seat belt law, suggests that the law produced no net saving of lives, but redistributed the burden of risk from those who were already the best protected inside vehicles to those who were the most vulnerable outside vehicles.

### Three postscripts

1. In 1986, five years after the British seat belt law was passed by Parliament, risk compensation was effectively enshrined in the road traffic law of West Germany. Coaches fitted with seat belts now have a permitted top speed of 100 km/h, while those without are restricted to 80 km/h. The Royal Society for the Prevention of Accidents (RoSPA), a staunch believer in the life-saving benefits of the British seat belt law, when reporting this development in its journal *Care on the Road* (March 1987), unwittingly presented a classic example of the trade-off that routinely takes place between safety benefits and



performance benefits:

In Germany coaches with belts are allowed to travel faster than those without, thus allowing drivers to cover more miles in the hours they are allowed.

2. In September 1989, inspired by the ‘success’ of the law compelling people to wear seat belts in the front seats of cars, the British Government made seat belt wearing compulsory for children under 14 years in the rear seats of cars. Figure 6.8 shows the outcome measured in accident statistics. Comparing the year before (1988) with the year after (1990) there was an increase of almost 10 per cent in the numbers of children killed in rear seats, and of almost 12 per cent in the numbers injured; in both cases these increases were greater than the background increases.

3. On 10 November 1993 10 people were killed in a coach crash on the M2 in Kent. Before any detailed information about how they were killed became available there was an immediate chorus on television and radio and in the press demanding that seat belts be made compulsory for coaches. The writers of editorials demanded seat belts in coaches. The authorities cited in their news reports, and the authors of letters to editors, all had one thing in common: they rested their case on the ‘fact’ that seat belt laws had saved enormous number of lives. It is highly unlikely that any of the ‘safety authorities’ belonging to the chorus had any first-hand working knowledge of the statistical evidence. The vehemence with which they argued their case was rooted in a sincere belief in the efficacy of seat belt legislation. This belief is now so

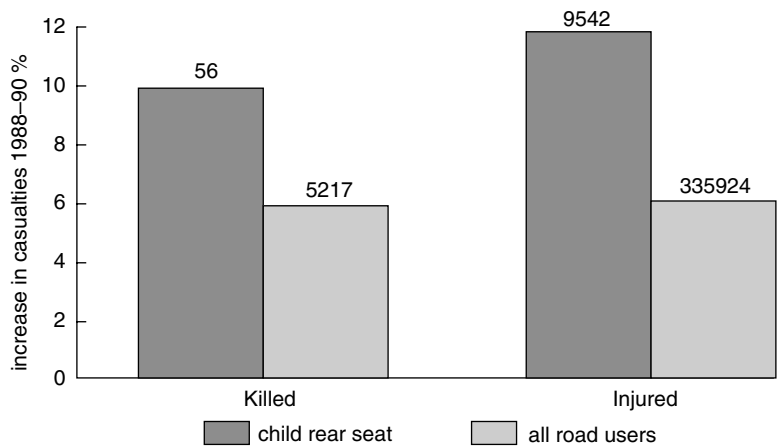


Figure 6.8 Rear seat belts for children; the effect of compulsion in 1989

Source: Road Accidents Great Britain 1992.

wide spread, profoundly held, and insistently repeated that it is difficult to imagine any way in which it might be altered. The contrary view is routinely filtered out.

The original claim that a seat belt law would save 1000 lives a year in Britain was made at a time when there were about 200 billion kilometres travelled every year by unbelted motorists. The promise of the legislation was, in other words, that it would reduce the chance of death by one in 200 million per kilometre travelled. The change in behaviour required to offset the promised benefit would be equally small, and very difficult to measure directly – perhaps slightly faster or more aggressive driving, or the occasional extra lapse of concentration every few million kilometres. The promised reduction in risk was accompanied by a major advertising campaign to persuade people that a seat belt would make them very much safer.

Most readers of this chapter will now be habitual users of seat belts. You are invited to consult your own experience. Might you drive a little bit more carefully, if you were deprived of the protection of your seat belt? Some readers will be parents who insist on protecting their young children with rear seat belts or child restraints. Might you brake slightly more gently or corner a wee bit more slowly, if your children were not safely secured in the back seat? The changes in your driving necessary to offset the loss of the protective benefits of seat belts are so small that accurate and reliable measurement by behavioural observation or introspection is extremely difficult. But all the world's seat belt laws assume that the answer to these questions is a resounding 'no'.

## Cultural theory

All this is fertile ground for the theory of socio-cultural viability. The hundreds of thousands of people killed world wide every year in road accidents constitute a large problem. Large problems and inconclusive information make people uncomfortable. The debate about seat belt laws appears to be as far as ever from resolution, despite more than two decades of experience and volumes of statistical evidence. The theory of socio-cultural viability suggests that in the face of such uncertainty the informational vacuum will be filled with *contradictory certitudes*; belief and conviction serve as substitutes for factual knowledge. The theory further suggests that these beliefs and convictions assume distinctive and predictable forms depending on their adherents.

Until 1981 in Britain the seat belt debate in Parliament had become almost an annual event. It was a debate between the *defenders of life* and the *defenders of liberty*. The principal actors in these debates appear to have come from the cultural theory's central casting department. The defenders of life were played with great conviction by *hierarchical* actors, and the defenders of liberty with equal passion by *individualistic* actors.

The hierarchical actors believed that a law would save large numbers of lives, and prevent even larger numbers of injuries. Their belief was conveniently rounded to 1000 lives and 10,000 injuries a year. They argued that they had a duty to save people from themselves. If people were too ignorant, lazy or foolish to act in their own best interest, the state should intervene to ensure that they did. The hierarchical research establishment produced abundant evidence to support the belief.

The individualistic actors opposed legislation, but were heavily outnumbered. They had no supporting research organization and their campaigning support, such as it was, came largely from 'right-wing' organizations, such as the Institute for Economic Affairs. They were not opposed to the wearing of seat belts, they were opposed to the *compulsory* wearing of seat belts. They were supporters of law-and-order in so far as the law enforces contracts and protects private property, but they were opposed to criminalizing self-risk. Risk taking is after all an essential ingredient of the private enterprise system in which they believe. Their epithet for a government seeking to impose a seat belt law was 'the Nanny State'.

They did not challenge the accuracy of the official estimates of 1000 lives and 10,000 injuries a year to be saved, they dismissed them as irrelevant. They argued that once the state began to criminalize self-risk there would be no logical stopping point; it would have to pass laws prohibiting rock climbing, cycling, drinking, smoking and eating too many cream buns.

Fatalistic and egalitarian actors did not initially take much part in the debate. The former never engage in debate about such matters, because they cannot see the point.<sup>21</sup> The latter were indifferent, because they did not see an issue that interested them. They had no reason at the time to question the validity of the claimed life-saving benefits of a seat belt law, and the law did not challenge the egalitarian way of life in any obvious way.

However, once risk compensation became an issue and the validity of the statistical basis of the benefits was challenged, egalitarian actors began to get involved. Once it became apparent that the law might shift the burden of risk from the rich and powerful and well-protected – those in cars – to the poor and vulnerable – those on foot or bicycle – they began to see a cause worthy of their attention. Organizations like Friends of the Earth, the Pedestrians Association, and various cycling organizations began asking sceptical questions, and some came out in direct opposition to the law. Their scepticism and opposition was rendered ineffectual by their late entry into the debate. It was also undermined by the nature of the evidence available to them. Like the individualistic organizations, they lacked research and publicity resources with which to counter the stream of confident assertion about the benefits of the seat belt law emanating from the hierarchy, a stream that continues to the present day. The voting on the seat belt law found well-known left-wingers such as Michael Foot (egalitarian) and right-wingers such as Enoch Powell (individualistic) together in the opposition lobby.

## Cultural filters

The Hans Christian Andersen fable of the emperor's new clothes is a good description of the way a cultural filter works. The Emperor and all his courtiers and all his subjects – with one exception – participated in a grand conspiracy of self-delusion. With the help of a pair of dubious tailors they persuaded themselves of the exquisite textures and intricate patterns and beautiful colours and overall magnificence ... of something that had no objective existence. The fable suggests that once an idea – however preposterous – becomes accepted, and espoused, by established authority, it can become very difficult to dislodge. The idea becomes self-reinforcing. Authorities cite prior authorities, until the idea accumulates an authoritative pedigree. The idea acquires its own defence mechanism. Anyone incapable of seeing the Emperor's new clothes is 'unfit for his station, or unpardonably stupid'. The fact that large numbers of others believe the idea, can become sufficient reason for believing. After a while evidence is no longer required.

The evidence justifying the original seat belt law in Victoria initially seemed very convincing. Detailed studies of accidents, and experimental evidence with dummies, both supported the idea that *in an accident* a car occupant's chances of emerging unscathed would be dramatically improved by the wearing of a seat belt. The statistical evidence from Victoria, after its law was implemented, appeared to provide ample justification for compelling people to wear belts. The rising trend of 1960s in the numbers killed on the roads levelled off. The life-saving abilities of seat belt legislation became *fact*.

This fact became an integral part of the cultural filters of legislators all around the world, and became the basis of seat belt campaigns that culminated in the passage of laws in over 80 jurisdictions. In each country, a central plank in the case for a seat belt law was the list of other countries that had already passed one. As the list grew longer, the plank grew stronger. The failure of the countries following Australia's lead to replicate its life-saving success did not appear to matter. Cultural filters become more efficient the more they are used, and the belief in the law was so deeply entrenched that the disappointing statistical results did not present a serious challenge. The 'confounding variables'-theory was invoked to explain away the results; one influential and exasperated researcher said:<sup>22</sup> 'I just cannot accept that there is a sudden switch in driver behaviour just because the wearing of seat belts is made compulsory'. If one rules out the possibility of a behavioural change in response to the implementation of a safety measure, then any apparent lack of beneficial effect becomes evidence of the work of confounding variables: some other factor or factors *must* be at work masking the effect that you know to be there.

Pressure to conform can be intense. Norman Fowler, the British Secretary of State for Transport at the time, was publicly accused at a British Medical

Association conference of being 'an accessory to mass murder' for his opposition to the seat belt law. My research casting doubt on the claims for seat belt legislation was denounced in a Parliamentary debate by a succession of MPs as 'spurious', 'eccentric', 'preposterous' and 'bogus'.

Research into the subject arouses strong emotions for entirely honourable reasons. Most researchers would claim to strive to establish the truth from a position of detachment above the fray. But if researchers uncover a truth with implications for the well-being of the public, they may see it as their duty as citizens to pursue these implications into the realm of public policy. The fact that safety research involves matters of life and death creates a sense of urgency in both researchers and public policy campaigners. These are often one and the same, and, as a consequence, attitudes more appropriate to the latter sometimes intrude into the domain of the former.

Gatherings of road safety researchers tend to have an evangelical atmosphere. For example, in 1981, the American Association for Automotive Medicine and the Ontario Ministry of Transportation and Communications jointly sponsored a conference on seat belts.<sup>23</sup> The papers presented to the conference were 'scientific' papers, supposedly devoted to examining the effectiveness of methods of restraint and the medical significance of such methods. But the *purpose* of the conference, summarized in the conference agenda, was to highlight 'the need for physician commitment to influence public policy, research and education aimed at increased usage of occupant restraint devices'. In 1984 the American Association for Automotive Medicine, this time jointly with the Society of Automotive Engineers, sponsored another scientific symposium, entitled 'Advances in Seat Belt Restraint Systems'.<sup>24</sup> The chairman's foreword declared the symposium's purpose to be 'bringing recognition to the gravity of the crash injury problems and the benefits of seat belt use'. A second foreword by Lee Iacocca, president of Chrysler, declared that 'seat belts are the most effective device ever developed for saving lives and preventing injuries'. The leading scientific paper presented to the conference urged America to emulate Australia and make the wearing of belts compulsory, insisting that 'a simple act of political courage would save countless American lives in road crashes'. Although both conferences purported to consider scientific evidence about the efficacy of legislation, their real and publicly proclaimed purpose was to win adherents to their cause. Clearly, evidence casting doubt upon the wisdom of this cause would have been unwelcome at these conferences. No such evidence was presented; it was filtered out before the conference.

The atmosphere in which the research is conducted can be morally intimidating. Anyone, who cannot see the dramatic effects of road safety regulation, risks being labelled by the *American Journal of Public Health* (AJPH) as an 'ignorant nihilist', who is 'symptomatic of a sick society'.<sup>25</sup> Lord Underhill in the House of Lords debate on seat belts (11 June 1981) declared 'it would be terribly dangerous if credence were to be given to any arguments against the

benefit of wearing seat belts'. The danger that both Underhill and the editor of the *AJPH* feared was that if people had their faith in seat belts undermined, they might stop wearing them. Truth, it has been said, is the first casualty of war; such is the passionate conviction of some safety campaigners that their campaigns can become crusades. In crusades, heretics are not treated gently.

Such pressures can lead to a bias in the selection of the evidence that is published. Such a bias would seem to be the only way to reconcile the numerous small scale studies which appear to show a safety benefit following legislation, with the aggregate national statistics which do not. For example, one much cited study of casualty admissions to 16 hospitals in Sweden reported a decrease in admissions following the Swedish seat belt law of 29 per cent.<sup>26</sup> The fact that in Sweden as a whole, the number of deaths and injuries to car occupants *increased* after legislation indicates that it must have been possible to find other sets of hospitals, which showed an opposite result; but such a result is yet to be published.

Such selective pressures also appear to have been at work in the analyses of the effect of the British seat belt law that were presented to Parliament, before it voted to confirm the law in 1986. Why was the effect of the campaign against drinking and driving omitted entirely from the analyses? Why was all the credit for the drop in road accident casualties attributed to seat belts? At least part of the explanation may lie in the fact that the seat belt law was on trial, in a way that the drink-drive measures were not. The seat belt law had been passed for a trial three year-period and would have lapsed had it not been confirmed by Parliament. The proponents of seat belt legislation feared that an important life-saving measure might be lost.

Knowing that the publication of findings, which could undermine public confidence in a safety measure, is likely to invite the charge of dangerous irresponsibility, can lead to an editorial filtering of evidence. I have personal experience. In 1985 the Chief of Health Legislation for the World Health Organization commissioned me to write a review of the published analysis of the UK seat belt law for the WHO quarterly *International Digest of Health Legislation*. The contents of the review were a greatly abbreviated version of the story told above. The editor decided that it would be best if his readers remained in ignorance of the story. The review was rejected 'for editorial reasons', reasons upon which the editor declined to elaborate further. The editor was concerned that his publication should not be seen to be associated with the review in any way. I was told that the WHO 'would have no objection to the review being submitted by you for publication elsewhere, subject to the proviso that no mention is made of the fact that the review was commissioned and an honorarium paid by WHO'. Such pressure is also likely to encourage self-censorship by researchers in a way that can be misleading. Convictions often masquerade as statistical hypotheses. If a research finding is consistent with the researcher's expectations and supports the (seat belt)

campaign, he is likely to rush into print with the support of like-minded editors. Where a finding is contra-hypothesis, and would, if published, leave one open to charges of undermining public confidence in a measure believed to be effective, researchers are likely to scratch their heads and try again. The road safety literature is full of articles in which levels of statistical significance are dutifully reported. But what does it mean to say that some relationship is significant at, say, the 5 per cent level? It means that you might get a test statistic as large as the one you got by chance one time in twenty, even if there is no relationship between the variables tested. One in twenty is probably a very conservative estimate of the fraction of statistical tests done that actually get published; the mesh of the statistical/cultural filter through which most road safety studies must pass is almost certainly much finer.

## Introspection

The above history of the seat belt debate is the version of one of the participants. More suspect still, it is a version from the losing side, or at least up until now. Cultural theory exempts no one from bias. The complete detachment of the hermit is an ideal state of mind to which a researcher aspires, without hope of ever completely achieving it. Self-knowledge is more difficult than knowledge of others, or certainly feels so.

Research, policy and action in the field of road safety are all hierarchical monopolies, or nearly so. Government and government-funded researchers decide which statistics to collect, and do most of the collecting and analysis. They filter most of the available evidence. They are predisposed to the view that it is possible and desirable to intervene in human affairs to reduce risk. They expect their interventions to work, and they believe their successes can be measured by accident statistics. Having examined the evidence from a position of as much detachment as I can muster, I believe the case for seat belt legislation to be fatally flawed. I see gross distortions in the evidence that has passed through an extraordinarily efficient hierarchical filter – so efficient that it has persuaded majorities in most of the world's legislative assemblies to pass seat belt laws.

Am I biased? Yes, inevitably. The seat belt law offends my individualistic sensibilities; I see it as an unwarranted intrusion of state power into a realm that ought to remain the preserve of the individual. By shifting the burden of risk from those who are most powerful and best protected on to those who are weakest and most vulnerable, it offends my egalitarian instincts. But, perhaps most damning of all, it brings the hierarchy into disrepute. Far from curbing the depredations of the car, as its advocates maintain, it amplifies them. By its spectacular failure to deliver the safety benefits it promised, it has weakened the hierarchy's authority to act in areas that are its proper

domain. It must remain for the reader to decide whether my biases have undermined the validity of my argument.

## Notes

1. This is based on J. Adams, *Risk* (London: Routledge, 2001), chapter 7.
2. L. Evans, *Traffic Safety and the Driver* (New York: Van Nostrand Reinhold).
3. *Hansard* (22 March 1979).
4. G. Grime, *The Protection Afforded by Seatbelts* (Crowthorne, Berkshire: Transport and Road Research Laboratory, 1979), Research Report SR449.
5. P.M. Hurst, 'Compulsory Seat Belt Use: Further Inferences', *Accident Analysis and Prevention* (Vol. 11, 1979), pp. 27–33.
6. Royal Society for the Prevention of Accidents, *Seat Belt Sense* (Birmingham: RoSPA, 1981).
7. *Hansard* (13 January 1981).
8. US Department of Transportation, *Safety Belt Usage: Hearings before the Subcommittee on Investigations and Review* (Washington, DC: US Government Printing Office, 1978).
9. Grime, op. cit.
10. Evans, op. cit., p. 278.
11. Evans, op. cit., p. 378. In chapter 8 of my book *Risk*, op. cit., I discuss evidence from Evans' own research that undermines this contention.
12. J. Adams, *The Efficacy of Seat Belt Legislation: A Comparative Study of Road Accident Fatality Statistics from 18 Countries* (London: Geography Department, University College London, 1981).
13. J.E. Isles, *Seat Belt Savings: Implications of European Statistics* (London: Department of Transport, 1981).
14. W.H. Janssen, *The Effect of Seat Belt Legislation on Fatality Rates in a Number of West European Countries* (Soesterberg, Netherlands: TNO Institute for Perception, 1989), Report IZF 1989–13.
15. *Ibid.*
16. The experience with motorcycle helmet law has been similar to that with seat belts (see Adams 1995, chapter 8). For motorcyclists the only direct test, comparable to Janssen's with seat belts, of which I am aware was conducted in January 2003 by *Bike*, Britain's best selling motorcycle magazine. It undertook a modest test of the risk compensation hypothesis that compared the driving behaviour of riders with different levels of crash protection. The rules for the test were simple: 'ride as fast or as slow as feels comfortable in various states of dress, from full leathers, through jacket and jeans, to just underwear'. Their insurers did not allow them to coax readers to take part in the test, so it was conducted with four staff volunteers. They were timed over two courses: 1.7 miles on a 'sleepy B-road', and 0.8 miles in a town centre. Helmets were worn on all runs 'to stave off attention from the fuzz', a concern that clearly did not impinge on their speeds, as shown in the table below. Excessive speed is the principal cause of loss-of-control accidents. On the B-road, the average top speed in underpants was 29 per cent lower than the average top speed in full leathers. It is not possible to say whether the extra protection afforded by full leathers offset the added risk of having an accident and the higher impact speed, although it seems unlikely. But clearly the 'fully-protected' bikers posed an extra risk to other road users.



*Top speeds, in mph, reached with different levels of protection*

	B-road		Town	
	leathers	pants	leathers	pants
Steve	126	92	36	28
Hugo	115	84	38	27
Luke	124	105	35	29
Maria*	120	65	31	25

\* Maria wore pyjamas instead of underpants.

17. J. Broughton, and D.C. Stark, *The Effect of the 1983 Changes to the Law Relating to Drink/Driving* (Crowthorne, Berkshire, Transport and Road Research Laboratory, 1986), Report RR89.
18. A.C. Harvey, and J. Durbin, 'The Effect of Seat Belt Legislation on British Road Casualties: A Case Study in Structural Time Series Modelling', *Royal Statistical Society (A)* (Vol. 149, 1986), pp. 187–227.
19. R.J. Tunbridge, *The Long Term Effect of Seat Belt Legislation on Road Users' Injury Patterns* (Crowthorne, Berkshire: Transport and Road Research Laboratory, 1990), Report RR239.
20. J. Adams, 'Evaluating the Effectiveness of Road Safety Measures', *Town and Country Planning* (1988), pp. 344–52; and 407–12; M. Hillman, J. Adams and J. Whitelegg, *One False Move ... A Study of Children's Independent Mobility* (London: Policy Studies Institute, 1990).
21. The fatalists did receive some tongue-in-cheek support from the individualists. Ronald Bell, a Conservative Member of Parliament well known for his right-wing views, was one of the most persistent campaigners against the law. Citing the precedent of an earlier law that exempted turbaned Sikhs from the requirement to wear motorcycle helmets, he proposed a religious amendment to the seat belt bill exempting 'all Calvinists and other believers in predestination'.
22. M. Mackay. Quoted in 'Belt Report Slammed', *Motor* (March 1981).
23. AAAM, *International Symposium on Occupant Restraint* (Morton Grove, IL: American Association of Automotive Medicine, 1981).
24. SAE, *Advances in Seat Belt Restraint Systems: Design, Performance and Usage* (Detroit, MI: Society of Automotive Engineers, 1984).
25. A. Yankhauer, 'Deregulation and the Right to Life', *American Journal of Public Health* (Vol. 71, August 1981): 797–8.
26. J. Adams, 'The Efficacy of Seat Belt Legislation'. *Society of Automotive Engineers, Transactions* (1982), SAE Report 820819, pp. 2824–38.

# Part II

## Clumsy Solutions

Cultural theory, the *Nepali Times* helpfully explained to its readers on the 31 January 2003, is ‘a research tool used to interpret human behaviour in hierarchies and groups and applied to analyse the failures of everything from mountaineering expeditions to governments’. Well, yes, as we have just seen, it certainly explains a wide range of failures, but that is not *all* that it does. It also suggests how these various kinds of failure can be avoided, and that – the crafting of clumsy solutions (or, in some instances, stumbling into them serendipitously) – is the focus in this section. ‘Clumsy solutions’ can perhaps be most succinctly described as ‘creative combinations of governmental policies, business strategies and NGO activities that successfully resolve pressing social ills’. We predict that such solutions will tend to consist of all the four ways of organizing, perceiving and justifying social relations that we distinguish. In the first chapter of this book, we argue that there are three possible ways in which clumsy solutions can be found: (1) through peaceful and consensual deliberation among all stakeholders; (2) in a top-down, technocratic process in which experts and leaders carefully construct a clumsy course of action from the alternative plans proposed to them by adherents to all ways of organizing and perceiving; and (3) in an open competition between proponents of different ways of organizing and perceiving, with checks and balances ensuring that no camp gains the upper-hand for evermore. We also maintain that clumsy solutions can only be found in social settings that combine these alternative forms of decision-making. The five chapters that make up the second half of the book illustrate our claims. The chapter on how to abate the divisive and long-standing debate on gun control in the United States advocates a process of reasonable deliberation among equals. Another chapter describes an innovative method for parting the waters in California, which has – by and large – been devised by the regulatory water agencies involved. The new plans for flood compensation in eastern Hungary – detailed in yet another chapter – have been arrived at through following both these roads to clumsiness. These flood compensation plans have been shaped in a deliberative process among the

major stakeholders, which has itself been organized and guided by academic experts. Last, the chapter on the World Wide Web shows how clumsiness can be achieved through never-ending conflicts between organizations and people with very alternative views on how technology should develop and which purposes it should serve.

# 7

## Gunfight at the Consequentialist Corral: The Deadlock in the United States over Firearms Control, and How to Break it

*Dan M. Kahan, Donald Braman and John Gastil*

For most Americans, the ‘Great American Gun Debate’<sup>1</sup> is not particularly great.<sup>2</sup> The question of how strictly to regulate firearms has convulsed the national polity for the better part of four decades without producing results satisfactory to either side. Drowning in a sea of mind-numbing statistics, ordinary citizens stand little chance of even understanding their opponents’ arguments, much less being persuaded by them. Battered by pro-control forces in one election, and by anti-control ones in the next, moderate politicians say as little as they can get away with. The organizers of relatively extreme interest groups, in contrast, say – indeed, scream – as much as they possibly can, symbiotically nurturing a divided public’s anxiety that one side or the other is poised to score a decisive victory.

Our goal in this chapter is to diagnose the pathologies that afflict the American gun debate and to prescribe a possible cure. That debate, we argue, has been disfigured by two prominent misconceptions, one relating to what the gun debate is fundamentally about, and the other relating to how citizens of a liberal democracy should talk to each other when they are divided on fundamental values. Overcoming these misconceptions almost certainly will not dispel Americans’ differences of opinion on guns. But it will go a long way to making the public discussion on this issue in the United States into one that honours rather than mocks the pretension to be a well-functioning deliberative democracy.

So what *is* the gun debate about? If one peruses academic journals or tunes in to the debates that pervade legislative chambers in America, the gun debate appears to hinge on a narrow factual question: whether more guns make society less safe or more. Control supporters, we are told, believe that the ready availability of guns *diminishes* public safety by facilitating violent crimes and accidental shootings; opponents, that such availability *enhances* public safety by enabling potential crime victims to ward off violent predation.

Hoping to settle this disagreement, social scientists employ a wide array of empirical methods – multivariate regression models, contingent valuation studies, public-health risk factor analyses – to investigate these conflicting claims.<sup>3</sup> But so long as only statistics continue to fund the parties' arguments, the gun debate, we believe, will remain bankrupt. Purely instrumental arguments lack the power to persuade, because they ignore what really motivates individuals to favour or oppose gun control – namely, their preferred ways of organizing, perceiving and justifying social relations. We argue that only after these have been openly acknowledged and taken into account, will people be open to considering the empirical arguments advanced by other contenders in the debate, and will compromise – or even synthesis – become possible.

Their prominent (and, in many respects, fabled) role in American history imbues guns with a surfeit of social meanings. For one segment of American society, guns symbolize honour, human mastery over nature, and individual self-sufficiency. By opposing gun control, individuals affirm the value of these meanings and the vision of the good society that they construct. For another segment of American society, however, guns connote something else: the perpetuation of illicit social hierarchies, the elevation of force over reason, and the expression of collective indifference to the well-being of strangers. These individuals instinctively support gun control as a means of repudiating these significations and of promoting an alternative vision of the good society that features equality, social solidarity, and civilized non-aggression. These competing moral visions, we argue, are what drive the gun control debate. They are what dispose individuals to find certain empirically grounded public-safety arguments more convincing than others. Indeed, the meanings that guns and gun control express are sufficient to justify most individuals' positions on gun control independent of their beliefs about guns and safety. It follows that meaningful debate on gun control is only possible, when it explicitly addresses whether and how the underlying cultural visions at stake should be embodied in American law.

So why is not *that* what the protagonists in the mainstream academic and political debate are talking about? The answer is that they adhere to a common understanding – we intend to argue misunderstanding – about the inappropriateness of injecting partisan values into democratic deliberations. Liberal norms are often thought to enjoin the state from imposing a cultural or moral orthodoxy. From this premise, it is said to follow that citizens and their representatives should avoid morally partisan stance-taking when debating public issues, and instead frame their arguments in terms accessible to individuals of diverse normative persuasions. The prevention of physical harm seems morally ecumenical in this way. That is why most citizens are moved to speak in the empirical, consequentialist idiom of public safety, even though instrumental arguments conceal the normative foundations of their views towards guns.

The problem with this strategy for minimizing conflict, however, is that it does not always work. In the case of the gun debate, it clearly has not. After decades of an intense verbal contest fought with highly sophisticated statistical technology, the contest is still undecided – leaving all contenders, and observers, in the gun control debate thoroughly dissatisfied. Consequentialism as a liberal discourse strategy has prevented the moderate majority in the gun control debate from expressing their underlying world views and normative stances. As a result, the ideological debate over gun control has come to be documented by moral zealots, thereby exaggerating each side's perception that the other side is bent on ideological domination.

So what is to be done? The solution that we defend is the construction of a new vocabulary for the gun control debate. Rather than conceal their normative commitments or assault one another with them, the moderate middle should address their competing moral visions in meaningful, yet respectful, terms. Enabled to talk to each other in this way, the more moderate and normatively pluralistic majority will displace the imperialists and steer the gun control debate down a clumsier and more productive path.

We present our argument in three parts. First, we use the theory of socio-cultural viability to explain why empirical arguments alone lack the power to resolve the gun debate. Thereafter, we connect the dominant, consequentialist framing of the gun debate to liberal discourse norms, which, far from dispelling social conflict over guns paradoxically serve to entrench it. Finally, we show how a clumsy form of deliberation, one in which the normative underpinnings of public policy are embraced rather than elided and suppressed, might be used to break the impasse in the American gun debate.

## **The futility of consequentialism**

To identify the types of information and the types of political procedures that are most likely to generate consensus on gun control in America, it is necessary to figure out who fears guns, who fears gun control and why they do so. The theory of socio-cultural viability (or cultural theory) supplies a methodological framework for investigating these issues. The conclusion that such an investigation generates, moreover, is that the American gun debate cannot be resolved by the mere amassing of empirical data on the consequences of private gun ownership or various types of gun control. We begin by spelling out the implications of cultural theory for our understanding of how people perceive risks, and then use the theory to examine the American gun debate.

### **Risk and culture**

Experts have traditionally advocated basing risk regulation on narrowly consequentialist measures of environmental and industrial hazards. Techniques, such as 'cost-benefit analysis' and 'comparative risk assessment', rank

hazards according to a uniform expected-utility metric. The policies they generate are defended as superior to any based directly on public risk perceptions, the unruly character of which is attributed to the public's lack of information about the hazards posed by various technologies and to cognitive limitations that distort laypersons' processing of such information.<sup>4</sup>

The inadequacies of this approach to risk regulation, however, are well known and, by this point, largely accepted even by many expert regulators.<sup>5</sup> The gap between various objective measures of risk and public perceptions of the same is not entirely (or even largely) a consequence of imperfect information or cognitive defects, but rather a reflection of the diverse social meanings that ordinary citizens attach to risk. As a host of disciplines have taught us, individuals do not have generic attitudes towards risky activities; rather they evaluate them according to context-specific norms that determine what risk-taking connotes about their values and attitudes.<sup>6</sup> Nowadays smoking, at least for some, conveys an irresponsible disregard for the future and a contemptible weakness of will, whereas mountain climbing conveys for many a laudable attainment of physical discipline and courage.<sup>7</sup> It would be morally obtuse to expect individuals to evaluate the desirability these activities solely according to their respective health risks, without taking into account the value that they attach to their distinctive social meanings. Quite how we then evaluate smoking mountain climbers, of whom there are many, is somewhat problematical. Stock expressions, such as 'no one's perfect', or 'there's good and bad in all of us', are useful.

The same holds true for public risk regulation. Many citizens tend to view nuclear waste disposal and global warming with alarm, not just because they pose risks of a particular magnitude, but because running these risks (however small) conveys a host of undesirable meanings – of collective hubris, of generational selfishness, of disrespect for the sacredness of nature.<sup>8</sup> It would thus be morally obtuse for regulators to attempt to evaluate these risks relative to those associated, say, with recreational swimming (which regulators tend to view as much more serious<sup>9</sup>) without taking account of what citizens think the acceptance of the former says about their society's values and attitudes.<sup>10</sup> Of course, what societal attitudes the law should express is often a matter of dispute. And that is exactly why risk regulation so often becomes the site of intense political conflict.

The best account of such conflict (as has already been argued in Chapter 6 with respect to safety seat belts in cars) is supplied by the theory of socio-cultural viability.<sup>11</sup> The selection of certain risks for attention, and the disregard of others, the theory predicts, will reflect and reinforce the world views that are part and parcel of the various ways of organizing social relations. Thus, by virtue of its commitment to the fair distribution of resources, the egalitarian perspective is predictably sensitive to environmental and industrial risks, the minimization of which reinforces demand for the regulation of the commercial activities that generate disparities in wealth and status.

In contrast, the individualistic rationale, precisely because it is dedicated to the autonomy of markets and other private orderings, tends to portray environmental risks as low – as often does the hierarchical view (though not always – e.g. passive smoking), which puts trust in the competence of authorities to solve society's problems. The hierarchical and individualistic perspectives come with their own distinctive anxieties – of the dangers of social deviance, the risks of foreign invasion, or the fragility of economic institutions – which, predictably, are dismissed by those who tap into the egalitarian view.<sup>12</sup> Empirical testing (as we will see in a moment) suggests that preferred ways of organizing, characterized in this way, more powerfully predict individual attitudes towards risk than myriad other influences, including education, personality type and political orientation.

Cultural theory not only explains why risk regulation so often generates political disputes, but also why consequentialist modes of decision-making are often powerless to solve them. No amount of expected utility analysis can tell us which particular vision of the good society – the egalitarian, the hierarchical or individualistic – to prefer. When commitments to ways of life figure explicitly into appraisals of societal dangers – 'better dead than red!' – culture-effacing modes of risk-assessment and decision-making will simply miss the normative point.

### **Gun risks and culture**

The consequentialist version of the gun debate is naturally framed as one between two competing risk claims: that insufficient gun control will expose too many innocent persons to deliberate or accidental shootings; and that excessive gun control will render too many law-abiding citizens vulnerable to violent predation. Insofar as the four ways of organizing explain who fears what sorts of societal risks in general, it stands to reason that they will also explain who takes which of these gun risks more seriously.

Various forms of public opinion data along with ethnographic, historical and journalist accounts of the gun debate all support this hypothesis. Celebrated for their contributions to securing American independence and taming the American frontier, guns (at least for some) resonate as symbols of 'freedom' and 'self-reliance', associations that make opposition to gun control cohere with an individualistic orientation. Guns are also pieces of equipment integral to traditional male roles – father, hunter, protector – and badges of authority for institutions like the military and the police. These social functions imbue guns with connotations of 'honour', 'courage', 'obedience to authority', and 'patriotism', virtues distinctive of a hierarchical outlook.<sup>13</sup>

Aversion to guns and support for control, in contrast, cohere naturally with more egalitarian and communitarian world views. Precisely because they help to construct traditionally male roles and virtues, guns are often equated with a hypermasculine or 'macho' personal style that many



individuals, male as well as female, resent.<sup>14</sup> This egalitarian aversion is reinforced by the association of guns with the assassination of Martin Luther King Jr and resistance to civil rights generally in the modern era,<sup>15</sup> and with social and legal controls that, in earlier times, made the possession of guns 'an important symbol of white male status'.<sup>16</sup> And while control opponents see guns as celebrating individual self-sufficiency, control supporters see them as denigrating solidarity: 'Every handgun owned in America is an implicit declaration of war on one's neighbour. When the chips are down, its owner says, he will not trust any other arbiter but force personally wielded.'<sup>17</sup>

We have confirmed the fit between the four ways of organizing and perceiving social relations and gun control attitudes with independent research.<sup>18</sup> Using data from the General Social Survey and the National Election Survey – the premier social science surveys of American public opinion – we constructed scales for measuring individual preferences for organizing and perceiving social relations. We then constructed regression models for each data set to test the influence of these orientations on people's attitudes towards gun control. The relationship between preferred ways of life and gun control attitudes was statistically significant and consistent with our prediction in both studies: that is, the more hierarchical and individualistic individuals were in their orientations, the more they opposed control; and the more egalitarian and solidaristic they were, the more they supported it.

Even more impressively, the measures for preferred ways of life, when combined, had a bigger impact on gun control attitudes than did any other individual characteristic. Indeed, in the General Social Survey regression, these measures subsumed many of the strongest demographic predictors of gun control attitudes altogether: after controlling for social orientations, there was no longer any difference in the attitudes of whites and blacks, southerners and northerners, or urbanites and country dwellers. The results in the National Election Survey model were similarly striking.

## **The futility of liberal circumspection**

At least some participants in the gun control debate, of course, *do* frame their appeals in explicitly normative terms. These individuals speak not in the technical, detached language of statistics, but in the fiery, assaultive idiom of expressive condemnation.<sup>19</sup> Control partisans ridicule their adversaries as 'hicksville cowboy[s]', members of the 'big belt buckle crowd'<sup>20</sup> whose love of guns stems from their 'macho Freudian hang ups',<sup>21</sup> while Charlton Heston, President of the National Rifle Association (NRA) declares 'cultural war' against 'blue blooded elitists' who threaten an 'America ... where you [can] ... be white without feeling guilty, [and] own a gun without shame'.<sup>22</sup>

Most citizens undoubtedly find this culturally chauvinistic style of debate exceedingly unpleasant. Indeed, it is precisely the judgmental tone of

expressive condemnation, we believe, that explains the appeal of empirical, public safety arguments in the mainstream gun debate. American political life is heavily influenced by liberal discourse norms, which direct those engaged in public debates to disclaim reliance on contested visions of the good life and instead base arguments on grounds acceptable to citizens of diverse moral outlooks.<sup>23</sup> Consequentialist modes of decision-making seem to satisfy this standard. Furnishing apparently 'objective procedures and criteria' for policy making, econometrics, cost-benefit analyses, contingent valuation studies and the like are 'decidedly divorced from statements about morality'.<sup>24</sup> Because they elide contestable judgments of value, instrumental arguments are the 'do not ask, do not tell' solution to normative disputes in the law – not just over gun control, but over policies like the death penalty, hate crimes, welfare reform, environmental regulation and a host of other controversial policies.<sup>25</sup>

If this sort of indirection were an *effective* strategy for suppressing attempts at moral domination in law, it might be prudent to assent to the continued centrality of public safety arguments in the gun debate, notwithstanding – indeed, exactly because of their remoteness from the moral cleavages that really divide Americans on this issue. But the hope that the gun control debate can be made less contentious by confining it to empirical arguments is in fact naïve, and for two reasons. It is naïve, first, because it misapprehends the psychological interdependence of factual beliefs and values. As cultural theory illustrates, what individuals accept as truth cannot be divorced from their preferred ways of organizing and justifying social relations (their social and moral orientations). Our knowledge of all manner of fact – that men landed on the moon in 1969; that Andrew Wiles solved Fermat's Last Theorem; that the paternity of a baby can be determined from a DNA test – derives not from first-hand observation, but from what we are told by those whose authority we trust. Whom we regard as worthy of such trust (religious leaders or scientists at major research universities; Rush Limbaugh or the editors of the *New York Times*) is governed by norms that we have been socialized to accept. For this reason, factual disagreement can be ripe with political and cultural conflict. If you insist that I am wrong to believe that the Holocaust took place, or that God created the world, you obviously are not reporting that your sensory experience differs from mine; you are telling me that you *reject* the authority of institutions and persons I am morally impelled to defer to. And for that reason, I might well decide not merely that you are misinformed, but that you are evil.<sup>26</sup>

Because the facts that individuals accept about gun control bear exactly this relationship with their preferred ways of organizing and perceiving, there is little reason to think that recourse to empirical data can shield us from the conflict generated by clashing world views. Indeed, it seems quite obvious that it has not. Indeed, commentators debating the 'facts' engage in no less recrimination and name-calling than do activists who explicitly see

gun control as part of a 'culture war'.<sup>27</sup> While predictably failing to change anyone's mind, empirical analyses *do* reinforce the conviction of those who already accept their conclusions that a rational and just assessment of the facts *must* support their position. The disagreement is then no longer seen as a reflection of differing visions of the good society, but an ethical battle over acceptance of an indisputable, objective truth. Instead of challenging one another's world views, those who continue the debate simply challenge one another's honesty and integrity.<sup>28</sup>

Second, the hope that consequentialism will quieten social conflict misunderstands the strategic and psychological dynamics of political discourse. Most Americans are not moral imperialists, but as the gun debate starkly illustrates, at least some are. For them, the liberal injunction against public moralizing lacks any constraining force. By speaking in the muted tones of public safety in a (vain) effort to avoid giving offence, moderate commentators, politicians and citizens cede the rhetorical stage to these expressive zealots, who happily seize on the gun debate as an opportunity to deride their adversaries and stigmatize them as deviants.<sup>29</sup> No matter how obnoxious these normative extremists might seem, moreover, their messages cannot be easily ignored. Their language, however intolerant, resonates much more deeply with the social meanings of guns and gun control than do the statistics and the equations, the graphs and the figures of the mainstream empirical debate. The special attention that these moral zealots command, moreover, reinforces the perception of citizens on each side that they are facing an unreasonable and unreasoning adversary who is bent on normative domination. Accordingly, so long as the zealots are the only ones with anything pertinent to say, the gun debate will remain divisive and unproductive.

In order to civilize the gun debate, then, *moderate* citizens – the ones who are repulsed by moral imperialism of all varieties – must come out from behind the cover of consequentialism, and talk through their competing visions of the good life without embarrassment. They must, in the spirit of genuine democratic deliberation, appeal to one another for understanding, and seek policies that accommodate their respective world views. An open debate about the social meanings the law should express is not just the only *philosophically cogent* way to resolve the gun debate; it is also the only *practical* way to resolve it in terms that embody an appropriate dedication to political pluralism.

## Expressive pluralism and the gun debate

### Three principles

Our critique of the terms in which the American gun debate is carried out presupposes that expressive debate in law can be simultaneously pertinent

and tolerant. The liberal anxiety that it can not be – that the only way to avert ‘the domination of one cultural and moral ethos over all others’<sup>30</sup> is to cleanse public discourse of appeals to contested cultural views altogether – is far too pessimistic. Anthropologists, sociologists and comparative law scholars have in fact catalogued many examples of communities successfully negotiating culture-infused controversies – for instance, ones between archaeologists and Native Americans over the disposition of tribal artefacts;<sup>31</sup> and between the supporters and opponents of abortion rights in France and Germany.<sup>32</sup> These success stories suggest three important principles that should guide deliberations over highly divisive and deadlocked political issues. One can be called *social-meaning over-determination*. The best way to make normative conflict recede is not to drain it of social meaning (through, for example, the seemingly ‘neutral’ idiom of empirical social-science methods),<sup>33</sup> but rather to make it so abundantly rich in meanings that members of all cultural groups can simultaneously find their values and hence their identities affirmed by it.<sup>34</sup> The second principle is *identity vouching*. Individuals with different social orientations can be persuaded to accept a middle-ground solution on a highly divisive issue, when figures who share their preferred ways of organizing, and whose commitment to it are beyond question, assure them that the compromise is acceptable. Because individuals look to those whom they trust to tell them what claims they should credit, the identity of the messenger matters at least as much as the content of the message.<sup>35</sup>

Finally, the cultural-dispute-resolution literature suggests the importance of *discourse sequencing*. Parties to normatively grounded political conflict often do converge, ultimately, on instrumental policies supported by empirical data and methods. They do so, however, only after they have first devised expressive policies that satisfy the criterion of social meaning over-determination and that are vouched for by those whom they trust.<sup>36</sup> Once such policies dispel each side’s apprehension that the other is poised to score a decisive moral victory, members of competing groups become more receptive to factual claims and data, which they otherwise would have dismissed as the product of bad faith. Ironically, expressive politics turn out to be the midwife of sound instrumental policymaking!<sup>37</sup> To make these principles more concrete, we first describe how they operated in several success stories. We then suggest how they might profitably be applied to the American gun debate.

## Two stories

### *Disposition of native American artefacts: NAGPRA*

Disputes frequently arise between the indigenous peoples in the Americas and the nations that now claim their ancestral territory as sovereign. While there are numerous examples of conflict and resolution in this context,<sup>38</sup>

the dispute over the repatriation of Native American remains and artefacts is perhaps the most prominent in recent US history. The materials in question are extensive. Museums and universities currently hold hundreds of thousands of Native American human remains and millions of Native American cultural objects. Members of the scientific and curatorial communities who work with these materials view archaeological artefacts and remains as invaluable resources for research and education, analogizing them with the rarest of books written 'in a language that we are only beginning to understand'.<sup>39</sup> Because much of our knowledge of human evolution and North American history would simply not exist without these materials, researchers and educators view their preservation as both a professional duty and a public trust.<sup>40</sup> It is a humanistic vision of objective scientific research and universal social benefit.

Many Native Americans, however, view these same materials quite differently.<sup>41</sup> Their ancestral objects and remains had not simply been 'disinterred' for study, they felt, but torn from their rightful place in the web of life with the potential, as one member of the Pawnee tribe put it, to 'wreak havoc among the living, bringing sickness, emotional distress and even death'.<sup>42</sup> Further, because many of the materials now in museums and research collections were obtained during or after native populations were forcibly (and often violently) removed from their traditional homelands, their excavation and study is strongly associated with the oppression of native populations over the centuries.

During the 1970s and 1980s, as tribes became more aware of both the extent of existing material collections and the methods employed in contemporary research, they began demanding that researchers repatriate many items to tribes for ritual reburial. The public exchanges between the tribes and researchers during this period are reminiscent of those between protagonists in the debates over gun control and abortion, with disputants presenting arguments that appear coherent to those who share their world view but which often seem unintelligible or offensive to those who do not.<sup>43</sup>

As a number of archaeologists and Native Americans openly acknowledged, at issue was not simply the disposition of the cultural objects and remains, but what the outcome would *say* about the status of the world views of the parties involved. Laws mandating repatriation mattered, wrote one archaeologist, because they represented 'a serious and sustained assault [on] the world view of western science'.<sup>44</sup> The concerns of Native Americans mirrored those of scientists, as they wondered whether science and archaeology would be used to denigrate and dehumanize Native Americans as it had in the past.<sup>45</sup>

As in the gun debate, moreover, parties interested in resolving the debate (mainly archaeologists and museum curators) attempted to sidestep the clash over world views by framing their arguments in consequentialist terms. In congressional hearings and other fora,<sup>46</sup> they argued that permitting libraries

and museums to retain the artefacts could secure the interests of both the scientists, who would be able to continue studying them, and the Native American tribes, which would be assured the preservation of artefacts integral to their cultural heritage. This reasoning did nothing to quell the controversy. Looking back, one participant in the legislative debates recalled that neither side 'had the ability to let down their respective guards and work together'.<sup>47</sup>

At an impasse, representatives of the respective communities held two sets of meetings to discuss possibilities for compromise. The first was the 1989 World Archaeological Congress, at which archaeologists and indigenous peoples from around the world endorsed what became known as the Vermillion Accord.<sup>48</sup> While the Accord was almost purely symbolic,<sup>49</sup> the effect was nevertheless substantial. Many saw it as the first public expression of mutual respect between native peoples and scientists over this issue. To their surprise, many representatives of indigenous populations who had previously viewed archaeology as 'anti-Indian'<sup>50</sup> found archaeologists and curators speaking respectfully about Native American concerns.<sup>51</sup> Archaeologists and museum curators found that, similarly, many from indigenous communities could be sensitive to the loss that broad repatriation could impose on the scientific community.<sup>52</sup>

The second set of meetings was held by the Panel for a National Dialogue on Museum/Native American Relations over the course of the same year.<sup>53</sup> The panel consisted of six representatives of Native American interests, and six representatives of museum and archaeological research interests.<sup>54</sup> All were trusted and prominent members of their respective communities.<sup>55</sup> The Panel's report, written after nearly a year of meetings and deliberations, begins by setting forth general principles that describe and affirm the values of both Native Americans and the scientific community.<sup>56</sup> It 'recognizes the value of historic and scientific research and public education',<sup>57</sup> while affirming that such activities should be undertaken without violating 'the rights of Native American nations and people';<sup>58</sup> it states both that '[e]ducating the public about past cultures and societies is inherently worthwhile'<sup>59</sup> and that '[h]uman remains must at all times be accorded dignity and respect'.<sup>60</sup> The panellists also developed a number of policy recommendations.<sup>61</sup>

Using the panel's report as a guide, Congress quickly drafted and passed the Native American Graves Protection and Repatriation Act (NAGPRA). NAGPRA asserts tribal ownership and control over remains and 'items of cultural patrimony' found on federal and tribal lands.<sup>62</sup> Under the Act, federally funded institutions were required to provide inventories of their Native American collections to a federal clearing house for review by tribes and the public. Where tribes demonstrate cultural affiliation and request repatriation, the Act requires these institutions to return the items in question.<sup>63</sup> However, when an item is 'indispensable for completion of a

specific scientific study, the outcome of which would be of major benefit to the United States,' the Act holds that repatriation may be delayed until the study is completed. The Act also establishes a voluntary review process that would allow for a negotiated settlement to any disputes that might arise.<sup>64</sup>

While not perfect,<sup>65</sup> NAGPRA has succeeded in that it is regularly praised and explicitly supported not only by the National Congress of American Indians and the Native American Rights Fund, but also by the Society for American Archaeology and the American Association of Museums.<sup>66</sup> Little over a decade after its passage, the compromise legislation has both considerably improved relations between Native Americans, anthropologists and museums and dramatically expanded the scope and quality of empirical research being undertaken.

Moreover, since the passage of the act, tribes, museums and archaeologists have entered into hundreds of cooperative agreements, many not required by law.<sup>67</sup> And while prior to NAGPRA there were accounts of Native Americans who studied archaeology being ostracized,<sup>68</sup> the last decade has seen a dramatic increase in interest in archaeological methods and findings by tribes, and the establishment of successful and popular programmes to train Native Americans in archaeological methods.<sup>69</sup> NAGPRA, as one observer noted, has 'sparked more analysis of human remains and funerary objects in [its first] eight years than was done in the [previous] 100'.<sup>70</sup>

The success of NAGPRA, we believe, reflects all three principles of successful dispute resolution. First, the diverse provisions of the Act symbolically affirm the world views of both sides, satisfying the principle of social meaning overdetermination. Because the law gives tribes the authority to grant or withhold consent, NAGPRA recognizes tribal sovereignty and manifests respect for their claim that such remains must be handled with the dignity that attends their spiritual significance. Indeed, against the background of these provisions, most tribes have proven perfectly willing to *agree* to continued institutional custody of tribal artefacts and remains. At the same time, by setting up a procedure for obtaining custody of the artefacts with consent, and for memorializing findings when consent is withheld, the law affirms the archaeologists' allegiance to a scientific style founded on humanist and enlightenment values.<sup>71</sup> In the context of the respect for the scientific community expressed in these measures, the cataloguing of collections, a task that might be considered onerous and demeaning, is instead viewed as an expression of valued craft norms.<sup>72</sup>

Second, NAGPRA illustrates the efficacy of identity vouching. The principles endorsed in Vermillion Accord, and the proposals formulated by the Panel for a National Dialogue on Museum/Native American Relations were not intrinsically more coherent or penetrating than compromises that had been proposed earlier by interested parties. What gave *these* understandings the power to break the impasse over the artefacts was the identity of their sponsors. The role of prominent scholars and Museum curators in devising

NAGPRA's procedures assured archaeologists and anthropologists that the Act, despite its recognition of tribal rights, was not hostile to their claim to be recognized as involved in valuable scientific research. The participation of tribal leaders who previously had been instrumental in fighting for repatriation likewise assured Native Americans that the Act, despite its protections for scientists, respected Native Americans' ideals and norms. Moreover, NAGPRA works, at least in part, because Native American archaeologists are themselves involved in administering its procedures. Native Americans are much more likely to accept the claim that scientific study of tribal remains is consistent with Native American values when archaeologists who personally hold those values assert it.

Finally, the success of NAGPRA illustrates the principle of discourse sequencing. NAGPRA has in effect made both scientists and Native Americans better off in a purely consequentialist sense. Rather than insist on repatriation, Native American tribes typically assent to continued institutional custody over remains and artefacts on conditions that they believe assure their interests in memorializing tribal heritage. Museums and scholars have not lost access to these materials, as they were at risk of doing before NAGPRA. Indeed, they have obtained even more thoroughgoing access to them as more and more tribes have joined in scientific efforts to find such artefacts and secure them from destruction.

Even before NAGPRA was enacted, many museum curators and scholars had argued that permitting continuing custody of Native American artefacts could simultaneously advance the interests of scientists in studying them, and of Native Americans in memorializing their heritage. But that argument was not accepted – indeed, it was not even seriously entertained – until *after* the enactment of NAGPRA created a climate in which both sides could see such agreements as congenial, rather than hostile, to their moral orientations and world views.

### *Abortion: The French solution*

The struggle over abortion laws in the United States is a paradigmatic conflict between people adhering to different ways of organizing, perceiving and justifying social relations. What citizens believe about abortion – that it is an 'unnatural and threatening manipulation of the human body',<sup>73</sup> 'a question of equality',<sup>74</sup> an 'abomination',<sup>75</sup> a 'private act',<sup>76</sup> 'murder',<sup>77</sup> a 'fundamental right',<sup>78</sup> 'selfish',<sup>79</sup> 'about freedom',<sup>80</sup> 'about life'<sup>81</sup> and so on – reflects competing understandings of nature, of personal virtue and of the just society. What position the *law* takes on the issue is understood by both sides to embody a judgment about the moral truth of these competing visions, and about the relative social status of those who subscribe to them.<sup>82</sup>

The same used to be true in France, where the abortion issue had for decades provoked intense controversy between citizens committed to conflicting norms and ideals. But this changed when, in 1975, France enacted a



law that Mary Ann Glendon characterizes as establishing a regime of abortion 'for a reason'.<sup>83</sup> A woman may have an abortion under French law during the first 10 weeks of pregnancy, but only if she certifies that the procedure is necessitated by personal 'distress' or 'emergency' sufficient to overcome the foetus' 'right to life'. The conditions that constitute 'distress' and 'emergency' are not defined by the law; nor is any state agent authorized to second-guess the woman's certification that such a condition exists. After a woman certifies that she is facing personal distress or emergency, however, she must wait one week before undergoing an abortion, during which time she is counselled about the sources of state support available to her, should she decide to forego the procedure and have her child. Since the enactment of that law, the controversy over abortion in France has largely abated.

The primary reason the French law overcame the policy impasse is that 'abortion for a reason' satisfies the principle of social meaning over-determination. Because no authority looks behind the individual woman's certification of emergency, those who support abortion rights can see the law as affirming personal autonomy. Yet because the law *does require* such certification, it also affirms the moral view of those who see foetal life as having intrinsic moral worth, and who consequently see 'abortion on demand' as a denigration of the sacred value of life. This interpretation of the law is reinforced by its explicit textual recognition of the foetus' 'right to life', by a statutory injunction against 'voluntary termination of pregnancy ... [as] a means of birth control',<sup>84</sup> and by the waiting period and counselling provision – all of which reinforce the message that the decision to abort is not just a matter of personal choice, but a matter of serious moral concern for the entire community. The French abortion law, Glendon argues, thus achieves a symbolically rich compromise that is 'more than the sum of its parts'.<sup>85</sup> By including in the legislation provisions affirming concern for foetal life, women's liberty and maternal health, the French legislature made it possible for both opponents and supporters of abortion to find evidence that the state respects their identities.<sup>86</sup>

The success of social-meaning over-determination in quietening the French abortion controversy illustrates an important principle about the political economy of highly divisive political conflicts. Despite appearances, such controversies are not typically zero-sum games. Most citizens are not moral extremists. They are satisfied as long as they know that the law respects their social orientations and world views; they do not insist in addition that it should reject other people's orientations and world views. Despite appearances, then, most conflicts are not zero-sum games, where one side's interest can be realized only at the expense of the other. Indeed, the only reason that such controversies appear to be zero-sum games is that moderates adhere too readily to the liberal prohibition against normatively transparent discourse, and thus allow the public debate to be dominated by

zealots, who *do* aspire to make the law compatible with only one world view.<sup>87</sup> More meanings, not fewer, are essential to resolving moral disputes.

France's solution to its abortion controversy also demonstrates the workings of discourse sequencing. Since the enactment of the law, broad consensus has emerged for both state-sponsored birth control and state-sponsored support services for single and indigent mothers. Even before the 1975 law, abortion rights activists had advocated such policies as a means for reducing *demand* for abortions. Abortion opponents resisted these proposals, however, because the threat that the abortion rights movement posed to their social orientations and world views, made them distrust the intentions of those who advocated such policies, and hence doubt the credibility of the empirical evidence that these policies would in fact *reduce* abortion. Once the 1975 law had eased their deeper anxieties, however, abortion opponents relaxed their opposition. And it turned out that these policies worked exactly as their advocates had predicted.<sup>88</sup> So today, even though abortion is effectively easier to obtain in France than in the United States, the abortion *rate* is much lower in France than it is in America.

In other words, there was a consequentialist or utilitarian solution to the social conflict in France, but the parties could not see it, and implement it, *until after* they had constructed a pertinent, yet respectful, expressive idiom for reconciling their competing demands for affirmation.

### *The gun debate*

We believe the same principles that were used to resolve the disputes over abortion in France and Native American tribal artefacts in the United States can be used to treat the pathologies that afflict the American gun debate. We do not want to be understood, however, to be arguing that one can derive or deduce a clumsy solution to the American gun controversy from these principles simply by thinking hard about the problem. What sort of policies fit the demands of social meaning over-determination; who the qualified identity vouchers are and how they can be enlisted to support expressively over-determined policies; what kinds of instrumental regulations are likely to emerge from an appropriately sequenced gun debate – all will necessarily be shaped through real-world political activity. Indeed, more important than guessing what these three principles might entail is to identify the *democratic deliberative procedures* most likely to make them operative in the American gun debate. But to motivate the task of formulating and implementing such procedures, we conclude by offering an imaginative preview of the clumsy outcomes that an expressively pluralistic gun debate might yield.<sup>89</sup>

We would suggest consideration of two possible gun policies that satisfy the social-meaning over-determination principle. The first can be called the 'big trade'. In exchange for control proponents acknowledging that the Second Amendment creates a genuine individual right to gun ownership, control opponents should assent to universal registration of hand guns.

In isolation, each of these policies resonates with normative imperialism. To control advocates, the individual rights conception of the Second Amendment glorifies individualism and militarism. To control opponents, hand-gun registration is a device for stigmatizing their behaviour as deviant, and portends a total ban on handgun ownership. But when these policies are combined, their meanings change. Because they can see that gun owners, through registration, are submitting to society's claim to regulate their activity in the interest of the common good, control advocates need no longer see acceptance of an individual-rights conception of the Second Amendment as repudiating social solidarity.

Likewise, when they see that society recognizes their individual right to own a gun, gun owners are assured that acquiescing in registration will not lead to an ultimate dispossession of their weapons. In addition, because the law recognizes that gun ownership is an individual right, registration need no longer be seen as connoting moral deviancy. Instead, it can be conceptualized as symbolizing the exercise of civic duty and personal responsibility, values that cohere with gun owners' own way of life. Indeed, this connotation has historical antecedents that should be especially congenial to those who adhere to hierarchy as well as those who favour individualism: during the founding era, state militias consisted of all registered voters, who were *obliged* to possess firearms for militia service.<sup>90</sup>

To drive home this understanding, policy-makers could combine voter, jury and firearm registration. Any time a person registers to vote, to perform jury duty, or to own a firearm, they should be provided with the opportunity to register for all three. Again, combining gun registration with jury and voter registration transforms its meaning from something that connotes deviance to something that confers the proper care and concern of a citizen. The post office and motor vehicle registry provides a convenient place for this combined registration, cutting down on administrative costs and adding an additional layer of legitimacy to the act of gun registration.

The second proposal can be called the 'registration bounty'. Upon registration of his or her handgun (pursuant to either a voluntary or a mandatory registration requirement) an owner would be entitled to a tax rebate or some other monetary award. This policy satisfies the principle of over-determination insofar as both the supporters and opponents of gun control can see the bounty as an effective and fair solution to a collective action problem. For control supporters, registration of guns promotes safety by making it easier to trace the ownership of weapons used to commit crimes. That societal good, however, is enjoyed by the community at large, and not just by those who register their weapons. Consistent with egalitarian sensibilities, control supporters can thus envisage the bounty as a means of fairly compensating individuals for being made to bear a burden that benefits society at large.

For control opponents, in contrast, the relevant public good is the reduction of violent crime in a community in which a relatively high proportion of

individuals own guns. Again, this benefit is enjoyed not just by gun owners, but by others, who can free-ride on the asserted general deterrent effect of widespread gun ownership. Because they do not believe individuals should be expected to endure disproportionate burdens to benefit society at large, people who favour individualism will think it is perfectly appropriate to compensate individual gun owners for the contribution they are making to public safety. So will those with more hierarchical views, who can see the bounty as a fitting public acknowledgement of such an individual's virtuous willingness to promote the common good.

Obviously, for both the 'big trade' and the 'registration bounty,' the meanings that the two sides are attributing to the respective policies are antagonistic. But expressive politics is not a zero-sum game; the vast majority of citizens demand only that the law be susceptible of a meaning that affirms their identities, and not that it be cleansed of any potential meanings congenial to citizens of some other normative orientations. This is the lesson of France's solution to its abortion controversy and the United States' solution to the controversy over Native American artefacts. It is a lesson that policy-makers need to fully exploit in the gun debate in order to arrive at a clumsy settlement.

## Notes

1. See Don B. Kates, Jr and Gary Kleck (eds), *The Great American Gun Debate* (San Francisco: Pacific Research Institute, 1997).
2. Cf. Barry Bruce-Briggs, 'The Great American Gun War', *The Public Interest* (Vol. 45, Fall 1976), p. 37.
3. Mark Duggan, 'More Crimes, More Crime', *Journal of Political Economy* (Vol. 109, No. 5, 2001), pp. 1086–114; John R. Lott, *More Guns, Less Crime: Understanding Crime and Gun Control Laws* (Chicago, IL: University of Chicago Press, 2000); Ian Ayres and John J. Donohue, 'Nondiscretionary Concealed Weapons Laws: A Case Study of Statistics, Standards of Proof, and Public Policy', *American Law and Economics Review* (Vol. 1, No. 1–2, 1999), pp. 436–70; Dan Black and Daniel Nagin, 'Do "Right to Carry" Laws Deter Violent Crime?', *Journal of Legal Studies* (Vol. 27, No. 1, 1998), pp. 209–13; Jens Ludwig, 'Concealed-Gun-Carrying Laws and Violent Crime: Evidence from State Panel Data', *International Review of Law and Economics* (Vol. 18, No. 3, 1988), pp. 239–54; Philip J. Cook and Jens Ludwig, *Gun Violence: The Real Costs* (Oxford: Oxford University Press, 2000).
4. For an influential statement of this view, see Stephen Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulation* (Cambridge, MA: Harvard University Press, 2004).
5. See generally Richard L. Revesz, 'Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives', *Columbia Law Review* (Vol. 99, May 1999); Michael Thompson and Steve Rayner, 'Risk and Governance, Part I: the Discourses of Climate Change', *Government & Opposition* (Vol. 33, No. 2, 1998); Michael Thompson, Steve Rayner and Steven Ney, 'Risk and Governance, Part II: Policy in a Complex and Plurally Perceived World', *Government & Opposition* (Vol. 33, No. 3, 1998).

6. See Mary Douglas and Aaron Wildavsky, *Risk and Culture* (Berkeley, CA: University of California Press, 1982), p. 73; Richard H. Pildes and Cass Sunstein, 'Reinventing the Regulatory State' (Vol. 62, No. 1, 1995), p. 48 and p. 68; Mary Douglas, *Risk Acceptability According to the Social Sciences* (London: Routledge, 1985), pp. 59–60; Aaron Wildavsky and Karl Dake, 'Theories of Risk Perception: Who Fears What and Why?', *Daedalus* (Vol. 114, No. 4, 1990), p. 41 and p. 49.
7. Joseph R. Gusfield, 'The Social Symbolism of Smoking and Health', in Robert L. Rabin and Stephen D. Sugarman (eds), *Smoking Policy: Law, Politics, and Culture* (Oxford: Oxford University Press, 1993), p. 49.
8. Douglas and Wildavsky, op. cit.
9. See Pildes and Sunstein, op. cit., p. 38.
10. Ibid., pp. 51–2.
11. Michael Thompson, Richard Ellis and Aaron Wildavsky, *Cultural Theory* (Boulder, CO: Westview Press, 1990).
12. Karl Dake, 'Orienting Dispositions in the Perception of Risk: An Analysis of Contemporary Worldviews and Cultural Biases', *Journal of Cross-Cultural Psychology* (Vol. 22, No. 1, 1991), p. 61; Wildavsky and Dake, op. cit., pp. 44–54.
13. For example, Bruce-Briggs, op. cit., p. 61: '[The gun culture's] model is that of the independent frontiersman who takes care of himself and his family with no interference from the state'; William R. Tonso, *Gun and Society: The Social and Existential Roots of the American Attachment to Firearms* (Lanham, MD: University Press of America, 1982): 'Just to hold [a Colt Model 'P'] in your hand produces a feeling of kinship with our western heritage – an appreciation of things like courage and honor and chivalry and the sanctity of a man's world.' (quoting gun collector); James D. Wright, Peter H. Rossi and Kathleen Daly, *Under the Gun: Weapons, Crime, and Violence in America* (New York: Aldine, 1983): 'The values of th[e] [pro-gun] culture are best typified as rural rather than urban: they emphasize independence, self-sufficiency, mastery over nature, closeness to the land, and so on'. James D. Wright, 'Ten Essential Observations on Guns in America', *Society* (Vol. 32, No. 3, 1995), p. 68: 'for control opponents, the gun 'symbolizes manliness, self-sufficiency, and independence, and its use is an affirmation of man's relationship to nature and to history'. See Richard Slotkin, *Gunfighter Nation: The Myth of the Frontier in Twentieth-Century America* (Norman: University of Oklahoma Press, 1998), for an examination of the historical evolution of pro-gun meanings in American culture. For an excellent ethnographic account of this feature of the pro-gun culture, see Abigail Kohn, *Shooters* (Oxford: Oxford University Press, 2004).
14. For example, H. Taylor Buckner, *Sex and Guns: Is Gun Control Male Control?* presented in the Deviance and Control: Quantitative Studies Session of the American Sociological Association 89th Annual Meeting, Los Angeles, 5 August 1994.
15. See Lee Kennett and James La Verne Anderson, *The Gun in America: The Origins of a National Dilemma* (Westport, CT: Greenwood Press, 1975), pp. 223–5 and p. 231.
16. Richard Hofstadter, 'America as a Gun Culture', *American Heritage* (Vol. 21, No. 6, October 1970), p. 84.
17. Don B. Kates, Jr., 'Public Opinion: The Effects of Extremist Discourse on the Gun Debate' in Kates and Kleck (eds), op. cit., p. 109, quoting Gary Wills (internal quotation marks omitted).
18. Dan Kahan and Donald Braman, 'More Statistics, Less Persuasion', *University of Pennsylvania Law Review* (Vol. 151, 2003), p. 1291.
19. Dan M. Kahan, 'The Secret Ambition of Deterrence', *Harvard Law Review* (Vol. 113, 1999), p. 413.
20. Margery Eagan, 'Rally Proves Gun Lovers Are Still Out There', *Boston Herald* (18 May 1999), p. 4. See also Richard Cohen, 'The Tame West', *Washington Post*

- (15 July 1999), p. A25: '[Republican control opponents] all pretend to be upholding American tradition and rights, citing in some cases an old West of their fervid imagination and suggesting remedies that can only be considered inane.'; Ted Flickinger, 'Dodge City' (Letter to the Editor), *Pittsburgh Post-Gazette* (1 June 1999), p. A-10: 'The widespread availability of guns in a society in which many so-called adult males still embrace the frontier mentality makes it a certainty these periodic adolescent outbursts will be tragically repeated. It's still Dodge City out there, boys. Wahoo.'; Perry Young, 'We Are All to Blame', *Chapel Hill Herald* (24 April 1999), p. 4: '[W]e seem crippled by a mythological "tradition" (a frontier gun world that ceased to exist 100 years ago and was wrong even then) and bullied into submission by a ridiculous minority of airheads like B-movie actor Charlton Heston and the National Rifle Association.'
21. Norman W. Nielsen, 'Letter to Editor', *L.A. Times* (30 April 1999), p. B6. See also Robert Reno, 'NRA Aims but Shoots Self in Foot', *Newsday* (9 May 1999), p. 5H (Sign at gun control rally: 'Gun owners have penis envy').
  22. See Charlton Heston, 'The Second Amendment: America's First Freedom', in Jan E. Dizard, Robert Merrill Muth and Stephen P. Andrews Jr (eds), *Guns in America: A Reader* 203 (New York: New York University Press, 1999), p. 203 (exhorting those who 'prefer the America ... where you [can] pray without feeling naïve, love without being kinky, sing without profanity, be white without feeling guilty, own a gun without shame' to join and 'to win a cultural war'); David Keim, 'NRA Chief Proves Big Draw at Vote Freedom First Rally', *Knoxville News-Sentinel* (Nov. 2, 2000), p. A1 ('Our country is in greater danger now than perhaps ever before,' Heston warned. 'Instead of Redcoats, you're fighting blue-blooded elitists.').
  23. See John Rawls, *Political Liberalism, Lecture VI* (New York: Columbia University Press, 1993); Bruce A. Ackerman, *Social Justice and the Liberal State* (New Haven, CT: Yale University Press, 1980), pp. 8–12; Amy Gutmann and Dennis Thompson, *Democracy and Disagreement* (Cambridge, MA: Harvard University Press, 1996), chapter 2.
  24. Martin Rein and Christopher Winship, 'The Dangers of "Strong" Causal Reasoning in Social Policy', *Society* (Vol. 36, No. 5, 1999), p. 39.
  25. See Kahan, op. cit.; Rein and Winship, op. cit.; 'The CITES Fort Lauderdale Criteria: The Uses and Limits of Science in International Conservation Decisionmaking', *Harvard Law Review* (Vol. 114, 2001), p. 1769.
  26. See generally Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Cambridge: Cambridge University Press, 1994), p. 20: 'It is at least uncivil, and perhaps terminally so, to decline to take knowledge from authoritative sources. Persistent distrust therefore has a moral terminus: expulsion from the community. If you will not know, and accept the adequate grounds for, what the community knows, you will not belong to it, and even your distrust will not be recognized as such.'
  27. For example, Chris Mooney, 'Double Barreled Double Standards', *Mother Jones* (13 October 2003), [http://www.motherjones.com/news/feature/2003/42/we\\_590\\_01.html](http://www.motherjones.com/news/feature/2003/42/we_590_01.html). Accessed 5 April 2006. Quoting Yale Law Professor, Ian Ayres: 'A lot of people would say, thank God Lott is still in the academy, but [I say] thank God he's not at my school.'; John J. Donohue, 'The Final Bullet in the Body of the More Guns, Less Crime Hypothesis', (July 2003), Stanford Law and Economics blin Working Paper No. 260; Stanford Law School, Public Law Working Paper No. 61. Available at SSRN: <http://ssrn.com/abstract=431220> or D0110.2139/ssrn.431220. As the eminent sociologist Otis Dudley Duncan has stated: 'The Lott episode is just one incident in a seemingly inexorable trend toward eliminating professionally

- competent research from discussions of social policy or overwhelming it with junk science. If that trend is not halted, the life blood of democracy itself will dry up'; John Lott, [Untitled], <http://groups.google.com/groups?selm=23fa92fe.0209230650.202e3526%40posting.google.com> (23 September 2002).
28. For example, Matt Bai, 'The Gun Crowd's Guru', *Newsweek* (12 March 2001), p. 36: 'After one debate, [Lott] sent an e-mail to Doug Weil, Handgun Control's resident PhD, which read in part: "Either you no longer have a conscience and thus no longer care whether your false statements end up getting people killed, or you're unable to separate your dreams from reality." His enemies are equally vitriolic. Perhaps because Lott comes from their own academic world, gun-control advocates just about lose their minds talking about him. "This guy has been dishonest from day one", shouts Weil. Opponents have accused Lott of getting funding from the gun industry (he hasn't) and lying about his PhD (he didn't).'; Kevin Beck, 'Conceal Carry (Letter to Editor)', *St. Louis Dispatch* (12 April 1998), p. B6, where he expresses gratitude to the columnist for: 'expos[ing] Professor John R. Lott Jr as an intellectually dishonest toady of the bullet manufacturing industry. Gun nuts have been in our faces lately with his alleged study saying that not carrying a gun made our streets unsafe'; Ann Coulter, 'More Facts, Fewer Liberals', *Human Events*, <http://www.humanevents.org/articles/03-12-01/coulter.html>: 'While having dinner recently with John Lott, author of *More Guns, Less Crime*, one of life's enduring debates came up: Are liberals evil or just stupid?'.
  29. Cf. James Davison Hunter, *Culture Wars: The Struggle to Define America* (New York: Basic Books, 1992), p. 321: 'A ... condition ... essential for rationally resolving morally grounded differences in the public realm would be the rejection by all factions of the impulse of public quiescence ... [T]here is a tendency among those Americans in the middle of these debates to hesitate to speak at all.'
  30. *Ibid.*, p. 42.
  31. See Jack F. Trope and Walter R. Echo-Hawk, 'The Native American Graves Protection and Repatriation Act: Background and Legislative History', *Arizona Law Journal* (Vol. 35, 1992), p. 24; Gene A. Marsh, 'Walking the Spirit Trail', *Arizona Law Journal* (Vol. 79, 1992), p. 24; Robert Winthrop, *Resolving Culturally-Grounded Conflict in Environmental Change* (unpublished manuscript, Aug. 1999) (describing cultural dispute resolution techniques used to resolve conflicts over development of sacred Native American lands).
  32. Mary Ann Glendon, *Abortion and Divorce in Western Law* (Cambridge, MA: Harvard University Press, 1989), chapter 1.
  33. Rein and Winship, *op. cit.*, p. 38.
  34. For example, Glendon, *op. cit.*; Clifford Geertz, *Local Knowledge* (New York: Basic Books, 1983), p. 219.
  35. Roderick M. Kramer, 'Trust and Distrust in Organizations', *Annual Review of Psychology* (1999) (noting that individuals 'confer a sort of depersonalized trust on other in-group members that is predicated simply on awareness of their shared category membership'). See also Marilyn B. Brewer, 'Ethnocentrism and Its Role in Interpersonal Trust', in Marilyn B. Brewer and Barry E. Collins (eds), *Scientific Inquiry and the Social Sciences* (San Francisco, CA: Jossey-Bass, 1981), pp. 345-59 (describing the increase in distrust that accompanies ethnic difference). See also, Marilyn B. Brewer, 'In-Group Favoritism: The Subtle Side Of Intergroup Discrimination', in David M. Messick and Ann E. Tenbrunsel, *Codes of Conduct* (New York: Russell Sage, 1996), pp. 160-71. Thus, while any number of individuals might present the same argument in the same terms, those who are extended

this trust are more likely to have their claims accepted as a result of identity-based trust. In this regard, identity vouching is an effective tool in convincing a community that a compromise speaks to their concerns.

36. Glendon, op. cit. (arguing that the symbolic compromise in other Western nations over abortion has not only made for a more respectful public debate on the issue, but also allowed legislators to shift their attention from warring cultural ideals to common instrumental concerns.)
37. Kahan and Braman, op. cit.
38. For example, Normal Dale, 'Cross-Cultural Community-Based Planning: Negotiating the Future of Haida Gwaii (British Columbia)', in *The Consensus Building Handbook* (Thousand Oaks, CA: Sage, 2000), pp. 923–50 (describing the aftermath of the 'most publicized environmental conflict to date in British Columbia: the struggle over logging Southern Moresby, the southernmost third of Haida Gwaii').
39. See *Native American Museum Claims Commission Act: Hearings before the Select Committee on Indian Affairs*, 100th Cong. 1–255 (hereinafter Senate NAAMCA Hearings) (statement of Micheal Fox, Member, Governing Board, Director, Heard Museum, Phoenix AZ., and Representing the American Association of Museums, Washington, DC).
40. Over the course of the last century, researchers have become increasingly concerned about the destruction of these materials by vandals, thieves, and amateur 'pot hunters'. Helping to draft and then pressuring Congress to pass laws protecting Native American materials found on federal lands and tribal reservations. See *The Antiquities Act of 1906*, 16 USC § § 431–33 (2001); and *The Archaeological Resources Protection Act of 1979*. § 470bb(1) (2001).
41. There is, of course, significant diversity within the Native American community that is not captured by these gross generalizations. Nevertheless, these are the rough outlines of the debate.
42. James Riding In, 'Without Ethics and Morality: A Historical Overview of Imperial Archaeology and American Indians', *Arizona State Law Review* (Vol. 24, 1992), pp. 11–34.
43. The problems inherent in any cross-cultural communication are exacerbated when conflict has further eroded trust between parties. As Robert Winthrop, an anthropologist who works on resolving cultural conflicts, has noted, this is in part because the values underlying the dispute are often not explicitly articulated.
44. G. A. Clark, 'Letters to the Editor, NAGPRA and the Demon-Haunted World', *SAA Bulletin* (Vol. 5, 1995), p. 14, <http://www.anth.ucsb.edu/projects/saa/14.5/SAA4.html>. Accessed 6 April 2006.
45. See, for example, James Bishop Jr, 'Bones of Contention', *High County News* (25 October 1999), at: [www.hcn.org/servlets/hcn.Article?article\\_id=5372](http://www.hcn.org/servlets/hcn.Article?article_id=5372). Accessed 6 April 2006.
46. As late as 1988, representatives of the archaeological and curatorial communities testified against and helped to defeat The Native American Museum Claims Commission Act (NAMCCA), federal legislation intended to facilitate the repatriation of sacred objects, items of cultural patrimony and human remains. See Senate NAAMCA Hearings (statements of Dean Anderson, Michael Fox and Cheryl Ann Munson) arguing that cases should be handled at the local level, between the parties directly involved, and that current state and local law were sufficient. Native American groups criticized these tactics, questioning their motives, questioning the accuracy of their testimony, and calling for significant



- expansion in the scope of the proposed legislation. See Senate NAMCCA Hearings at 88 (statement of Walter Echo-Hawk, Staff Attorney, Native American Rights Fund, Boulder, CO) (arguing that 'the bill should very clearly cover private institutions and individuals and parties as well as public', and for greater Native American representation on the proposed commission for resolving disputes.).
47. Michael J. Fox, 'Repatriation: Mutual Benefits for Everyone', *Arizona State Law Journal* (Vol. 7, 1992), p. 24.
  48. The name 'Vermillion Accord' was taken from the location of the World Archaeological Congress: Vermillion, South Dakota. See Michael Day, 'Archaeological Ethics and the Treatment of the Dead', *Anthropology Today* (Vol. 1, No. 15, 1990), p. 6 (describing the 1989 meeting of the Congress).
  49. The Accord committed parties to the principle that any decision about repatriation should be arrived at 'on the basis of mutual respect for the legitimate concerns of communities for the proper disposition of their ancestors, as well as the legitimate concerns of science and education.' *Ibid*.
  50. See, for example, Vine Deloria, 'A Simple Question of Humanity: The Moral dimensions of the Reburial Issue', *Native American Rights Fund Legal Review* (Vol. 14, No. 4, 1989), pp. 1–12; Roger C. Echo-Hawk, 'Working Together Exploring Ancient Worlds', *Society for American Archaeology Bulletin* (1993).
  51. As one Native American activist recalled, the Vermillion Accord was his first indication that 'not all [archaeologists] are scum of the earth'. Steve Russell, 'Archaeology Interview: The Roots of NAGPRA', <http://www.archaeology.about.com/library/weekly/aa083197.htm> (last visited 27 February 2002).
  52. Author's interview with Larry Zimmerman ('I think it was something of a surprise [among archaeologists] that [Native Americans] were so willing to say that there was some benefit here. Many Indians are aware that certain aspects of their culture were literally saved by anthropologists.')
  53. *Report of the Panel for a National Dialogue on Museum/Native American Relations* [hereinafter *Panel Report*].
  54. The panel included several who had testified before Congress on opposing sides of proposed legislation regarding repatriation.
  55. The panel members were: Willard L. Boyd, President, Field Museum of Natural History; W. Roger Buffalohead, Director, American Indian Learning and Research Center, University of Minnesota; Vine Deloria, Jr, Professor of Political Science, University of Arizona; Lynne Goldstein, Associate Professor of Anthropology, University of Wisconsin-Milwaukee; Susan Shown Harjo, Executive Director, National Congress of American Indians; Walter R. Echo-Hawk, attorney, Native American Rights Fund; Oren Lyons, member, Chiefs Council of the Onondaga Nation, Six Nations Iroquois Confederacy; Will Mayo, member, Chiefs Conference; Michael Moratto, President of INFOTEC Research, Inc., and Fellow and Research Associate in Anthropology, California Academy of Sciences; Harriet Toro, Phoenix Area Vice President, National Congress of American Indians; Reuben A. Snake, Jr, Chair, Winnebago Tribal Council; Martin Sullivan, Director and Assistant Commissioner of Education, New York State Museum; and Douglas H. Ubelaker, Head, Division of Physical Anthropology, Smithsonian Institution; Peter H. Welsh, Director of Research/Chief Curator, The Heard Museum, President, Council for Museum Anthropology. Report of the Panel for a National Dialogue on Museum-Native American Relations, 28 February 1990, reprinted in *Arizona State Law Journal* (Vol. 24, 1992), pp. 491–3.
  56. *Panel Report*, pp. 494–5. See, for example, *Ibid.*, p. 496 ('Relationships between museums and Native American peoples with regard to Native human remains,

funerary objects, sacred ceremonial or religious object and items of national or cultural patrimony should be governed by respect for the human rights of Native Americans and for the values of scientific research and public education.')

57. Ibid.
58. Ibid.
59. Ibid.
60. Ibid.
61. Ibid., p. 496.
62. Tribes may, however, relinquish ownership of such items. [25 USC 3002]. Ancillary provisions restrict the excavation and removal of Native American human remains or cultural items and require notification of inadvertent discoveries of such material. [25 USC 3002]. Items found on private property, however, are not subject to NAGPRA.
63. Where patrimony is uncertain, or where more than one tribe claims an item, the museum will care for the materials until the matter of patrimony is resolved.
64. See James A. R. Nafziger And Rebecca J. Dobkins, 'The Native American Graves Protection and Repatriation Act in Its First Decade', *International Journal of Cultural Property* (Vol. 8, No. 1, 1999), p. 77.
65. Some Native Americans feel that NAGPRA does far too little, leaving those tribes not formally recognized by the federal government powerless, and excluding overseas and private collections from the reach of federal criminal law. At least one researcher considers NAGPRA to be 'an unmitigated disaster', and reinternment to be a permanent loss of public property, an impermissible restriction of their first amendment rights, and a clear valuation of religious over secular and scientific perspectives.
66. See Keith W. Kintigh, *Senate Committee on Indian Affairs Oversight Hearing: Implementation of the Native American Graves Protection and Repatriation Act*, (available at <http://www.saa.org/publications/saabulletin/17-5/saa3.html>). Accessed 6 April 2006 (Describing the 'coalition of scientific organizations and Native American groups that strongly supported NAGPRA's enactment').
67. Ibid.
68. Vine Deloria, 'Anthros, Indians, and Planetary Reality', in Thomas Biolsi and Larry Zimmerman (eds), *Indians and Anthropologist: Vine Deloria and the Critique of Anthropology* (Tucson: University of Arizona Press, 1997).
69. See Joe Watkins, *Indigenous Archaeology: American Indian Values and Scientific Practice* (Lanhan, MD: Altamira Press, 2001) (describing the emergence of these programmes and the implications for both archeology and Native American self-understanding).
70. Timothy McKeown, *Anthropologist*, National Park Service, 1998. At: [www.washington.edu/burkemuseum/kman/anthropologists.htm](http://www.washington.edu/burkemuseum/kman/anthropologists.htm). Accessed 6 April 2006.
71. The legislation does not forbid federally funded institutions from the display of artifacts or require that they be returned; rather, it requires the very diligence in care and consultation with Native Americans that museums and researchers have advocated as the best possible approach for some time.
72. The act also contains measures congenial to both parties, expanding criminal penalties for trafficking in items obtained in violation of the law's provisions, measures that were strongly supported by the researchers who have long bemoaned the private pillaging of Indian grave sites, preventing later study and documentation. In this and other respects, NAGPRA is closely related to the Archaeological Resources Protection Act of 1979 (ARPA), 16 USC 470a – 470mm (1994). ARPA reasserts federal control over archaeological resources on federal and

tribal lands and provides stiff penalties for persons who knowingly excavate, remove or engage in transactions involving those resources without a federal permit. These measures thus not only clearly affirmed the relationship that Native Americans felt they had with their ancestors and their material culture but also included measures that the archaeological community had long supported protecting these materials from private collectors, tourists and vandals.

73. Patricia Hershwitzky, 'Birth control, Abortion are "Unnatural Manipulations"', *Washington Post* (14 August 1996), p. C2.
74. Ruth Conniff, 'The Peace Candidate; The Word from Washington', *The Progressive* (1 April 2003), p. 12 (quoting Dennis Kucinich).
75. Laurette Elsberry, 'Letters', *Sacramento Bee* (31 January 2002), p. B8.
76. 'Approval of Abortion Pill a Win for Women's Health', *Atlanta Journal and Constitution* (29 September 2000), p. 22A.
77. Judy Holland, 'Peterson Case Stirs Debate Over Abortion, Unborn Victims', *Chicago Tribune* (30 April 2003), p. 3B (quoting Jerrold Nadler).
78. Alan Diamonstein, 'Lieutenant Governor', *Washington Post* (31 May 2001), p. T 04.
79. Aryl-Jeanne Reed, 'A Selfish or Lazy Option', *Houston Chronicle* (27 January 2001), p. A35.
80. Ted Cohen, 'Augusta, Portland rallies note anniversary of *Roe vs. Wade*', *Portland Press Herald* (20 January 2002), p. 3B (quoting Jennifer Halm-Perazone).
81. John Coppes, 'Life is Precious', *The Record* (10 November 1995), p. A12.
82. For example, Kristin Luker, *Abortion and the Politics of Motherhood* (Berkeley, CA: University of California Press, 1985).
83. Glendon, op. cit.
84. Ibid.
85. Ibid.
86. For a similar account, see Ronald Dworkin, *Life's Dominion: An Argument about Abortion, Euthanasia, and Individual Freedom* (New York: Vintage, 1994).
87. Steven Teles makes this point in the context of discussing the historic consensus in American society on the appropriateness of social welfare programmes for the poor. See Steven M. Teles, *Whose Welfare? AFDC and Elite Politics* (Lawrence, KS: University Press of Kansas, 1998). This consensus was underwritten, Teles argues, by a surfeit of meanings that made it possible for upholders of hierarchy, egalitarianism and individualism simultaneously to affirm such programmes. The consensus broke down as a result of the demand of cultural extremists who insisted that social welfare be infused with a meaning agreeable only to one orientation and not the others.
88. Glendon, op. cit.
89. See Donald Braman, Dan M. Kahan and John Gastil, 'A Cultural Critique of Gun Litigation', in Timothy Lytton (ed.), *Suing the Gun Industry* (Ann Arbor, MI: University of Michigan Press, 2005).
90. See Akhil Reed Amar, 'The Second Amendment: A Case Study in Constitutional Interpretation', *Utah Law Review* (2001), pp. 889–914.

# 8

## Floods and Fairness in Hungary

*Joanne Linnerooth-Bayer, Anna Vári and Michael Thompson*

### Introduction

In Europe, Hungary ranks only behind the Netherlands with respect to flood exposure, and by some estimates flood losses could be in the order of seven to nine per cent of Hungary's gross domestic product.<sup>1</sup> Adding to the scale of the problem, floods appear to be worsening in their intensity and frequency. In view of these increasing losses, the Hungarian government is concerned about continuing its tradition of taking almost full responsibility for flood risk management, including prevention, response, relief, repair, reconstruction and other forms of compensation for private losses. With its membership in the European Union, Hungary has committed itself to a programme of fiscal austerity, and for this reason some government authorities would welcome more private responsibility for the prevention of, and response to, flood disasters. However, many Hungarians regard the transfer of liability for flood losses to citizens, especially those living in very poor areas, as unfair. One of the more controversial issues in Hungary, and throughout Europe, is thus the respective roles of the government and the private market in preventing flood losses and providing compensation to flood victims.

A study (carried out by International Institute for Applied Systems Analysis – IIASA – with the Hungarian Academy of Sciences and Stockholm University)<sup>2</sup> developed and tested a participatory procedure for proposing a public–private flood insurance program for Hungary. Public participation comprises the ‘forums of exchange that are organised for the purpose of facilitating communication between government, citizens, stakeholders and interest groups, and businesses regarding a specific issue or problem’.<sup>3</sup> This definition includes arenas such as public hearings, public meetings, interviews, surveys, citizen advisory committees and stakeholder workshops and focus groups. In our research, we combined interviews, a public questionnaire and a stakeholder workshop. The challenge was to identify the contending perspectives and preferred policy directions held by the stakeholders and, more importantly, to identify a clumsy policy path for a nationwide,

public-private insurance/compensation system. To meet this challenge, a five-round, participatory stakeholder process was developed and tested. The final round of this pilot project took the form of a deliberative stakeholder workshop, where participants reached a consensus on a clumsy policy direction. The process was aided by a simulation flood catastrophe model that demonstrated the likely consequences of the policy options. This Chapter, therefore, illustrates one particular process through which clumsy policies can be designed – through computer-aided, participatory processes involving stakeholders.

## **The Tisza watershed: floods, poverty and natural beauty**

One of the most flood-prone areas in Hungary, and one of the poorest regions in Europe, is the Upper Tisza river basin in the northeastern part of the country. The Tisza river originates in the Carpathians in the Ukraine and flows from Romania and Slovakia to Hungary, and eventually into the Danube in Serbia. The intensity and frequency of flood disasters in this region, and throughout Hungary, appear to be increasing. Pecher *et al.* point out that from 1877–1933 the average period between disastrous floods of the Tisza River was 18 years; from 1933–64 it was only 3–4 years.<sup>4</sup> Since 1998, record-breaking water levels of the river have occurred annually, but the extensive network of levees surrounding the river has prevented major losses. The flood of 2001, however, burst through the protective levees causing extensive damage, including the destruction of, or damage to, 3000 houses. Since flood waves originating in upstream Ukraine arrive in Hungary at very high speed, there is little time for warning and preparation.

Communities in the Upper Tisza region, and especially the high-risk areas near the river itself and its tributaries, are among the poorest in Hungary. Most of the predominantly farming towns are located far from the cities, and this isolation is compounded by poor road connections. The rate of unemployment is very high, especially among the Roma population, and incomes from agricultural activities are typically small. Agriculture by itself cannot support the local population, and floods have aggravated this already precarious situation. In some communities, for instance, free seed is distributed, but the residents are unwilling to sow, mainly on account of the flood risk.<sup>5</sup> More positively, the area has a large and undeveloped potential for recreation, tourism and nature conservation. There are pristine, or almost untouched, areas surrounding the meandering Tisza, and its flood plain is sprinkled with old villages, traditional farms and historic buildings. Tourism was on the rise until 2000, when the area found itself stigmatized by a cyanide spill into the Szamos and Tisza rivers originating from an Australian-owned goldmine in upstream Romania. Today there is still considerable uncertainty about the future of the region with regard to tourism.<sup>6</sup> Yet tourism, if it could

somehow be nurtured, could be the key to the region's economic and social viability.

While there is little controversy that floods are a problem in the Tisza region and throughout much of Hungary, there is little agreement on *why* they are a problem or on *what should be done* about them. Many view the challenge as one of structural flood-control interventions, and some of those who take this view support the idea of moving people out of areas where the costs of prevention are too high. Others, however, insist that overflowing rivers are a natural part of the ebb and flow of ecosystems, and see the structural interventions as the problem, not the solution. People, they urge, should adapt their lives and livelihoods to the river, and not the other way around. Still others attribute primary responsibility to the local population. They have placed themselves in harm's way, as it were, and have then expected the government to bail them out. The solution, therefore, is to somehow break this fatalizing dependency and to encourage the local people to stand on their own feet. In the next section, we examine these and other stakeholder views on the problem and its solution.

## Round one: stakeholder interviews

Nearly all Hungarians have a stake in flood risk management for the Upper Tisza region. Many of them are directly exposed to flood risks, and all of them are indirectly affected. For instance, Hungarians have to pay taxes for flood-loss mitigation and response, they have to contribute to flood insurance payments that subsidize those living in high-risk areas, and they may have to forego public amenities because of their government's post-flood expenditures. (After the devastating floods in 1998, the central government diverted funds intended for the extension of the Budapest subway to the flood victims.) Round One of the participatory process elicited the views of the active stakeholders on flood risk strategies for this region. Face-to-face, open-ended interviews were carried out with twenty-four persons representing central, regional and local government agencies, farmers and entrepreneurs, NGO activists and insurance companies.<sup>7</sup> Three prototypical and contending flood policies emerged from the interviews: state protection, individual responsibility and holistic development of the region.

## State protection

As in other formerly socialist countries of Central and Eastern Europe, the Hungarian government has traditionally taken primary responsibility for protecting the public from floods in all their aspects. Before the political transition in 1990, the powerful national water authority boasted a staff of 25,000 people, spread between Budapest and twelve regional branches. The authorities' mission was to protect Hungary's territory from riverine flooding, and they invested huge sums in a vast network of protective levees,

including about 3000 kilometres of embankments along the Tisza River. The water authorities justified these enormous expenditures on two grounds. First, it was decreed that nobody in Hungary should be exposed to a life-threatening flood risk. Second, it was asserted that, without the levees, huge areas in Hungary could be flooded. Recent government estimates show that an unprotected flood on the Tisza could inundate up to 17 per cent of the country, which, presumably (and as those who do not see the floods as a problem point out) is what used to happen before the levees were put in place.<sup>8</sup>

Since the Tisza experience suggests that flood waves are worsening in their intensity, it is imperative for those who are fastened on the flood-control option to build the levees higher and higher. Indeed, after the one-in-a-hundred-year flood wave nearly topped the embankments in 1998, the central government accelerated its levee-construction programme for the Upper Tisza and its tributaries.<sup>9</sup> This one-in-a-hundred-year flood was exceeded only three years later, when an 11-metre high flood wave broke through the levees causing extensive damage and providing further justification for building the levees even higher.

While there is no statutory requirement for the Hungarian government to compensate flood victims, it has almost always taken full liability for private damages in the event of a levee breach, and has compensated victims generously for other types of flood damage, such as groundwater inundation. After the Tisza floods in 2001, for instance, the government fully rebuilt nearly 1000 houses that had been washed away. This kind of taxpayer solidarity with flood victims is typical of all the formerly socialist countries of Central Europe. It usually takes place within a hierarchically organized field, in which fair distribution is at the discretion of the authorities. It is they who decide who is deserving and how deserving they are.<sup>10</sup> The overall result has been technological inflexibility of the kind that the eight indicators listed by Gyawali (in Chapter 3) are designed to alert us to: as the floods get higher so the levees have to be built higher – there is no alternative! This response, of course, excludes the voice that speaks for adaptation to, not control of, the river, and that discerns a very clear alternative: the re-naturalization of the Tisza.

Significantly, the interviews revealed strong stakeholder support for the continuation of a state role in flood protection, albeit to differing degrees. The strongest supporters, to no one's surprise, were the water authorities themselves. It would be wrong, however, to conclude from this that all stakeholders share the water authorities' conviction that there is no alternative to hard-engineered interventions. Those who favour the Tisza's re-naturalization, and see the hard-engineering as the problem, are insisting that those responsible for creating the problem compensate those who suffer the consequences, but only until such time as the problem has been remedied.

### Individual responsibility

Following the fall of Communism in 1990, the extensive government expenditure on protective flood levees and reconstruction, as well as on the requisite bureaucratic machinery, have increasingly been viewed as economically unsustainable. The rebuilding, or repair, of the damaged homes and buildings from the 2001 flood was criticized by many of the interviewees as excessive. The insurance up-take rate in the region is 40 per cent, yet, the total sum paid by the government for damage repair and compensation was 13 times the amount paid by the insurance companies. While the senior officials of the water authorities are reluctant to relinquish public authority and control in the financing of flood risks, the powerful Finance Ministry welcomed more private responsibility to relieve pressures on its budget. Fiscal necessity may thus force a partly reluctant government to switch towards more individual responsibility, and this switch is positively welcomed by those who would like to see less government intervention generally. Their concern is that government protection and compensation will simply encourage people to take less precaution against flood losses, and to move into high-risk areas protected by flood levees. In their view, the result of protective measures may actually be an increase in the losses. And they can point to the United States where, after the huge costs of the 1993 Midwest floods, the US Corps of Engineers came under heavy attack for creating a seemingly risk-free zone that had attracted large investments in the protected areas.<sup>11</sup> If uninsured disaster victims are guaranteed post-disaster support that enables them to continue to locate their property in hazard-prone areas, and more people build in those areas, taxpayers will be subject to increasingly larger expenditures for bailing out victims of future disasters. For this reason, leading disaster experts in the United States argue for making private responsibility the guiding principle of catastrophic risk management.<sup>12</sup>

The stakeholder discourse in Hungary (as we might expect, given the depth of the state-driven technological lock-in that built up during the Soviet bloc decades) is notably short on attributing responsibility to individuals or communities in high-risk areas. With the exception of blaming the new landlords in the Tisza area for not maintaining water drains and culverts (neglect, that is, of locally sustained common-pool resources), the stakeholders made little mention of relocation and other individual loss-reducing measures. Nor was there any feeling that individuals and communities should be fully insured. This appears true throughout Central Europe. For instance, after the 1997 Polish floods, the Prime Minister made a public statement that uninsured victims had only themselves to blame for their financial losses and should not expect government compensation. This remark raised such a public outcry that the Prime Minister was forced to apologize.<sup>13</sup>

However (even by Western European and United States standards) a high proportion of Hungarian households – almost 60 per cent – carry flood



insurance offered by one Hungarian and 16 foreign-owned insurers.<sup>14</sup> The reason for this high uptake is that flood policies are 'bundled' with the residential property insurance that is required for a homeowner mortgage. In the Upper Tisza region, however, only about 40 per cent of the households hold flood insurance. While insurance is not uncommon, insurers offer only limited cover, mainly for breaching or over-topping of the levees. The premium for homeowner flood insurance is independent of the risk; insurers charge all households in Hungary an equal percentage of their property insurance premium (flat rate) to cover flooding. This has resulted in significant cross-subsidization from those living in low-risk areas (for example in large cities like Budapest and Szeged) to those living in high-risk areas (for example in villages in the Upper Tisza region). It is this subsidization that makes it possible for poor people in high-risk areas to afford flood cover, albeit limited, and is one of the cornerstones of the current insurance-compensation regime. So insurance, as currently instituted, and as those who advocate government responsibility point out, is every bit as morally hazardous as is government compensation.

Given that few Hungarians are opposed to the protection offered by the government, who are the proponents of more individual responsibility? The pro-market advocates are found within the private insurance companies (which are foreign-owned to a large degree), as well as the World Bank. Indeed, the authors of a World Bank-funded study queried whether what is being protected in the Tisza basin is worth the costs.<sup>15</sup> Since there is little economic output from the subsistence farming, it may make economic sense, they suggest, for the people in the high-risk areas to relocate. In spite of these reservations, following the 1998 Tisza flood the government invested US\$ 5 million in strengthening and heightening some 10 kilometres of levees along the river. Following the levee breach of March 2001, the insufficiency of even these heightened defences was recognized, and the government began discussing other flood-mitigation measures, including the construction of emergency reservoirs in Hungary and in upstream Ukraine, increasing the capacity of the main riverbed, and changing land-use practices in the flood plains.<sup>16</sup> 'Changing land-use practices', of course, is code for the partial re-naturalization of the river and its surroundings: the tacit admission, therefore, that there is an alternative after all. All of which suggests that a clumsy solution may now be emerging of its own accord, as it were, in reaction to the excessive elegance of the preceding decades, and spurred on by the increasingly evident and ever-accumulating surprises that that elegance has given rise to.

### **Holistic development**

While only a few Hungarian stakeholders advocated more individual responsibility and market allocation, many voices – and in particular those of environmentalists – raised objections to the levees for different reasons.

Protecting the upstream areas with engineered, structural measures ultimately forces flood waters downstream and increases risks to the riparians of the lower Tisza and Danube rivers. Levees, on this view, are socially unfair and ecologically destructive. What is needed instead is a holistic approach for the sustainable development of the region, perhaps even re-naturalizing the river in its entirety and turning the whole area into a national park. Rather than framing the problem as primarily a failure by individuals and communities to take protective actions, some interviewees saw the failure as lying within the system.

The local environmental NGO pointed to systemic sources of the flood problem, in particular from worsened soil erosion due to extensive clear felling and forest cutting in the Ukraine. By some estimates, the wooded area of the Ukraine's Transcarpathian region has recently been reduced by a half or even two-thirds of its former area, and there was almost unanimous agreement among the stakeholders on the value of reforestation in the river basin.<sup>17</sup> Along with scepticism about the government's efforts at controlling the flood problem with ever higher levees along the river, the environmentalists, among others, point their fingers at unregulated lumber markets across the borders. Many stakeholders thus call for the holistic management of the entire river basin, and the environmentalists propose taking down the levees in some places to re-naturalize the river, reinstate wetlands and create natural reservoirs. Interestingly, some (but not all) local mayors have joined the environmentalists in support of these alternative solutions, but in combination with the levees (which suggests an emerging coalition aimed at promoting locally produced, and currently neglected, common-pool resources). Since flooding *as a problem* should not exist in the first place (flooding being a natural part of ecosystems), these voices, unsurprisingly, are silent on how the flood burden should be distributed. Their focus is on how the structural interventions can be modified, and on how people can adapt their lives and their livelihoods to those modifications, so that flooding no longer results in any burdens! Furthermore, among most of these interviewees there is a deep-seated distrust of private insurance companies, and a sense that increased private insurance in poor areas like the Upper Tisza is grossly unfair.

### The contested terrain

The stakeholder interviews suggest three distinctly different paths that the Hungarian policy community can take for reducing flood losses and providing support to flood victims in the Upper Tisza region. These are illustrated as 'corner solutions' in the triangle of possibilities in Figure 8.1. These three solutions correspond with the three active policy perspectives posited by the theory of socio-cultural viability. At one extreme, the government can continue to absorb a large share of the costs of flood risk management by continuing its investments in levees and its generous compensation of flood victims, as well as by controlling development in the flood-risk areas

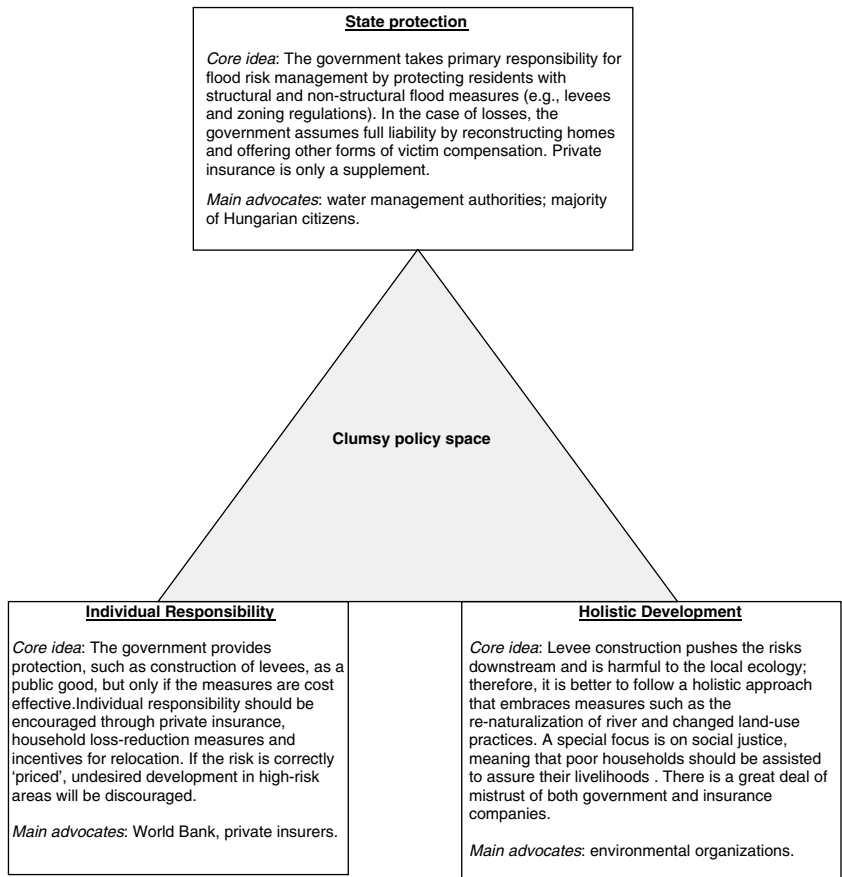


Figure 8.1 The contested policy terrain

by top-down zoning regulations. This *hierarchical* approach will likely lead to a worsening of the central government's budget deficit and, despite regulation, will encourage undesired development in the flood-prone areas. Alternatively, the government can withdraw resources from this area and rely more strongly on market forces to encourage individual responsibility for reducing losses and for insuring against them. This *individualistic* strategy would likely lead to increased diligence on the part of farmers and landowners and less development in the disaster-prone areas. However, *egalitarian* critics of this approach are concerned about the burden this would place on an already vulnerable population and worry about the cultural and ecological losses: the abandonment of historic villages, the failure to learn from the still

visible remnants of the earlier landscape and further impoverishment of the ecosystems that sustained that particular interpenetration of the human and the natural. The holistic (or egalitarian) policy strategy, in consequence, is oriented to the ecological preservation and regeneration of the area. Measures would include subsidized programmes to help farmers change land-use practices, re-naturalization of the river by removing levees in some areas, and provision of infrastructure for soft tourism. Insurance may be an option, but only by circumventing the commercial insurers with non-profit mutual arrangements (common-pool resources, that is, rather than private goods). Those who are sceptical of this holistic approach point out that these measures will not reduce the risks to already existing villages, may require the relocation of villagers and farms, will exclude commercial insurers from covering floods in Hungary, and will not solve the government's budgetary problem.

No single stakeholder exclusively advocated any one pure policy direction; none of the corners of our triangular policy terrain (Figure 8.1) were 'inhabited'. Almost all stakeholders agreed that levees in certain areas are essential and, at the same time, that individual responsibility for reducing flood risks should be encouraged, even with economic incentives. There was also unanimity in the agreement that the transfer of the burden to an already vulnerable population cannot be justified by arguments of efficiency. Most stakeholders supported some government protectionism and, at the same time, saw a limited role for the private market in flood response. Still, in keeping with cultural theory's predictions, different stakeholders clearly came down in favour of alternative policies. Private insurers – similar to the authors of the World Bank report – put more emphasis on individual responsibility and market forces; interviewees from the national and regional water management authorities stressed levees and other forms of state protection; and representatives from environmental groups gave priority to holistic development and re-naturalization of the watershed. The challenge for the IIASA study was to identify an intersection of these policy directions, or a clumsy policy strategy, that could command a wide base of support. To further this agenda, a public survey was held.

## Round two: the public survey

Based on the stakeholder interviews, a questionnaire (with face-to-face interviews) was administered to 400 persons in Hungary. The purpose was to gauge the support for the contending policy strategies among the larger public. Four separate locations in Hungary were chosen in order to include people at high and low risk to flooding in both rural and urban areas. The sample size in each area was 100. Settlements within specific rural areas were chosen randomly, and the number of participants was determined according to population size. The sample was selected to be representative in

terms of gender and age for each region. The questionnaire contained 24 questions, of which nine could be answered with *yes*, *no*, *maybe* or *don't know*. With the exception of one open question, the remaining 14 questions gave the respondents a list of four possible options that corresponded to the three 'active' perspectives of cultural theory (thus to the policy paths identified in the stakeholder interviews), plus a fatalist option. The respondents could also add options and comments.<sup>18</sup>

The public survey confirmed that, when it comes to floods, the majority of Hungarians continue to view their world as it was: that is, with the state taking the main responsibility for their well-being. The main causes of flooding were seen as lack of maintenance of the levees, clearing of nearby forests, and insufficient height and strength of the levees. Significantly, the least importance was attributed to the local residents taking insufficient preventive measures or locating in flood-risk areas. At the same time, a third of the respondents blamed the authorities for having issued building permits in areas with high inundation risk. In mitigating the risks, low rankings were given to measures such as financial incentives to encourage inhabitants to migrate out of high-risk areas, the introduction of alternative agricultural practices and the re-naturalization of parts of the river. These results confirm the findings of the stakeholder interviews, that a majority of Hungarians tend to blame their government (or those of neighbouring countries) for escalating flood losses, and few appear to hold those living and working in the high-risk areas as contributing substantially to this escalation.

Within this same hierarchical perspective, responses strongly indicate that responsibility should be mainly in the hands of the central government, rather than in the hands of property owners living in high-risk areas. The central government was ranked in first or second place (of four alternatives) by 92 per cent of the respondents, the governments of neighbouring countries by 51 per cent of the respondents, the municipalities by 49 per cent, and the property owners by only 10 per cent. In line with the view that the central government is mainly responsible for flood losses, a large majority of the respondents would fully or partially support Hungary's generous public compensation system (see Table 8.1). At the same time, about 60 per cent of the respondents were supportive of introducing more private insurance. However, half of them qualified this opinion by insisting that low-income individuals should receive public assistance in purchasing insurance. Moreover, the interviews confirmed that many stakeholders are suspicious of commercial insurance companies, which may explain the apparent popularity of the more communitarian alternative: local insurance pools.

What motivates Hungarians to express such strong solidarity with flood victims? Considering Hungary's long history of government protection, it is not surprising that half (51%) of the respondents justify relief to flood victims on claims that flood protection is the *responsibility* of the government, and that flooding is therefore the fault of the government. If the river

Table 8.1 Forms of government compensation to flood victims

After a major flood, the Hungarian government should compensate ...	Chosen by (%)
All victims by a certain percentage of their losses	57
All victims by the same amount, above which they can choose to have insurance	19
Only needy victims, i.e., not owners of vacation homes or well-to-do businesses	7
Only victims with flood insurance	3
Only victims who have not built their homes in high-risk areas without a permit	4
Nobody	0

overflows the levees and inundates the villages, the government is to blame, since it has not built the levees strong or high enough. This solid majority does not mean that there are no contending views in Hungary. A small but important minority of respondents is *not* in favour of compensating flood victims. Among the cons mentioned, it was argued that compensation is too costly for the taxpayers, or that it often goes to the wealthy or that compensation discourages people from purchasing insurance.

This diversity of response is not well-explained by economic self-interest. For example, people were asked if they fully agreed, partially agreed or did not agree with each of the following statements:

- Solidarity requires that the government compensate flood victims;
- Everyone should take more responsibility for flood risk, and those who can afford it should purchase private insurance;
- Locals should create a fund for helping flood victims;
- It does not matter what you do, flood victims will lose a lot.

Figure 8.2 shows the geographical spread of the responses. Government compensation based on solidarity does have more sympathy in the higher-risk Upper Tisza and Szolnok regions, whereas a system based on individual responsibility and private insurance receives a more sympathetic reception in the less affected regions (Zala and Székesfehérvár), and in the cities (Szolnok and Székesfehérvár). Yet, in contradiction to the rationale of economic self-interest, there is an astonishing degree of support for compensation across the regions. Almost *one-third* of the respondents in the low- or no-risk areas support taxpayer solidarity with the Tisza flood victims.

Overall, the questionnaire results confirm that the Hungarian public has differentiated views concerning the management of flood risks in the Upper Tisza region. The results show there is little sympathy with extreme market

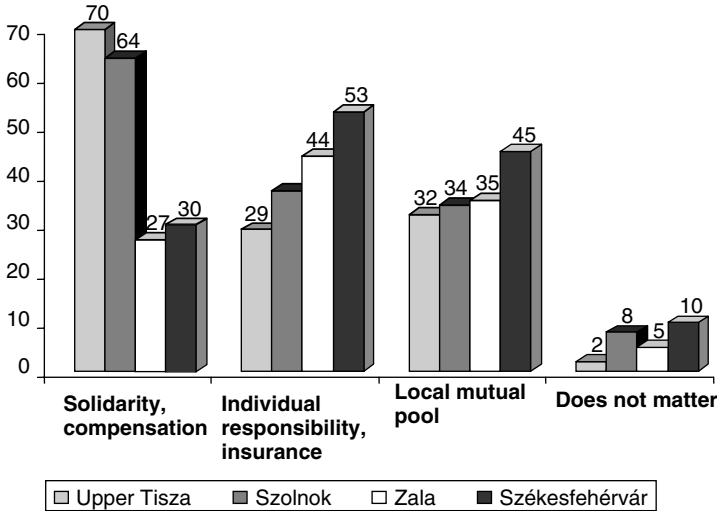


Figure 8.2 Respondents' views on risk sharing by region

positions, for extreme ideas on a more ecological and naturalistic path for the region. Hierarchical government still commands wide support in Hungary. However, in the light of recent history, the minority views in favour of increased individual responsibility and more holistic development policies are revealing and important.

### Round three: developing a clumsy national insurance programme

At the time of this study, policy makers in Hungary were considering to legislate a national flood-insurance program to increase insurance cover, and decrease government post-disaster responsibility. It is important to note that, from here (Round Three) onwards, we only consider the possibilities for insurance in relation to the Tisza and its flooding. This focus was inherent in the terms of reference for our research project, and it means that the voices of those stakeholders who place most of their emphasis on changing the current physical interventions – removing the levees, restoring the flood plains and so on – are somewhat muted. However, throughout the discussions on a risk-pooling system for Hungary, stakeholders were hesitant to separate options for sharing risks that did not account for loss reduction.

There are many options for loss sharing that combine the public and private sectors.<sup>19</sup> For example, the US National Flood Insurance Program offers public insurance that is mandatory for those holding a bank mortgage, and

that provision is now moving from flat-rate to risk-based premiums in order to encourage risk-reduction measures and discourage development in high-risk areas. Alternatively, France's all-hazards insurance system is private, but backed by taxpayer funds. It is based on a concept of solidarity with deliberate flat-based premiums resulting in subsidies across regions and hazards.

Cultural theory postulates that arrangements that are not based on all perspectives of the contested terrain will tend to be unstable, and will ultimately not be viable.<sup>20</sup> An over-commitment to any one perspective will eventually be undermined by opposition from the others. Before the political transition in Hungary, the strongly hierarchical and non-democratic socialist government encountered fierce opposition, both from the suppressed market forces and from the more egalitarian environmental and social movements. (For example, the Danube Circle, an environmental NGO opposing the Gabčíkovo dam, played a central role in the Hungarian transition.) Although the government has changed radically, this struggle continues. Thus, we witness opposition to the state's traditional role in providing flood protection from both the market-oriented voices of some interest groups and the egalitarian voices of the environmentalists – but for different reasons. This notion that institutions and individuals may argue for the same policy, yet for different reasons, is a core concept behind the search for clumsy policy paths. The overlap in discourses or arguments (when it exists; clumsy solutions are not always available) can be exploited in order to find a policy compromise. A clumsy policy can be thought of as one that commands wide stakeholder support but for different reasons and based on different and shifting perceptions of the problem, values and world views. For this reason, a viable flood risk policy can only be achieved by including and carefully considering the viewpoints of adherents to each of the perspectives.

A challenge for this study, therefore, was to develop a participatory process that can accommodate the different perspectives and articulate a clumsy way forward. On the basis of the initial two information-gathering rounds (the stakeholder interviews and public questionnaire), the research team proposed three possible public/private insurance systems. These paths, which are illustrated in Figure 8.3, are:

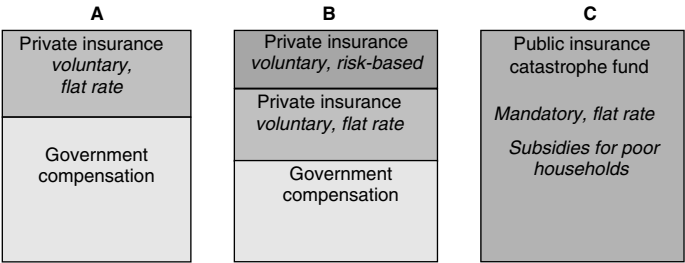
- *Option A* continues current practices by combining extensive government post-disaster assistance with voluntary, flat-rate (cross-subsidized) insurance;
- *Option B* places more responsibility on households living in high-risk areas. The government compensates victims by a lesser amount (perhaps only assuring their subsistence), and the public role is supplemented by two insurance layers: voluntary private insurance based on a flat-rate premium and voluntary, risk-based insurance (this option was suggested in the World Bank funded report); and,



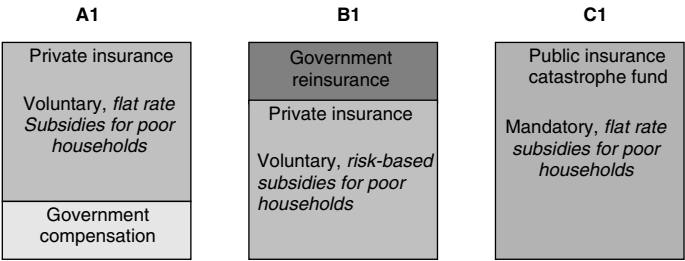
- *Option C* reduces the role of private insurers with the creation of a fully public insurance system (government disaster fund) financed by mandatory, flat-rate contributions from all property owners throughout Hungary. The government subsidises insurance premiums for low-income households.

Armed with computer-based simulations of these three options, we returned to the key stakeholders in order to refine the policy options on the basis of the interviewees’ values, as well as their knowledge of the political playing field and the economic constraints.<sup>21</sup> A somewhat different picture emerged

**Rounds 1 and 2: The interviews and public survey led to the following proposed options:**



**Round 3: From repeated interviews with key stakeholders, the following revised options emerged:**



**Round 4: Refinements of Options A1, B1 and C1 at the stakeholder workshop**

**Round 5: The clumsy solution D**



Figure 8.3 Options for a Hungarian flood insurance Programme

from these more detailed discussions with the stakeholders. There continued to be a great deal of solidarity with low-income victims of floods, *but this solidarity need not mean extensive post-disaster financial assistance*. It could also take the form of subsidies for pre-disaster loss reduction and insurance. Indeed, across-the-board post-disaster government assistance might mean that households with insurance would actually receive more than their damages, and this was seen by several stakeholders as unacceptable. As a result, all these revised versions of the insurance programmes included government assistance through some form of market mechanism.<sup>22</sup> This common element was a first indication that agreement on a clumsy policy package might be possible. The details of the revised options are shown in Figure 8.3.

### Round four: the stakeholder workshop

Finally, in order to find a clumsy solution, a stakeholder workshop was held in Vásárosnamény, a town in the Upper Tisza area, in September 2002. Participants included representatives of the key stakeholder groups, including the local mayor, a resident of a non-risk area, the leader of a local environmental group, officials of the regional water management authority and the national authority for disaster management and a representative of a major international brokerage firm. Unfortunately, and somewhat ominously, the representative from the Hungarian insurance industry was not able to attend, because of a last-minute invitation to attend a meeting on this very topic with government representatives.

The workshop was a forum for stakeholders to argue their policy positions and consider the arguments of the other participants. Theorists argue that decision-making based on ‘discussion among free and equal citizens’ can produce outcomes that authentically and genuinely reflect the public interest.<sup>23</sup> Deliberation is supposed to provide a space for reasoned discussion and the opportunity for critical reflection.<sup>24</sup> One view of deliberative democracy is that discussions lead to a transformation of citizens’ preferences by persuasion. In this view, deliberative outcomes are legitimate because they are based on what Habermas calls a ‘rationally motivated consensus’ that grounds policy decisions on reasons that every citizen can, on rational reflection, accept.<sup>25</sup> An alternative view of citizen deliberation – one that finds support from cultural theory – is that complex societies give rise to fundamentally conflicting values, perspectives and world views that cannot be reconciled into a common view of the public interest.<sup>26</sup> This does not mean that agreement on a common policy is not achievable, but that (when it is) stakeholders will endorse that policy for different reasons (see also the previous chapter by Kahan, Braman and Gastil).<sup>27</sup> The idea of the stakeholder workshop was thus to enable the stakeholders to find such a mutual accommodation. To search, of course, is not always to find. Clumsy solutions are not always and everywhere possible, but in this case, as we will see, the quest was successful.

The workshop, which we moderated, started off with a discussion on flood risk management in the region, after which the three revised options for a flood insurance program (A1, B1 and C1) were introduced. This discussion was aided by a computer (catastrophe) model of the Upper Tisza region, which simulated flood losses in a pilot area.<sup>28</sup> For each policy option, the model demonstrated the impact of simulated losses over the next decade on the three main stakeholder-victim groups: the residents in the pilot area, the insurance companies and the government. The participants were then asked to choose their preferred policy option, and they were given time to change the option of their choice in any way, so as to get it to correspond more closely with their view of a fair and workable system. The participants were then grouped according to the option chosen and asked to negotiate a common view in their subgroup – a kind of mini consensus within a single perspective. Below we describe the three options that emerged from these stakeholder deliberations.

### **Option A1: a mixed public–private system**

Option A1 (see also Figure 8.3) is characterized by limited post-disaster victim compensation to assure only a subsistence to the victims, and this assistance is then supplemented by voluntary, flat-rate insurance. Four participants at the stakeholder workshop chose this option. Their spokesperson justified this choice as follows:

We, who were victims of probably the largest flood of the century, feel there is no doubt about the responsibility of the government toward the local population. It wasn't a 'vis major' situation that the state couldn't have managed. It wasn't an earthquake or a windstorm you can't be prepared for. There is no doubt that in case of flood disasters the government has a key role and also has to assume full financial responsibility. Flood protection lines have been built, and theoretically ... no water should come out through the dikes ...

While Group A placed the main responsibility on the government, the participants recognized the importance of a complementary role for the private sector in both sharing and mitigating the losses:

In order to reduce the share of responsibility of the government, partners should be found. Who are the potential partners? In all three options, the potential partners are the people and the insurance companies. They are the ones who may participate in jointly bearing the burden ... High level involvement of the people in mitigation and reconstruction may be expected only if they are not subject to extremely large burdens, and a system of solidarity should be established that ensures an almost even distribution of these burdens. Although in principle, we agree that in regions

with high flood risks, higher insurance premiums should be calculated, we should ask then whether premiums should be higher in hilly regions due to the higher risks of earthquakes and landslides? Therefore, we don't support a proposal suggesting that the extent of flood risk should be the basis for calculating the insurance premium. On the other hand, we strongly support the idea that not only the government should take the responsibility for mitigation/reconstruction, but also the citizen. Thus insurance companies should be involved. Mandatory insurance, however, would be a form of taxation, and it would be difficult to make it acceptable.

Group A rejected the idea that the government act as insurer of last resort:

We can't accept a system where private insurance companies are reinsured by the government because this is essentially a burden on the citizen ... We would rather welcome the international practice of reinsurance agreements with larger companies or even with international companies.

This group therefore decided upon a mixed system of 50 per cent compensation from the government and the rest dependent on the voluntary purchase of insurance.

### **Option B1: private responsibility and insurance**

Option B1 (see again Figure 8.3) places significantly more reliance on private insurance for post-disaster compensation than is currently the case. However, in this scenario, the government would provide subsidies to protect households that cannot afford insurance. This option has the advantage of discouraging (non-poor) people from locating in high flood-risk areas by placing the burden on the pool of exposed persons rather than on taxpayers. In the light of earlier evidence of weak Hungarian support for more individualistic policy paths, it is not surprising that only one participant at the stakeholder workshop selected Option B1 as his preferred policy. He justified this choice as follows:

Option B1 is a concept that I can agree with, namely (based on) a French saying 'L'etat c'est moi' meaning 'I am the state', and also 'L'etat c'est nous' meaning 'we are the state'. We have to consider that if the government covers all the costs, this actually means that the costs are covered from the pocket of the citizens, including us ... Therefore, I agree with the proposal that the government should not directly provide compensation.

While the government should not provide compensation, taxpayers would be burdened in two ways: (1) to enable poor households to purchase subsidized flood insurance; and (2) to create a government emergency fund (a type of reinsurance) that would cover claims in the case of very large or multiple catastrophes that would go beyond the means of insurers.

### Option C1: a public insurance fund

Option C1 is a public insurance system, similar to the US National Insurance Flood Program, where the government fully underwrites the risks. According to this option, property owners throughout Hungary are required to purchase flood insurance from the government via a flat-rate tax on their property. This will shift liability for disaster relief from taxpayers to property owners. Private insurers administer the system on a commission basis by collecting the premiums and assessing and honouring claims after a flood disaster. The premiums contribute to a public catastrophe fund; however, in the case that premium income is not sufficient to cover losses, the taxpayer will be called upon to supplement the fund. The taxpayer is called upon again to subsidize poor households (up to 100%) in their purchase of insurance. Four members of the focus group selected this option, and the spokesperson justified the choice as follows:

In Hungary, the floods have already shown that there are risks for which insurance companies are unwilling to offer coverage on a market basis, and that's why we need a catastrophe fund ... operated according to non-market principles ... but not necessarily funded by the central budget. It's pretty obvious that private insurance companies will not offer coverage for standing water, nor for adobe houses, and so on ... At the same time we find the involvement of the government very important. The issue is not that I want to grow wheat at the wrong place, but it's rather that I won't be able to restart my life. This should not be managed on a market basis, and that's why I support Option C. There are regions that will never represent good business for the private insurance companies.

In discussing this option, the issue of risk-based versus flat-rate premiums arose:

At first, I found it a good idea to have uniform payment throughout the country, saying that if a relatively high number of people pay, then the premium can be lower. But then we started to think about how we could introduce something that will reflect the risks at the same time. Actually, we found this whole issue quite complicated, especially because not only floods and standing water should be considered, but other types of natural disasters, like earthquakes, windstorms, *etc.* Therefore, we should consider the implementation.

Notwithstanding the implementation problems, it was recognized that incentives should be in place to discourage households and businesses from locating in high-risk areas. As another member of Group C put it:

Maybe (the system) shouldn't be based on uniform taxation, but operated as an insurance policy. If not, then regulations should be very stringent,

especially with regard to standing water risks. The government's guarantee should only apply to buildings that have a building permit.

### Round five: a clumsy policy path

After arguing for their various policy perspectives, the workshop participants turned to a lively and heated discussion on a possible compromise. This deliberation led to an imaginative new system: *only households with private insurance would qualify for government assistance after a disaster, but the government would heavily subsidize poor households in their purchase of flood insurance.* It was also agreed that the government would not provide reinsurance for private insurers. This type of insurance program is similar to what is being currently discussed in Italy.<sup>29</sup>

In what ways is Option D a clumsy solution? Returning to the starting point – the original contested terrain – we see that the process moved incrementally and quite significantly from the prototypical positions (the corners of Figure 8.1) to a middle ground. The resulting policies are clumsy in the sense that they are not neatly based on a single rationale or value set, but are a creative mix of perspectives. They are also clumsy in that they create important win-win elements. First, taking a medium-term view, the state-protection position gains. The ministries can continue their role of compensating victims, with all the ensuing bureaucratic control, but at a lower cost. The additional expense of subsidizing poor households means that in the short run the government's fiscal problem is not solved (and the model demonstrated this). But in the medium term, the government budget will improve, as fewer households require subsidization. As one of the participants remarked, this policy will cost the government dearly in the short term, but it will create a culture of responsibility and insurance in the region over the medium term. Second, it appears that the heavy subsidization of insurance premiums for poor households placated those who are concerned mainly about social justice and holistic development. This is somewhat surprising since these voices had expressed a great deal of suspicion about private insurance.<sup>30</sup> Interestingly, as the process evolved, trust in insurance companies appeared to grow, perhaps fuelled by the recognition that most insurers in Hungary are foreign-based and financially more secure than their Hungarian counterparts.

### Towards an elegant future?

At least one caveat is in order. The clumsy solution on which the stakeholders decided would probably not have been endorsed by insurance companies, as it would have required them to offer greatly expanded cover at flat-based rates. No high-level representative from the insurance industry was present at the final stakeholder workshop due, as we have already mentioned, to a

last-minute cancellation. In a follow-up interview, we learned that the representative of insurance industry had not been able to make it to the meeting, as he had been expected in the Prime Minister's office to negotiate directly with government representatives.

As a result of these negotiations, the Hungarian government decided upon a novel flood insurance program. According to the new legislation, the government will fully underwrite flood insurance in high-risk areas (where most private companies do not offer flood insurance), and taxpayers will provide a backup if the premium pool is insufficient to cover claims. Consistent with the insurers' perspective, and in direct contradiction to the results of the clumsy solution, insurance premiums will be risk-based. Moreover, the premiums of poor households will only be subsidized up to 30 per cent.

Other aspects do overlap with our clumsy solution. Insurance will be voluntary and available only for homes built with a permit. It will cover all flood and standing water damages both in protected and unprotected flood basins. The indemnity can reach 100 per cent of the property value, but with a maximum of Euro 57,000.

The outcome of this new law is disappointing. As of September 2004, only 159 households had purchased flood insurance policies.<sup>31</sup> The Achilles heel of the new system seems to be that poor households will only receive a 30 per cent subsidy for their private, risk-based insurance premiums. Our study strongly suggests that this will not encourage many poor households in risky areas, such as the Tisza region, to buy insurance. If so, then the next major floods will significantly harm and threaten the most vulnerable Hungarians. Given that the great majority of Hungarians still feel that the government should be responsible for flood prevention and compensation, it would not be unlikely that a public outcry would follow the floods, perhaps forcing the government to abandon its plans and compensate all flood victims. Then, a lose-lose scenario would have unfolded: one in which the Hungarian government would have to spend lots of money (both in the short- and long-term), while poor Hungarians would be left at the mercy of the weather gods for the foreseeable future. It seems to us that our clumsy solution constitutes a safer, fairer and less costly alternative. The elegant solution, moreover, threatens to fatalize many of the more vulnerable of Hungarian citizens: something that is erosive of both constructive accommodations and democracy. Perhaps the senior representative of the insurance industry went to the wrong meeting!

## Conclusion

We have demonstrated that it is feasible to organize a participatory, deliberative process that respects, and builds on, the conflicting stakeholder perspectives, and leads to consensus on a single set of policies. Starting with a very broad survey of divergent views, interests and perspectives, the range of

policy options was narrowed and refined through repeated interactions with stakeholders. The process gradually moved from the contested terrain characterized by these arguably unsustainable policy 'corners' to increasingly clumsy options, culminating, at the stakeholder workshop, with agreement on a single clumsy policy recommendation. There was thus a process of reasoning and argumentation, which (contrary to many theories of deliberation) did not lead to a general agreement on the problem of itself. Rather, different stakeholders agreed to the clumsy solution for alternative reasons. A major breakthrough in this process was the eventual recognition by the key stakeholders that this assistance need not be in the form of direct compensation or rebuilt houses. Rather, it could take the form of subsidizing insurance payments – a mix of hierarchy and market to further an egalitarian cause.

Of course, the particular mix that characterizes this clumsy solution may turn out not to fully deliver on its promises: something that would create serious difficulties for any of the three 'corner solutions', since each of these is optimized around a single definition of what the problem is. Easing away from an optimal policy will inevitably make things worse (for quite some time, at least) since it would require a major shock – an 'optimal perturbation', as ecologists call it – to unlock oneself from a corner solution and find one's way to a better one. No such difficulties arise with clumsy solutions, however, since they are not optimized. With a clumsy policy, any of its diverse but complementary components can be strengthened a little, or weakened a little, in the light of experience and changing circumstances (Hungary's heritage of state-induced solidarity, for instance, is unlikely to stay the way it is), thereby moving the clumsy solution this way or that within the middle-ground.

In this chapter, we have unearthed one possible source of clumsy solutions: a deliberative setting that provides an opportunity for stakeholders and citizens to meet on equal terms to debate their perspectives and differences. Of course, clumsy solutions will not be generated in pure institutional settings, but in settings that mix institutional forms. In fact, we did not rely solely on deliberation to reach the clumsy conclusions. Participants in the workshops were selected by the research team, and were guided by computer simulations undertaken by IIASA members. Hence, this was a case of expert-guided deliberation.

## Notes

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  16. József Váradi, *How to Proceed after Floods and before New Floods? Development of the Vásárhelyi Plan* (Budapest: Ministry of Transportation and Water Management, 2001). (In Hungarian).
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22. A main difference between stakeholders concerned the question of whether premiums should be flat or risk-based. Many stakeholders expressed dissatisfaction with instituting risk-based premiums. An exception, not surprisingly, was voiced by a representative of the Association of Hungarian Insurers, who advocated more risk-based insurance, accompanied by government assistance to those who cannot afford the high premiums.
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  30. But not *that* surprising, given that the main egalitarian focus is on ways of drastically altering the current system of physical intervention in the river itself, in the dependent ecosystems, and in the land-use practices of those who live in the region. The egalitarian voice, as we have already mentioned, is inevitably somewhat muted by our focus on just the insurance aspect. Ideally both aspects (and in particular, win-win possibilities across these aspects) should be considered.
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# 9

## Inclusive by Design: The Curious Case Of the Internet

*Tommy Tranvik and Michael Thompson*

The Internet originated in a strongly hierarchical setting: the United States military. Way back in the 1960s, the Pentagon became seriously concerned about the vulnerability of its communication systems in the event of an all-out nuclear attack. It therefore commissioned a research programme aimed at 'strike-proofing' these systems. The answer the researchers came up with was to distribute the crucial communication functions across a non-hierarchical net, so that, like a spider's web, it would retain its integrity even if holes were blown in it here, there and almost everywhere. To actually create such a network, a way would have to be found to get the computers to speak to one another without information having to pass through a central hub. This, as the many tellings of the Internet story all recount,<sup>1</sup> first happened in October 1969.

It is important to remember that, at that time, powerful computers were room-sized machines that belonged to heavyweight outfits, such as government departments and agencies, big corporations and universities. Personal computers came along later (in 1975), just in time for the bottom-up, small-is-beautiful campaigners of the (post) Vietnam era to realize their potential, especially when (thanks to the US military's public-spirited breakthrough, and the use it was put to within the university sector) they could be linked to one another in this distributed way. So, again as the many accounts of the Internet's development make clear, it was this largely unexpected domestication of computer power that transformed the esoteric ARPANET (as the US military's invention was called) into what we now know as the Internet.

Another thing that the storytellers seem to agree on is that the novelty of the Internet is in its simplicity. The Internet, at its most basic level, is made up of a bundle of software called communication protocols (or the TCP/IP programmes) that determines how computers interact (i.e., send and receive information). This software is freely available and unlicensed. This means that anyone can install it on his or her local computer or network without paying royalties, and become yet another node in the confusing and

ever-increasing web of electronic connections that collectively is referred to as the Internet. Closely related to the basic communication protocols are layers of various other software programs, the most important being the Hypertext Transfer Protocol (HTTP), which governs the exchange of different types of data-files. The World Wide Web is the total collection of resources and computers that is using the HTTP protocol. Like the basic communication protocols, HTTP (along with many other software programs) is made available over the Internet free of charge.<sup>2</sup> As a result, no one owns the Internet or its basic technologies, and no institution is in charge of what is going on over the network. It cannot go bankrupt, be held accountable for its actions, go on strike or stop providing more information. The point is that many of the important decisions that make the Internet attractive to many people (and unattractive to some) are made by the users themselves. This also means that the technical and human intelligence that makes the Internet spin is non-centralized (it is a distributed network), which explains why bankruptcy is not an option. In order to put someone out of business, there needs to be a centralization of decision-making power; that is, a group of people (owners, board members, executives, and the like) pulling the money-losing strings. That, if you pause to think about it, is how things are in the sorts of technological networks – those that let us phone one another, for instance, or that supply our houses with energy – with which we have long been familiar. To find these people, we only need to follow the strings to where they are knitted together. Nation-states have the same centralized string-pulling structure (although the level of centralization varies, depending on internal organization – federations and confederations are of course less centralized than unitary states). And, if the nation-states are democratic, the citizens at the end of the strings can pull back, changing the composition of elites at the higher echelons of power. What is more, the way older technological networks have developed has been closely linked to the way the nation-states have developed. All roads, it was said, lead to Rome, and much the same is true of French railway lines and Paris. But in Germany there is a plurality of nodal stations that reflects its federal structure (and vice versa). But nothing like this happened with the Internet.

Even so, there may be some clustering of strings. There are junction points that the Internet traffic needs to pass through on its way from sender to receiver. However, there is a large number of these (many, many more than there are regional cities in Germany for the railway lines to converge on), and – contrary to the string-clusters formed by businesses and nation-states – it is unclear where the traffic is coming from, and where it is going to. Moreover, the strings are not of a permanent nature. Two people communicating through junction point X in the morning may be communicating through junction point Y at lunchtime. And, in order for the traffic to reach X or Y, it is usually routed via a number of intermediaries that may change from one communication session to the next.<sup>3</sup>

However, some Internet researchers suggest that Internet traffic is governed according to a logic of increasing returns. Routing computers – equipment that directs packets of digitalized information to their destinations – with many strings (communication links) attached to them are likely to attract even more strings, while those with few strings attached will stay marginal. This has been called the ‘Matthew effect’ – from the biblical: ‘To those that have shall be given and from those that have not shall be taken away, even that which they have’. If this is true, then the global number of junction points may be reduced considerably, perhaps to as little as 230,000 (see [www.nd.edu/~networks/](http://www.nd.edu/~networks/)). But this complexity-reduction depends on the amount of Internet traffic staying at roughly the same level as today, which is unlikely. The probability is that the layout of broadband connections – those strings that link individual users to the ‘fat’ national and international communication pipelines – will increase the amount of traffic and, in a partial reversal of the Matthew effect, push more of it over to the junction points (routing computers) that have relatively little work to do. This, of course, will increase the number of important junctions far beyond the 230,000 level. In any event, the strings of the Internet – as any topographical picture of the network shows – are not particularly clustered (even if some areas of concentration can be identified), and certainly not to the extent that the sorts of rules of accountability that we are used to with older technological networks can be applied in any meaningful sense. Instead of running in and out of one or just a few centres of control, strings crisscross at different levels, in seemingly incomprehensible and ever-shifting ways.

The Internet is not only distributed in nature, but is also characterized by its ‘inside-outness’. That is to say, its ends (the personal computers and their users) are smart and its centralized parts (routing equipment, for instance) are relatively dumb. This is the exact opposite of how things are with power stations and telephone exchanges. The combination of the Internet’s distributed nature and its ‘inside-outness’ opens up the possibility of structuring online social relationships in accordance with a number of different and mutually incompatible rules of organization. This, it seems, has suited three of cultural theory’s four ways of organizing, perceiving and justifying social relations fine.

Supporters of *individualism* took to the Internet because its instantaneous and asynchronous communications seem ideal for personal networking or quick information searches. And because its global reach promises an ever-expanding market, largely free (thanks to the network’s accountability-outsmarting features) from regulatory authorities, it is likely to reward the best and the brightest. Here we find peer-to-peer networking communities (like the late Napster), Linux (and other so-called open-source communities), the loudly proclaiming prophets of libertarian cyber-ideology, and the freelance crackers who break into supposedly Fort Knox-like online databases to prove their skills to kindred spirits. Typical of libertarians, for

instance, is their insistence that electronic networks will usher in a new social order, where there will be no place for 'old' and 'repressive' big business and big government:

Governments of the Industrial World, you weary giants of flesh and steel,  
I come from Cyberspace, the new home of Mind. On behalf of the future,  
I ask you of the past to leave us alone. You are not welcome among us. You  
have no sovereignty where we gather.<sup>4</sup>

The dotcoms too were here, intent on turning the Internet into a giant shopping mall. However, as we will see in a moment, they are currently disengaging from the individualistic way of organizing and, in response to certain changes in the nature of the Internet, moving towards more hierarchy.

Those subscribing to the *fatalistic* way of organizing and perceiving, quite naturally, were (and still are) one of the consumer groups targeted by individualistic organizations: those most likely to enjoy 'infotainment' (and pornography), and to pay anyone for saving them the trouble of having to search for the material themselves. In this corner, we probably also find the disgruntled, self-proclaimed digital sweatshop workers who have, for years now, chronicled their 'nasty, short and brutish' Internet careers on various websites. Bill Lessard and Steve Baldwin, two of the most articulate and successful of the so-called 'netslaves', have, in books such as *NetSlaves: True Tales of Working the Web*,<sup>5</sup> provided graphic (and humorous) accounts of how life is for those in the dotcom industry who never cash in on multi-billion-dollar IPOs, but spend their underpaid days slogging through ever-growing piles of e-mail queries, for instance, or are in charge of monitoring smutty Internet chats. Behind (and beneath) every Internet 'gazillionaire', they insist, there is an army of downtrodden and alienated bread-and-butter workers.

Upholders of *egalitarianism*, on the other hand, perceive this free-floating system of zigzag electronic paths as a technology that has the built-in potential to equalize differences. Since it was originally designed to circumvent gates and gatekeepers – the very mechanisms that, according to the adherents to this way of organizing, introduce and perpetuate inequalities among people – the more transactions we can shift over to the Net, the more levelled we will all become. Here we find consumer rights groups, civil liberties crusaders, virtual share-everything communities, altermondialistes (de-globalizers), and so on. The Global Eco-village Network (GEN), for instance, links into a virtual community a number of real communities that are much concerned with education and the desire to integrate ecology, sustainability and community development ([www.gaia.org/thegen/index.html](http://www.gaia.org/thegen/index.html)). Founded in 1994, and open to everyone (individuals and settlements) interested in these issues, it has grown in size while still retaining its horizontal character and 'conversational' style, thereby enabling real local communities to

maintain their small-scale, face-to-face interactions (community with propinquity), while, at the same time, achieving, in virtual terms, global solidarity and commitment (community without propinquity).

Left standing on the sidelines, a bit puzzled and confused, were those who believed in *hierarchical* ways of organizing; in particular, law-enforcement services, national security agencies and tax authorities, often backed by big offline businesses, such as the music and film industry. (Businesses that, finding that they are in danger of becoming the dinosaurs of this world, want the world to turn into a huge dinosaur sanctuary). Being committed to centralized technological systems that command the resources, as well as to the expertise and the authority needed to direct the behaviour of people according to predictable norms and regulations, these actors found little comfort in what they regarded as a jungle of bits and bytes. To them, this constituted a disorderly realm in which online life was likely to be 'solitary, poore, brutish, nasty and short' (and, with the bursting of the dotcom bubble, they have, at least to some extent, been proved right). If it is an uncontrolled mess like that, they reasoned, it cannot be important; and if it is important then it cannot be left the way it is. Since it was increasingly apparent that it was important (and not, as many have wishfully claimed, 'just another Citizens' Band Radio'), these actors decided they must shoulder the burden and sort out the mess. Hence the ambitious Information Superhighway plans that were hatched, in the mid-1990s, in states around the world. Nationally controlled electronic networks were to be built, in cooperation between the state and private enterprises. This was the hierarchical way of handling 'the cyberspace challenge'. But these plans, in their original framing, came to nothing, being overtaken by the rapidly developing Internet before they were even off the ministerial drawing boards. Today these hierarchical actors focus more explicitly on things like content-regulation (censorship laws), restrictions on the use of encryption tools, enforcement of copyright laws, ways of combating crackers, apprehending terrorists, defeating drug dealers and so on. These, of course, are fairly conventional hierarchical activities – activities that are likely to be tolerated, if not always welcomed, by the upholders of the other ways of organizing.

The conclusion so far, then, is that the Internet, in its original free-wheeling design, was beneficial to everyone but the nation-state establishment (and its supporters among 'big business'). Yet, the hierarchical actors are not locked out of the Internet in the way, say, that egalitarian actors found themselves locked out of the technology of nuclear power. The technological design of the Internet renders lock-out virtually impossible. There is, for instance, no way in which the Internet could have its own special police force of the kind that is deployed around Britain's peaceful nuclear establishments. But, of course, there are cyber-cops who routinely patrol the highways and byways of the Internet, trying their best to bring a certain level of law-abiding civility to the darkest corners of the Net. The Internet, it would seem, is intrinsically clumsy and flexible.

The main explanation for this relative absence of hierarchy, as we have already suggested, is probably that, contrary to the followers of other ways of organizing, the hierarchical actors saw neither rhyme nor reason to the relational complexity that the Internet provided. While the others jumped in and exploited the flexibility that this relational complexity made possible, so as to structure online social relationships each according to their preferred mode of organizing, the hierarchical actors perceived few opportunities for re-making the Internet in their own image. The biggest difficulty, it seems, was to establish links between the three types of informational resources needed to effectively govern the online world: offline identity, offline location and online activity. As long as it was deemed impossible (or, at least, very difficult) to make these connections – ‘no one’, it used to be said, ‘knows that you’re a dog on the Internet’, nor do they know where you are – regulating institutions would stand little chance of pinpointing who was responsible for what or of establishing where those responsible could be found. But, with the rise of dotcoms and online commercialization around the mid-1990s, a new technology became central to the development of the Internet: high-end encryption. Ironically, Internet use of high-end encryption was first championed by the libertarian open-source crowd, but, like a modern-day version of Mary Shelley’s *Frankenstein*, the proliferation of online encryption tools has turned on its inventors. Encryption has become a powerful weapon with which to re-organize the Internet along hierarchical lines. The question therefore arises: will this destroy the current clumsy balance between all virtual ways of life?

### Encryption: the virtual arms race?<sup>6</sup>

The trouble (or the wonderful thing) with technology is that it seldom sits still.<sup>7</sup> No sooner have we got ourselves to some satisfactory accommodation with it then some invention moves it on. And, since some of those new inventions can move a technology on to such an extent as to make it almost unrecognizable, there is a good chance that the satisfactory accommodation will be blown apart. Something along these lines, we believe, has been happening with the Internet. The development of high-end encryption has given rise to an ‘arms race’ between the adherents to different ways of organizing and perceiving, with each group attempting to shape and use this new technology so as to further its own ends and norms. This arms race was sparked by the first asymmetrical cryptosystem that fitted the requirements of what is called the Diffie-Hellman-Merkle key exchange (1976) (which we will explain in just a moment), and the creation of the World Wide Web (early 1990s). It was spurred on by the end of the Cold War (which lessened the perceived legitimacy of the state monopoly on encryption technologies), and by the rapid increase in the Internet’s popularity (which increased the demand for civilian encryption). In this virtual arms race, the adherents of individualism, egalitarianism and fatalism tried to outflank the controlling



efforts of the hierarchical actors, and the hierarchical actors tried to get at least one jump ahead of the outflankers. Initially, the outflankers managed to stay ahead, with many of the hierarchical actors' cunning ruses ending in failure (or even farce).

Before we can describe these developments in more detail, we first need to explain what high-end encryption is. Encryption technologies are pieces of equipment used to scramble the content of messages sent over insecure communication channels.<sup>8</sup> If the message ends up in the hands of a third party it will prove unintelligible, because he or she has no access to the equipment needed to encipher (code) and decipher (decode) the message. The communicating parties ('Alice' and 'Bob' in crypto-speak) must be in possession of the encryption key, or the set of rules, which informs the parties how the plain text should be enciphered and deciphered.<sup>9</sup> In what are called symmetrical cryptosystems, the same key is used both for enciphering and deciphering; deciphering simply reverses the process used to encipher the plain text.<sup>10</sup>

Over the last 20 years or so, however, asymmetrical (or public key) cryptosystems have largely replaced the symmetrical ones in electronic communications. In asymmetrical cryptosystems, different keys are used to encipher and decipher messages. Deciphering, in other words, is not simply enciphering in reverse; different rules are used for enciphering and deciphering. The implications are that, when Bob sends Alice a message, Alice will know: (a) that it was Bob that sent it (authentication – digital signatures); (b) that the content of the message has not been altered during transmission (integrity control); and (c) that Bob, if acting on behalf of an institution or organization, is authorized to do or say whatever it is that he is doing or saying on behalf of that particular organization or institution (authorization).<sup>11</sup>

As long as symmetrical cryptography was the only game in town, cryptosystems were managed according to the principle: 'Cryptography + loose discipline = chaos'.<sup>12</sup> Avoiding chaos required hierarchical control of cryptosystems: a central authority had to manage and distribute the ciphering/deciphering keys used by subordinate nodes: not something that could be easily plugged into the inherently chaotic and authority-dodging Internet. In asymmetrical cryptosystems, however, key administration can be totally non-centralized, and it is the individual nodes that decide the timing and use of the different keys (as opposed to symmetrical systems, where a central authority decides which keys the subordinate nodes must use and the timing of use).<sup>13</sup> This means that asymmetrical cryptography mirrors the original structure of the Internet, making it particularly attractive to upholders of the individualistic, the egalitarian and the fatalistic ways of organizing, and an awful headache for those who are striving to uphold hierarchy.

Supporters of *individualism* enjoy using asymmetrical encryption because these systems are based on non-hierarchical principles and, moreover, secure

the right to privacy in the face of what individualistic actors tend to regard as intrusive state authorities.

*Egalitarian* actors support asymmetrical encryption schemes because, in addition to being non-hierarchical and providing privacy in relation to state authorities, they also secure privacy from commercial actors' efforts to track peoples' online habits. On top of all that, they can help in the vital business of building and maintaining virtual communities (online places where like-minded congregate to enjoy each other's company) by keeping unwanted intruders out.

*Fatalistic* actors ('couch-potato' consumers, for instance) may think asymmetrical encryption is a good idea, since it gives them the opportunity to consume in peace whatever services they find to be of amusement.

The headache for *hierarchical* actors – in this case, the nation-state establishment – is that asymmetrical encryption is a technology that can beat the enforcement of laws and regulations that uphold the kind of social order they are committed to.<sup>14</sup> That asymmetrical encryption will open the gates to the barbarians may be overstating it a little, but the feeling is that, if the Internet becomes as important for all sorts of social and economic activities as most people are inclined to believe, then it will have to be brought under public control. This feeling was of course massively strengthened after 11 September 2001, by reports that the al-Qa'ida terrorists had coordinated their attacks through encrypted e-mail. As a consequence, hierarchical actors initially fought encryption programs as hard as they could, albeit with little or no success.

In June 1991, Phil Zimmermann, a former peace activist, released (on a Usenet bulletin board) an easy-to-use encryption program that was based on the RSA cryptosystem. The program was called PGP (Pretty Good Privacy) and it became an almost instant hit with human rights groups around the world, who started to encrypt their documents so as to prevent them from falling into the hands of the regimes they were accusing of human rights abuses. The United States National Security Agency and the Federal Bureau of Investigation, however, were concerned that the program would be used by the Four Horsemen of the Infocalypse – drug dealers, organized crime, terrorists and paedophiles – and, in 1993, Phil Zimmermann found himself subject to a Grand Jury investigation. The FBI, though doubtful about securing a conviction, nevertheless accused Zimmermann of exporting a product that could assist hostile states and terrorists by making it easier for them to evade the authority of the United States government. The formal argument invoked by the FBI was that it was illegal for US citizens to export high-end encryption without an export licence.<sup>15</sup> On the other side of the Atlantic, however, the export regulations regarding high-end encryption were more liberal. European hackers, therefore, started to improve on Zimmermann's software, even while the investigation was going on in the United States, and they then made their PGP versions available to the rest of the world over the

Internet without running into any trouble with the European authorities. The FBI, realizing that the battle to contain the spread of PGP to countries outside the United States was lost, dropped the case. The battle might have been lost, but the hierarchical war to control high-end encryption had just begun.

The next skirmishes were around the attempts to promote what were called key escrow systems. Again, the most famous engagement was in the United States. In 1994, the US government introduced the Escrowed Encryption Standard – an asymmetrical cryptosystem for telephone and computer communication – which is now obligatory for private companies doing business with the US government. What caused controversy, however, was the Clinton administration's proposal to make the standard mandatory for all encrypted computer communication (by installing in all new computers a special chip containing the Escrowed Encryption Standard). Since the cryptosystem is asymmetrical, the private key, according to the administration's proposal, would be split in half and stored with two different government agencies. If law-enforcement necessitated access to encrypted computer communication in criminal investigations, the two parts would be handed over to the relevant authorities (after a court order had been issued), so that the suspect's communications could be tapped.<sup>16</sup> The proposal was met with fierce resistance from civil libertarians (combining individualistic and egalitarian arguments) and the computer industry (on purely individualistic grounds). These groups argued that the proposal was equivalent to all citizens being forced to leave copies of their home keys with the authorities, and that the export of American computer hardware and software could be hurt, if foreign customers feared that the US government might be tapping their encrypted communications.<sup>17</sup> The proposal was presented before the US Congress several times (going under the names Clipper I, II and III), but never gained majority support. Its opponents successfully managed to frame the issue as a classic all-American fight to secure the right to individual privacy in the face of intrusive, big government. But, even though the Clinton administration lost the key escrow battle, new tele-infrastructure in the United States is now designed in a surveillance-friendly way in order to make it easier to install search and monitoring devices.<sup>18</sup>

These two set-backs have not deterred the would-be controllers. They have bounced back with all kinds of technically ingenious schemes, supported in many cases by hard-hitting sanctions. In the European Union, for instance, it is proposed that all Internet traffic should be registered, stored and made available to the police if necessary. And in England,<sup>19</sup> public and private operators of communication systems are legally mandated to design their networks with surveillance and monitoring capacities, and users of high-end encryption, for their part, must turn over the private key to the police if asked to do so. Anyone who does not comply (regardless of reason) faces a two-year prison sentence. Similar ideas are being discussed in Norway and

elsewhere, and it might seem that, as more and more territories are policed in this way, hierarchical control may eventually be expanded to cover pretty well the entire Internet. But, given the enormous (and increasing) amount of Internet traffic, the uneven capacity (and will) among EU countries to implement Union-level requirements and, most of all, the staggering technical and ‘whole system’ obstacles represented by the technology itself, it is doubtful whether such measures could ever prove effective.

The trouble with all these proposals is that they are trying to make the interconnecting links ‘smarter’ than the nodes (personal computers and users) by adding technical capabilities at the junction points (supported, as we have pointed out, by legislative measures). Users, however, are still free to add all sorts of ingenious counter-capabilities at the nodal level and, since that is the ‘smartest’ level, the likelihood is that, as has been the case throughout the ‘arms race’, the attempts to impose full hierarchical control will again be defeated. To achieve overall control, the upholders of hierarchy would have to turn the entire Internet’s distributed ‘inside-out’-structure ‘outside-in’ (central control, subordination of the nodes): a truly daunting undertaking. One, moreover, that, if successful, would actually destroy the Internet. If the Internet was not ‘inside-out’, then it would not be a distributed system anymore, in which case its defining qualities would be eliminated.

It might appear from these events that any efforts to subject the Internet to a strictly hierarchical logic will always be destined to fail, given the technological characteristics of the Net – and that, therefore, the present clumsy balance (in which state authorities have a relatively minor but still vital role to play) is assured forever more. Appearances, however, can be deceptive, and in this case the deception stems from the belief that with asymmetrical encryption, unlike symmetrical systems, the Internet remains the way it is. What has been overlooked are the small and seemingly merely technical changes – we called them authentication, content control and authorization earlier in the chapter – that will have to be made, if Bob and Alice are to actually achieve the level of security that they are looking for. Prominent among these measures are things like DRM (digital rights management) systems, digital signatures, digital cash, certification authorities, TTPs (trusted third parties) and geo-location technologies. Together, these measures are profoundly altering the Internet’s design, and may usher in a new alliance between the adherents to hierarchy and the defenders of individualism; an alliance that might destroy the Internet’s current clumsiness.

## Hierarchy: the revenge

To clarify this, we need to take a close look at these seemingly small, technical measures that might have a huge impact. Rousseau’s lament – ‘Born free yet everywhere in chains’ – applies to more than just human beings.

Information too can be straitjacketed, and this is precisely what happens to it when it is wrapped up in encryption-based management systems. Such systems, which come in many different forms and shapes and are collectively called *digital rights management systems*, rely on high-end encryption to prevent information and proprietary software from being copied, once it is deciphered on a person's computer. The systems can be instructed to automatically track the way each user handles downloaded and copyright-protected material, charge fees according to its use, prevent certain types of use that the user has not paid for, prohibit the removal of copyrighted material and so on.<sup>20</sup> The point is that, until recently, when someone bought a book or a CD (compact disc), the publisher or music company had no idea about the identity of the buyer, where he or she lived or what the person was doing with the product after it was bought. Digital rights management changes all that. Under the new technological regime, a product or a service is not purchased in the old-fashioned sense of the word – the user making a one-time payment and receiving unlimited use – because it becomes possible to implement differentiated payment schemes based on 'real-time' information flow.<sup>21</sup> The bottom line is that rights management – by gathering, systematizing, storing and managing very detailed information about an individual user's identity, activity and location – facilitates the kind of informational control that the exercise of hierarchical online control depends upon.<sup>22</sup> Chains, of course, can be removed, and many of those who are striving to uphold the individualistic and egalitarian ways of life are now directing their energies towards that liberating task. But, as the technologies and legislative structures for straitjacketing information proliferate, they may well be faced with an uphill task.

*Digital signatures* provide another example of encryption-based rights management technology. Digital signatures use encryption to verify and check information: electronic documents can be stamped with unique identifiers, signer's name, location, the time and other types of information. Those users who do not wish to reveal this type of information can instruct their operating systems to disable rights management technologies like digital signatures, but, by doing so, they are also effectively disabling their chances of communicating with those private and public institutions that demand the use of, for instance, digital signatures. This may, in the end, prove to be too high a price to pay for all save the most zealous champions of informational privacy. That price, moreover, will become even higher if (or, most likely, when) rights management technologies are overlaid by digital cash systems.

*Digital cash* may seem like a futuristic dream, but it is not.<sup>23</sup> In simple terms, digital cash is money suited for electronic transactions. It is neither coins nor notes, but bits and bytes; that is, money converted into binary code. Digital money – residing in various types of smart cards (cards with a chip that holds the digitalized information that is the means of payment),

on computer hard drives or in online bank accounts – will make the business of doing business far cheaper than it used to be. The problem is – and it is here that encryption enters the picture – that digital cash is easy to make perfect copies of. In theory, anyone with a computer can start printing his or her own money. How, then, to ensure that people use the same digital penny only once?<sup>24</sup> The answer is to employ the digital rights management technologies described above. Each digital unit of money is wrapped up in encryption, stamped with unique identifiers and instructed to collect all kinds of information; for instance, who, when, where and for what purpose it is spent. Money can therefore travel electronically from smart card to smart card, hard drive to hard drive; it can be saved for a rainy day, but it cannot be copied and used many times over (unless someone manages to crack the seal of encryption). This is great, if your job is to fight money launderers, kidnappers, extortionists, terrorists, drug overlords, black marketers and credit card fraudsters, or for a central bank wondering where all the unaccounted for money has been going.<sup>25</sup> But the horror of horrors, at least for the would-be information liberators, is an Internet economy supported by layer upon layer of digital rights management systems. First, companies use them to track merchandise, and then governments (and banks and credit card companies) use the same techniques to track the money that buys the trackable merchandise.

*Certification authorities* solve one important problem associated with asymmetrical encryption systems: how does Alice know that Bob's public key (the one circulated over the Internet) actually belongs to him and not to someone claiming to be Bob? In the absence of certification authorities, Alice can never be 100 per cent sure about the authenticity of Bob's public key. Certification authorities are organizations (public or private) that will verify that a particular key belongs to a particular person (or not). Such organizations do not pose any threat to security, since the only role they perform is the ability to make the correct connections between keys and real life identities. They exercise no power over the crucial part of asymmetrical cryptosystems – the secret private key. As such, certification authorities provide a necessary service without contributing greatly to the administrative re-centralization of encryption control.

*TTPs* (trusted third parties), on the other hand, provide a service called key recovery. What happens to electronic documents enciphered with a person's or an organization's public key, if the private one – the only key that can decipher the documents – is destroyed or lost? The answer, of course, is that the documents will stay encrypted and unreadable for the foreseeable future – perhaps forever. TTPs, however, keep copies of private keys. Hence, they provide a back-up solution in case keys are destroyed, or are otherwise unavailable. In effect, TTPs are key-escrow agents that centralize the control over encryption technologies, and which may also give law enforcement agencies access to a client's private key (during police investigations, for

instance). One problem with key depositories is that there is a lot at stake if the depository (a database) is successfully hacked, or if an unfaithful employee turns over private keys to criminals. One of the main advantages with asymmetrical cryptosystems, after all, is the avoidance of security hazards caused by the centralized storage of keys. Even so, the proliferation of e-commerce is likely to force industry to work with governments in order to form TTP services.<sup>26</sup> This means that TTPs will probably be seen as necessary parts of a technological, legislative and institutional infrastructure underpinning the commercial use of encryption tools, simply because e-business (and other heavy private users of encryption) need the stability, predictability and public trust that are conveyed by this type of scheme.

*Geo-location technology* further demonstrates how and why mainstream businesses work for, and not against, greater centralized control of the Internet. The only passports available on the Internet are the IP (Internet Protocol) addresses, but there is no connection between a computer's IP-address and its geographical location. This means that the crucial link between offline identity and location, on the one hand, and online activity, on the other, is broken since IP-addresses are not geo-specific. Geo-location is software that analyses Internet traffic in order to determine the location of individual users. For example, geo-location is a function that will be built into the 3G cellular phone networks when they get fully under way. Geo-location technology is advantageous for pinning down emergency calls made over a cellular phone network, but it may also prove to have significant commercial value.<sup>27</sup> Many dotcoms build individual customer profiles, based on electronics logs containing information about Internet users' surfing and shopping habits, in order to target their marketing strategies more accurately. But, since they usually do not know where individual customers reside, it is not possible for dotcoms to then market geo-specific products: goods and services that are available close to where the customers live. To make online commercials more effective than they are at present, geo-location technologies have therefore been proposed as one solution – the intimate linking of merchandize and customers through location-specific marketing.

What all these technological and administrative measures add up to is the advent of a new alliance: individualism (in the form of the survivors of the dotcom bust) and hierarchy (regulatory agencies) may be side-lining egalitarianism in a joint effort to realize the money-making and location-pinning potential of the Internet. But what may this mean for the future of the Internet? Is it just a new form of relative absence of one way of organizing and perceiving – egalitarianism going out to the margins as the hitherto marginal hierarchy muscles its way in – or will the new alliance actually lock out the egalitarian way of life altogether and push the Internet down the road to non-clumsiness?

## Built-in clumsiness: has it got a future?

Virtual community builders, at present, are by no means excluded. Indeed, they are energetically carrying the egalitarian torch against the new alliance of individualism and hierarchy – a torch that was lit during the first decades of the Internet's existence (counting from October 1969, when the first message was sent across the ARPANET). In those days, egalitarian ways of organizing and perceiving were at the core of the youthful technology; now, though it certainly has not been excluded, it is no longer so central. Endless change, but with little (if any) exclusion, is what makes the Internet so different from other technologies, and that curiousness stems from the Internet's distributed and difficult-to-control nature. Clumsiness (albeit of a rather wobbly kind, thanks to one and then another way of organizing going in and out of relative absence), in consequence, is almost an in-built property of the technology, and elegance (as the early hierarchical actors soon discovered) is not easily achieved. But might the new alliance achieve a degree of centralization and control sufficient to invert (or, at least, seriously compromise) the Internet's original design features? And, since it is also our argument that clumsy technologies are rare, is there anything that can be done to avert this slow crawl towards elegance (if it is indeed happening)? Our first answer is 'Yes, it might happen', and our second answer is 'Yes, there is quite a lot that can be done to prevent it happening'.

Our more general concern is that, if there are some significant technological developments during a period when one way of organizing and perceiving is absent, then there might be a loss – an avoidable loss – of flexibility. Certain contentions that might well have put some spokes in those innovative wheels will not happen, and several forks in the technological road will have been passed on automatic pilot, as it were. This, if you pause to think about it, is what is currently happening with the various encryption-based technologies we have just looked at: The individualistic/hierarchical logic, at each fork in the road, is so compelling that the alternatives have been overlooked or wilfully ignored. The cumulative effect threatens to be lock-in – lock-in of a kind that may antagonise many Internet users in much the same way that the technologies of nuclear power and of genetic modification have left no congenial space for the upholders of certain ways of organizing. Some measure of protection from the Four Horsemen of the Infocalypse is one thing; having your every movement (on the Internet) scrutinized by the Big Brothers and Sisters of the software industry or law-enforcement agencies is quite something else.

## The individualistic/hierarchical club (and its critics)

Online commercialization – starting around the mid 1990s, and spurred on by the invention of the World Wide Web and of Internet browser tools – promised



at first to enhance the Internet's inherent clumsiness by giving the libertarian culture of small and nimble dotcoms a chance to influence the evolution of the network. But of course the dotcoms, as it turned out, were not as nimble as they claimed to be. The quest for profits, when combined with this lack of nimbleness, introduced the Internet to the logic of centralization and control. The culture of sharing limited resources (the 'university model' as it has been called) came under pressure, as scarcity was re-interpreted as a source of revenue. The problem with informational scarcity, however, is that it can easily be turned into abundance when the information (of its very nature) is duplicable and distributable in infinite copies at virtually no cost. This 'resource abundance', of course, is one of the main characteristics of the Internet, which, when it runs up against the money-making motives of dotcoms, must be curbed by new and encroaching ways of controlling information and what it is used for. Encryption, as we have seen, is the answer to this conundrum. By putting electronic locks on every piece of information, and selling access to the keys that unlock them, information, and the customers' use of it, can be monitored and controlled in real time from central but remote locations. Many of the common-pool goods that have been nurtured by the egalitarians are being (or have been) snaffled away from them, and transformed into private goods. The egalitarian way of life is being squeezed by these technological developments.<sup>28</sup>

Nor is it only dotcoms (and other types of information-rich businesses, such as film and music companies) that stand to benefit greatly from encryption and encryption-based technologies. Nation-states too depend, if they are going to make their sovereignty stick online, on exercising some control over what the citizens are using the Internet for. Centralized commercial control of online information thus becomes one intake to the exercise of national sovereignty (as governments can get access to the consumer records of businesses). Demanding that citizens use encryption-based technologies when interacting electronically with government institutions is another. Is this, we must now ask, where the Internet is headed?

'Making predictions', as Sam Goldwyn rightly pointed out, 'is very difficult, especially about the future'. Even so, no single actor or pair-wise alliance, cultural theory forecasts, will stay on top indefinitely. As centralization and control proliferate, those who embraced the original design of the Internet – the free-wheeling individualistic and the caring-and-sharing egalitarian actors – are being pushed towards the fringe. The mainstream is becoming the backwater, while the former backwater (hierarchy) is becoming one of the core players. It is this long-term, ping-pong nature of core-fringe relationships that is the historical heritage of the Internet, and this is why an overly synchronous view of the Internet (the freezing of the analytical time-frame to the here and now) is unlikely to discover the real significance of these time-entrained dynamics. Whether or not the time-entrained core-fringe dynamics will continue to prove viable over the years to come is a wait-and-see question. Our guess is that they will, but that the nation-state

establishment (hierarchy) will continue to stay at, or very close to, the core (particularly if, or when, the Internet becomes a major economic marketplace), and that this core will, from time to time, be upset by technological innovations hatched and implemented by other actors residing closer to the fringes. Freely available software that unlocks the anti-copying protection that the publishing, the music and the film industries have wrapped around their products is but one example of the types of upsets we can expect to see more of in the future.

But these sorts of dynamics do not look after themselves. If we just sat back, telling ourselves that, whatever we did would make no difference – that it is core today, fringe tomorrow, regardless of how energetically we may strive to get in there and stay in there – then the dynamics would break down and we really would have become elegant: fatalism would have silenced all the other voices! The reason, of course, is that technological clumsiness depends on actors representing all the ways of life developing some feel for the openings and closings within the dynamics, and then gathering together their resources during the times when things are closed to them so as to be able to make the most of the openings when they appear. The nice thing about the Internet, therefore, is that, providing you do not harbour the ambition of fully dominating its overall development, it does not matter much whether you find yourself at the core or out on the fringe. Regardless of where you are, you can still do your thing – that is the novelty of the clumsiness that is inherent in the Internet's distributed structure.

The particular form of clumsiness that is emerging from the new core-fringe relationship we have just sketched, we suggest, looks something like this (but, of course, it will not stay this way for ever):

- Aided by various technological systems, supporting legislation and institutional adjustments, *hierarchy* will find that the Internet actually increases its ability to exercise nation-state sovereignty (particularly, by making the crucial informational link between online activity, on the one hand, and offline identity and location, on the other). This will undoubtedly raise difficult and disturbing questions concerning issues like electronic surveillance and privacy.
- Some *individualistic* actors (in particular, competitive enterprises selling information-rich goods) will support the nation-state's role as the digital Leviathan because: (a) they are themselves heavy users of the same surveillance and control technologies; (b) they produce and sell these technologies to national governments; and (c) a stable business framework is best implemented and enforced by the nation-state. Open source libertarians, however, will use the fringes of the Internet to drum up support for measures that enhance privacy and individual online autonomy.

- *Fatalistic* actors may find the new relationship between online business and government comfortable, if the consequence is effortless access to better and tailor-made products and services (especially the dodgy ones).
- Lastly, the supporters of *egalitarianism* (first and foremost the virtual community builders) will continue to find comfort in their virtual communities of the like-minded, and (like the open source libertarians) will probably carry out fringe campaigns against the core alliance of national governments and the big online businesses (especially concerning issues such as privacy and consumer rights).

## Finally, what about the clumsy solutions?

This Chapter (unlike most of the other chapters in this book which are all about policy) is about technology, and this means that the lessons we can draw from it do not come across directly as solutions. Nevertheless, there are some solutions – mostly to do with the possibilities for lessening technological inflexibility<sup>29</sup> (and for avoiding increasing it). These solutions come down to two linked questions. First, is there anything we can do to avoid de-clumsifying those few technologies – the Internet, for instance, and the bicycle (to mention an old favourite<sup>30</sup>) – that we happen to have? Second, is there anything that we can do in order to encourage the many non-clumsy technologies to move in this clumsy direction? The answer, we propose, is ‘yes, there is’, and we will conclude with a few examples.

Our cultural theory-based story of the Internet demonstrates the crassness of the Information Superhighway proposals that dominated technology policy, in countries around the globe, less than a decade or so ago. These policies are revealed as being less inclusive (of ways of organizing and perceiving) than the technology it was trying to modify in the name of greater inclusiveness (bridging the digital divide, for instance, or creating participatory public decision-making processes over the Internet). A little more emphasis on clumsiness, therefore, might have enabled the policy-makers (hierarchical actors who had not made themselves at home on the Internet) with a way to avoid alienating the dominant stakeholders (individualistic and egalitarian actors, who, as we have seen, turned against the Superhighway initiatives and thus undermined the viability of these tectonic plans). And a method for promoting technological clumsiness, albeit still in a fairly rudimentary form, already exists.<sup>31</sup> This method, applied to the current policy commitments to digital rights management systems, would alert policymakers that they may be in the process of repeating the Superhighway-mistake. That is, they may be excluding some of the most important stakeholders from influencing the future direction of Internet-related technological and legislative developments. And again, this raises the possibility that the proposed technological and legislative schemes will be thwarted by those technology-savvy groups that are kept on the sidelines.

More positively, once you understand a clumsy technology like the Internet (in its present shape), you can ask yourself whether, and in what ways, it might be possible to move some of the existing technological systems – energy networks, for instance – in that direction: from highly centralized to more distributed, and from smart at the centre and dumb at the fringes to the reverse configuration. Interestingly, once the question is asked, you realize that it is already happening, to quite a considerable extent. Many of the technological innovations that are required for this clumsifying are already in place. As people clip little mass-produced wind turbines to the gable-end of their houses, or replace their worn-out roofs with extruded photovoltaic shingles, and then sell to the utility (through a ‘smart’ two-way meter) sometimes as much or even more electricity than they are buying from it, so it becomes more and more difficult to determine where the centre of the network is (or which parts are producing electricity and which parts are consuming it). As the smartness migrates to the nodes at the fringes, and as both producers and consumers transmute into prosumers (or conducers), so the electricity network comes more and more to resemble the Internet.

## Notes

1. One of the best accounts is Janet Abbate, *Inventing the Internet* (Cambridge, MA: The MIT Press, 1999).
2. For a ‘proper’ technical discussion of the Internet in particular, and electronic inter-networking in general, see Andrew S. Tanenbaum, *Computer Networks* (Upper Saddle River, NJ: Prentice Hall, 1996); Uyless D. Black, *Computer Networks: Protocols, Standards, and Interfaces*. (Englewood Cliffs, NJ: Prentice Hall, 1993.)
3. The expansion of electronic strings is usually explained by the interaction of three technical trends, which are referred to as ‘laws’: Moore’s Law – the speed of computer chips doubles every eighteen months, while the production costs drop by 50 per cent. Moore’s Law explains, according to technologists, the proliferation of cheap and powerful computers. Gilder’s Law – the communication capacity (bandwidth) of computer networks triples every year. Gilder’s Law is probably too optimistic: the capacity of networks seems to double every nine months (or it used to before the dotcom crash). This law is supposed to explain why the cheap and powerful computers are ever more eager to interact. Metcalf’s Law – the value of the Internet increases by the square of the number of nodes. This, according to networking logic, makes it very attractive for an increasing number of people to get connected to the Internet. Steward Brand, *The Clock of the Long Now: Time and Responsibility* (New York: Basic Books, 1999).
4. John Perry Barlow, *A Declaration of the Independence of Cyberspace* (1994). At: [www.eff.org/~barlow/Declaration-Final.html](http://www.eff.org/~barlow/Declaration-Final.html). Accessed 7 April 2006.
5. Bill Lessard and Steve Baldwin, *Netslaves: True Tales of Working the Web* (New York: McGraw-Hill, 2000).
6. For discussions of cryptosystems, see, for instance, Randell Nichols, Daniel Ryan and Julie Ryan, *Defending Your Digital Assets against Hackers, Crackers, Spies and Thieves* (New York: McGraw-Hill, 2000); Stewart Baker and Paul Hurst, *The Limits of*

*Trust: Cryptography, Governments and Electronic Commerce* (The Hague: Kluwer Law International, 1998); Pete Loshin, *Personal Encryption: Clearly Explained* (San Diego, CA: AP Professionals, 1998); Richard Smith, *Internet Cryptography* (Reading, MA: Addison-Wesley, 1997); Peter Wayner, *Digital Cash: Commerce On the Net* (Boston, MA: AP Professionals, 1997).

7. This means that technological changes (even those labelled revolutionary and unprecedented) are typically not stand-alone events of unparalleled ingenuity, at least not in high-technology societies where techno-scientific activities are thoroughly institutionalized. Technology, like almost everything else, has got history: a past, that tends to influence the way technology can develop in the future. This weight of history is usually referred to as path-dependence: prior technological choices frame how we choose to use and improve on that technology. Modern technology, therefore, is the accumulated result of new and old decision-making, which means that the past is an operative part of present-day changes even if the technology in question may look very different from the way it was originally designed. For discussions of path-dependence, see, for example, Brian W. Arthur, 'Competing Technologies, Increasing Returns, and Lock-In by Historical Events', *The Economic Journal* (Vol. 99, 1989), pp. 116–31; or Paul A. David, 'Clio and the Economics of QWERTY', *American Economic Review* (Vol. 75, 1985), pp. 332–7.
8. Steganography – the technique of hiding plain text (unencrypted) messages from being detected during transmission – is also in use on the Internet. A seemingly innocent picture sent as an e-mail attachment can hide information about when and where a drug deal is going down, for instance. The only way to discover the use of steganography is to examine the picture carefully for small irregularities, as the pixel structure (the 'atoms' of pictures) will be somewhat distorted. The problem with detection methods looking for statistical evidence that an image's data have been distorted is that JPEG files (images/pictures) are naturally altered when they are compressed before being sent over the Internet. And if steganography is used in combination with high-end encryption (the information is hidden and scrambled), law enforcement agencies (or other public or private institutions) are facing a very difficult challenge indeed. Gina Kolata, 'Stealth Messages on the Internet Leave No Outward Evidence', *International Herald Tribune* (31 October 2001), p. 13; and Simon Singh, *The Code Book: The Secret History of Codes and Code-Breaking* (London: Fourth Estate, 1999).
9. Deciphering of encrypted messages without knowledge of the encryption key is called crypto-analysis. Crypto-analysis uses knowledge and techniques from various disciplines – mathematics, statistics and linguistics, for instance.
10. Luke Seeman, *Keys to Secret Drawers: The Clipper Chip and Key Escrow Encryption*. (1996). At: [www.stardot.com/~lukeseem/j202/essay](http://www.stardot.com/~lukeseem/j202/essay). Accessed 7 April 2006.
11. The processes of authentication and integrity control work like this: When Bob sends Alice a message Bob enciphers it twice. First, by using Alice's public key, then, by using Bob's private key. The message is now protected by two layers of encryption. When Alice receives Bob's message, Alice decipheres it according to the rule: 'first on, last off'. This means that the first layer of encryption is deciphered by using Bob's public key, since Bob used his private key for the second enciphering. Alice now knows that only Bob could have enciphered the message (authentication – digital signatures), because Alice could decipher Bob's message by using his public key. To read the message Alice must decipher it once more using her private key, since the last layer of encryption was enciphered using Alice's public key. Now Alice can be sure that no one has altered the content during transmission

(integrity control). Authorization is in principle achieved the same way, but the process is a bit more complicated. See Whitfield Diffie and Susan Landau, *Privacy on the Line: The Politics of Wiretapping and Encryption* (Cambridge, MA: The MIT Press, 1999).

12. James Martin, *Networks and Distributed Processing: Software, Techniques and Architecture* (Englewood Cliffs, NJ: Prentice-Hill, 1981), p. 535.
13. The point is that asymmetrical cryptosystems provide a simple solution to the main weakness of symmetrical cryptosystems: the scaling problem. As Diffie and Landau, op. cit., p. 14, observe, 'In using cryptography to achieve secure communication, scale is everything'. The logic here is a bit complicated, but it goes like this: In symmetrical cryptosystems enciphering and deciphering are achieved using the same encryption key. This implies that the key must be distributed to all the nodes in a communication structure before messages are sent and received. The problem is that key distribution represents a serious security hazard – the key can fall into the wrong hands – and the likelihood of this happening increases with the number of nodes that the key needs to be distributed to. It therefore makes sense to centralize control: a central node determines the timing and pace of receipt of keys by the subordinate nodes (after these nodes have been authorized by the centre to receive keys). In asymmetrical cryptography, however, the keys are cut in half. One part is kept secret, while the other half is public, and you may want as many people as possible to have access to it. The two key parts are functionally different, but have identical statuses: a message enciphered with the private key can only be deciphered using the corresponding public key and vice versa. The consequence is that secure key distribution is possible without any need for centralized administrative control: there are no security hazards connected with making the public key widely available, because both keys – the public and the private – are necessary for secure communication, and because the keys work in different but compatible ways. By making one half of the key publicly available, the only administrative problem is to make sure that you keep your private key secret. Therefore, the size of the communication system becomes a non-issue: whether it is large or small is of no consequence.
14. For instance, Dorothy E. Denning, *The Future of Cryptography* (1996), at: <http://guru.cosc.georgetown.edu/~denning/crypto/Future>. Accessed 8 April 2006; and Steward Baker, *Don't Worry Be Happy: Why Clipper Is Good For You* (1994), at: [www.hotwired.com/wired/2.06/features/nas.clipper.html](http://www.hotwired.com/wired/2.06/features/nas.clipper.html). Accessed 8 April 2006.
15. For a discussion of PGP, and the legal and political issues raised by modern cryptosystems, see, for instance, Simon Garfinkel, *PGP: Pretty Good Privacy* (Sebastopol, CA: O'Reilly, 1995); or Singh, op. cit.
16. Diffie and Landau, op. cit.
17. Nevertheless, there have been a number of complaints raised by other countries over alleged 'back doors' in American computer hardware and software products. Intel's Pentium III chip, for instance, has a unique serial number that can be tracked as the user navigates the Internet, and the Australian Navy is reported to have discovered that their copies of Microsoft's Windows 95 operating system transmitted user information to Microsoft without the Navy's knowledge (Microsoft has verified that its Windows 98 technology tracks the user as he or she navigates the Internet, sending the information to the company's website, where it is stored in a database). The Navy subsequently accused Microsoft of undermining Australian national security. See Michael S. Chase and James C. Mulvenon, *You Got Dissent! Chinese Dissidents Use of the Internet and Beijing's Counter-Strategies*,

Rand Corporation Report MR 1543 (Santa Monica, CA: Rand, 2002). At: [www.rand.org/publications/MR/MR1543/](http://www.rand.org/publications/MR/MR1543/). Accessed 8 April 2006. Whether these 'back doors' are installed with the consent of US authorities, and whether the authorities have access to the information gathered, is anybody's guess. There have also been speculations for some time now that US encryption products have been deliberately weakened because of a secret export control deal between the industry and the National Security Agency.

18. No scheme like the key escrow system has been officially proposed or implemented in Europe, but in the mid-1990s, when the escrow controversy was at its peak in the United States, there was talk in several European countries about emulating the US approach (but see the discussion of trusted third parties below). The eventual failure of the Clinton administration's policy may, of course, have been partly responsible for the modest European enthusiasm for key escrow, but just as important, probably, is the more liberal European attitude towards civilian encryption in general, and together with militant feelings about what Americans tend to see as intrusive government and the need for freedom from state intervention. That does not mean, however, that European countries have a relaxed attitude towards the proliferation of civilian high-end encryption. Indeed, as we will explain later, European legislation (either in place or proposed) is as problematic as what we find in the United States. Steven E. Miller, *Civilizing Cyberspace: Policy, Power, and the Information Superhighway* (New York: ACM Press, 1996).
19. Scotland, though part of the United Kingdom, has its own legal system based on Scottish law. English law applies to the rest of the United Kingdom: England, Wales and Northern Ireland.
20. Companies like Microsoft, Nokia, IBM and Intel are working on hardware-based encryption technology that will make digital rights management systems more difficult to hack than the software-based ones. We can therefore expect to see encryption chips embedded in DVD players and cellular phones, personal computers and set-top boxes. Information content and individual tracking will then become mobile, intimate and secure. See *The Economist Technology Quarterly* (21 September 2002), p. 11.
21. Simon Garfinkel, *Database Nation: The Death of Privacy in the 21st Century* (Beijing: O'Reilly, 2000).
22. 'Cookies' may sometimes be one component of digital rights management systems. A cookie is a small computer program that is sent to your browser (and stored on the hard-drive) when you visit a website. Each time you go back to the same website, the cookie reports your activities to the owner of that website. Cookies can check the identity of individual users so that you do not need to type your log on name and password each time you visit a website, but are also used to compile information about your Internet activities. The idea is to offer tailor-made merchandize on the basis of in-depth profile analysis (data mining).
23. For instance, integrated-circuit smart cards have been used for years in road toll collection systems. Motorists take the cards to vending machines and add as much money as they want, and, because the cards are equipped with an antenna (so-called Radio Frequency Identification technology), the payment can be done without any card-to-machine contact: pennies travel in thin air and are picked up by an electronic toll booth receiver.
24. For a non-technical, easy-to-read and entertaining account of digital money – its problems and its promises – see James Gleick, *What Just Happened: A Chronicle from the Information Frontier* (New York: Pantheon Books, 2002). For further discussions

of the technical aspects of digital cash, see Jean Camp, *Trust and Risk in Internet Commerce* (Cambridge, MA: The MIT Press, 2000); or Wayner, op. cit.

25. According to the Norwegian Central Bank (Norges Bank), almost 70 per cent of the Norwegian money supply (those coins and notes that are still in use) was unaccounted for in 2001 – no one knew where it was or what it was being used for (*Aftenposten*, 3 January 2003), p. 4. Some of it was probably sitting in bank deposit boxes or was giving life to a grey economy, but a substantial part may have been in the wallets of criminals. In theory, encrypted money would put an end to all this insecurity and ignorance, and, in the process, bring the grey economy, tax evasion and money-heavy criminality (together with all the social ills that come along with those activities) to a halt.
26. For an argument along these lines, see Lawrence Lessig, *Code and Other Laws of Cyberspace* (New York: Basic Books, 1999).
27. For various other possible uses of geo-location technology, see James Mitchell, *City of Bits: Space, Place and the Infobahn* (Cambridge, MA: The MIT Press, 1996).
28. Though not, of course, out of the Internet itself. The virtual community-builders, for instance, are not being stopped; it is just that common-pool goods – the sorts of goods that are produced by virtual (and real) egalitarian communities – are now less prevalent within the overall mix of goods.
29. Technological inflexibility means that a technology is supportive of the values and interests of certain segments of society while, at the same time, being unsupportive of the values and interests of other important groups. Inflexibility, in other words, implies that a technology is not very clumsy (quite the opposite).
30. Wiebe E. Bijker, *Of Bicycles, Bakelites and Bulbs: Towards a Theory of Sociotechnical Change* (Cambridge, MA: The MIT Press, 1995).
31. Tommy Tranvik, Michael Thompson and Per Selle, 'Doing Technology (and Democracy) the Pack-Donkey's Way: The Technomorphic Approach to ICT Policy', in Christoph Engel and Kenneth H. Keller (eds), *Governance of Global Networks in the Light of Differing Local Values* (Baden-Baden: Nomos 2000).



# 10

## You Never Miss the Water till the Well Runs Dry: Crisis and Creativity in California

*Denise Lach, Helen Ingram and Steve Rayner*

Water resource management in California is a complicated business. The San Francisco Bay Delta in northern California supports the state's largest habitat for fish and wildlife and provides a nursery and migration corridor for two-thirds of the state's salmon. It also contains Suisun Marsh, the largest contiguous salt-water marsh in the United States. The systems that were built to serve California's increasing population – dams, canals, pipelines, and so on – attempt to regularize and borrow water from these natural systems.<sup>1</sup> Indeed, two-thirds of California's residents, the majority of whom are in southern California – some 600 miles away – receive some or all of their drinking water from the San Francisco Bay Delta, and its waters irrigate over 200 types of crops which, between them, produce 45 per cent of the United States' fruits and vegetables. Huge quantities of water are also moved (by federal, not state, projects) across the desert from the Colorado River. In addition to all these transfers, water that originates in the Owens Valley comes east through the mountains to Los Angeles, and some of southern California's water comes northwards from Mexico.

The complexity of these natural and built systems is exacerbated by institutional fragmentation and specialization. Historically, water policy has been dominated by large-scale bureaucracies that have built evermore infrastructure as a response to the natural variability and uncertainty of water supply. The relative conservatism of these water agencies, as many social scientists have observed,<sup>2</sup> comports with their strong commitment to reliability of service and their low public visibility. 'Predict and provide' has long been the motto of their successful strategy, and their claims that only experts can understand and make rational decisions for highly complex water issues have gone largely unchallenged. Until recently!

The trouble is that predicting and providing (along with the risk-spreading tactics, standard operating procedures and criticism-deflecting quantitative decision-aids that this strategy gives rise to) works only for as long as those

who are doing the predicting can come up with the provision:

- *Inability to meet growing demand.* The enormous growth of Los Angeles, San Diego and Orange Counties has occurred in an area of very low and highly variable rainfall, and it is only the massive and long-distance transfer of water that we have outlined above that has made this growth possible. The alternative – limiting growth in line with the availability of water – has not been entertained, and yet that, it would seem, is what is now happening. On 31 May 2002, a Supreme Court judge in the state of California called a temporary halt to the development of the largest housing project in Los Angeles County's history. The judge ruled that the developers of the 22,000-home Newhall Ranch had not proved that they could supply enough water, especially during periods of drought.
- *Inability to meet new, non-human demands.* New values – the protection of the environment in general and of endangered species in particular – once translated into law can dramatically reduce the availability of water at the very moment when the agency is striving to provide for the increased human demand it has predicted. These new values, moreover, often conflict directly with the traditional values and practices of the established agencies. As these novel demands have multiplied – water for fisheries, water for birds, water for hydropower, water for recreation as well as for more familiar recipients: agriculture, municipalities and industry – new agencies have been established to serve these ever-proliferating constituencies. Each agency, in consequence, has a relatively narrow jurisdiction, with mandates that encompass only a subset of the full range of relevant water objectives and uses. Making progress towards one agency's mission, not surprisingly, often involves negative impacts on other agencies. Economists would characterize this as the 'externalization' of the originating agency's problems. And, as the agencies multiply, so do the externalities!

The first line of response, among the agencies, has been to consolidate control over the resources required to meet their specific organizational missions. At first, this meant over-building the retention and delivery systems, so as to ensure that quantity and quality of water was available to all users at all times. Protection for additional water uses (e.g., fish and wildlife, recreation) also took this path, with a host of engineered solutions such as fish ladders, hatcheries and wildlife reserves. This orthodox response – consolidation of resources together with the provision of redundant ('belts-and-braces') infrastructure – has, until recently, buffered many organizations from the effects of growing scarcity and the accompanying threats to quality. However, these overbuilt systems (along with policy and administrative arrangements) have reduced flexibility: there is now much less scope for responding to new demands.<sup>3</sup> As water systems expand in terms of

infrastructure, number of participating agencies and geographic spread, so the potential for over-subscription of the resource also increases. In many instances, water policy makers have come to gridlock: 'predict and frown', at is sometimes unkindly called. But in some instances – and these are the ones we will be looking at – this has not happened.

## Coordination and conflict

In response to growing demands on the state's water resources, various players have been invited into alliances that bring diverse expertise and authority to the problems of securing sustainable water supplies, maintaining environmental quality, and ensuring access to recreational facilities. The early stages of these strategies look like nothing more than coordination among organizations that are responsible for managing different aspects of the system. Water supply agencies, for example, look for partners that are responsible for managing species and habitat protection. Or, they begin working with agencies at different scales of governance (e.g., federal and state agencies complementing local governments and the involvement of non-governmental organizations). New cross-sector networks and alliances are thus formed so as to address the complexity of managing water resources, but also to gain new, risk-bearing partners. So it is more than just coordination, because new parties are drawn in to share the agencies' responsibility for finding acceptable solutions.

It is not as if there is a dearth of solutions for water resources issues. Engineers know how to build dams and water transfer systems. They are experts in water treatment and quality control. Working with biologists, they are even learning how to restore fish and wildlife habitats. Lawyers have the means to perfect property rights and can create new definitions of public welfare statutes and public trust to constrain publicly undesirable water uses. As one of our respondents told us, 'if all other sources of water fails, there is plenty of water in the Pacific Ocean that can be desalinated'. The problem is finding agreement on a solution that is acceptable to the adherents of the different ways of organizing, perceiving and justifying, all of which are represented by among the various organizations and stakeholders that are now inextricably intertwined in managing California's water resources. The limitations of any water resource strategy prescribed by a single way of organizing are clear, once they are compared with the critiques offered by the other two. Each has a unique, but partial, view of the problems and potential solutions. While it is possible, from the hermit-like perspective of the disinterested scholar, to see that all three have something vital to offer the process, each of the ways of organizing, perceiving and justifying comes with its own diagnosis and solution. And since each diagnosis-cum-solution defines itself in opposition to the others, compromise and cooperation are rendered especially difficult.

The *individualistic* way of organizing and perceiving closely parallels the well worked-through recommendations long espoused by water resource economists, particularly those who identify themselves as adherents of 'rational choice' theory.<sup>4</sup> Water, these advocates of individualism maintain, is a commodity like any other, and its value should be determined by supply and demand. Water shortage, therefore, is a consequence of a poorly performing market. If water were priced at its true value, there would be those willing to sell and others able to buy. The large-scale bureaucracies that characterize contemporary water management are a waste of public money; such agencies do little more than pursue their organizational interests at public expense. Individualistic solutions to California's water problems would include perfecting property rights so that everyone knows how much water they own, and providing price and availability information for water auctions.

In the hierarchical view, these proposals are unacceptable. This view insists that the complexity of hydrological and ecological systems require rational planning and management. Markets do not engage in comprehensive planning, and the pursuit of short-term economic gains leads, in the aggregate, to long-term ecological disaster. If time horizons for buyers and sellers extend no further than the next sale, infrastructure investment will be ignored or postponed. Ultimately, the public will have to pay for the neglect that is engendered by market-dominated systems. Egalitarian objections to the individualistic solutions are based on a pair of moral arguments: that market systems ignore the needs of the natural world, and that they increase inequities among citizens. The natural world is neither a buyer nor a seller, and under-funded environmental groups make poor surrogates for species and habitats. The value of water simply cannot be quantified in dollars and a resource that is essential to life has intrinsic value beyond price. Sufficient water to support life ought to be free and water wasters should be made to see the error of their ways.

The *egalitarian* perspective is espoused by the environmental and environmental justice movements. These groups believe that a more eco-centric approach to water management is critical. This would include limiting industrial and municipal growth to naturally available water supply, de-centralizing water decisions to local arenas, recognizing the rights of nature as equal to those of humans, the application of technology appropriate for conservation rather than for the production of new water sources, and adherence to a very strict interpretation of the 'precautionary principle'. Poor and indigenous people's rights to water must be respected at any cost. Egalitarian solutions to California water problems include water conservation by all users, discontinuation of inappropriate desert water uses (e.g., agriculture, golf courses), and zero tolerance for the profligate use of water.

In contrast to the egalitarian view, people and organizations tapping into an individualistic perspective see these recommendations as a recipe for

disaster. They put fish (and other elements of the environment) before the welfare of people, and they stifle the innovation that is so essential for progress. The egalitarian view, moreover, disregards the true cost of water, leading to inappropriate market signals. If there is truly insufficient water to support further growth in California then the price of water ought to be so high as to discourage the in-migration of people and industry. People and organizations espousing a hierarchical perspective fear that reducing water demand means the end of growth and prosperity that California has long enjoyed, and that has been the direct result of the water bureaucracies' far-sighted construction of facilities. Without their timely and carefully planned actions, the water that is vital for all this development would have been used upstream by other states or lost to Mexico. Orderly delivery of urban water supplies, they insist, requires rates that are sufficient to pay utility costs; and, encouraging conservation in an unplanned way may leave utilities short of funds. Local watershed management, they feel, is not a good idea since it leads to fragmentation and to heightened boundary conflicts. Moreover, small watersheds lack the resources to produce the research and development that are essential for effective water management.

Organizations adhering to *hierarchical* views look at past water management practices as more success than failure. The large-scale dams and diversions are not 'sunk costs', but infrastructure investments that continue to pay off. What others see as over-building, they see as providing the degree of redundancy that is needed to ensure the reliability of water supply under highly varied natural conditions. They note that the region has droughts that last as long as a decade, and that considerable reservoir storage is therefore vital. Hierarchical solutions to Californian water problems are characterized by investment in science to reduce uncertainty, inter-agency cooperation to facilitate the distribution of water across vast spaces and multiple organizations, and continued investment in advanced infrastructure to cope with natural vulnerability.

The egalitarian and individualistic viewpoints share a common critique of these hierarchical solutions, arguing that there is no evidence that additional investment in bureaucracy and infrastructure will solve California water problems. From both vantage points, it appears that additional infrastructure will only reinforce current wasteful water use practices and, at the same time, ensure that important participants will continue to have no voice in decision and management. Those buying into an individualistic rationale are concerned about taxpayers and ratepayers, while those adhering to egalitarian views and norms are concerned about nature and the disadvantaged. Both groups resent the elitism represented by privileged science and opaque bureaucracy.

Thus, it is easy to see that, as new partners are drawn into water resource management, they often insist on what appear to be incommensurable demands on existing programmes or organizational values. It may be

difficult to satisfy emerging demands without challenging the assumptions and operations of the existing systems. New participants bring different needs, expectations and world views, challenging the authority of traditional expertise to solve problems. The level of conflict rises, threatening the very basis of the water industry's reputation: its ability to deliver high quality water at the right time and in the needed quantity.

## **Reaching the crisis point**

Conventional strategies for serving Californians' water needs came to an abrupt end in 1982, when the voters decisively defeated a proposal for a peripheral canal which would move water around – rather than through – the Bay Delta. Residents in northern California opposed the loss of more of their water to the south. Environmentalists were not satisfied with the environmental protections afforded by the bill, while agricultural interests swung the other way, insisting that the deal included too many environmental restrictions. Doing nothing was not an option. Indeed, by the 1990s, federal and state courts and the Environmental Protection Agency were rejecting the state's water quality standards, thereby threatening the stability of municipal water supplies; farmers were being forced by the Central Valley Improvement Act (a piece of federal legislation) to allocate over 800,000 acre-feet of water to fish and wildlife restoration; and even more ominously, the Sacramento River winter-run salmon and the Delta smelt (newly-hatched salmon) were listed as endangered under the Endangered Species Act. Matters reached a head in June 1999 in what was widely referred to as the 'smeltdown'. Pumps sending Bay Delta water south to Los Angeles were shut down in order to save a three-inch, translucent minnow. To compound matters, the 1987–92 drought was one of the longest and severest in the state's history; by the third year of the drought, overall state-wide reservoir storage was about 40 per cent of average. The Metropolitan Water District informed its member agencies that it would not be able to supply water at historical levels. The impacts of all this on local communities differed depending on groundwater reserves. Some agencies that were without reserves had no alternatives but to seek ways of reducing demand. 'Predict and provide' had hit the buffers!

## **In southern California**

In response to the drought, three southern Californian utilities – the Otay Water District, the City of San Juan Capistrano Water District, and the Irvine Ranch Water District – adopted a highly unusual conservation rate structure. Standard practice among public utilities is to use a cost-of-service structure, which simply means that the bill for all water users equals their total use of water times a base rate. The innovative rate structure used by the three

southern Californian utilities retains such a base rate, but in addition each water sector is allocated a conservation use target. Customers using more than the target are confronted with sharply escalating fees. For example, the residential target use is based on a combination of factors, including size of lot, housing characteristics and daily calculations of evapo-transpiration. Households that want to consume more than their target have to pay a significantly higher rate for their additional water needs. When this policy was first implemented as an emergency measure during the drought, some residential customers so far exceeded their target rate that they were billed as much as \$300 a month over their conservation rate.

Recalculations of the base rate for the three utilities were made with input from many stakeholders, who agreed that the amounts of water they were expected to use and the resulting costs were fair. After the new charges were installed, water use actually declined. Most ratepayers never used their entire base water rate. The new water bills, which explained water use in detail, helped water customers to understand the consequences of profligacy and conservation.

Since first adopted over a decade ago, these rate structures have remained in force, and they continue to reinforce the conservation of water. One utility, for example, assesses penalties (for consumption above the conservation target) to only about two per cent of its customers. Work continues to refine the conservation rates to other sectors, including cooling towers and hospitals. Because the rate does not have much bite (i.e., people typically do not exceed the base rate) and is seen as being both science-based and fair, it is seldom challenged. Should serious drought require a further significant reduction in demand, the conservation-use targets, we were told, could be substantially tightened. The utility managers, in consequence, believe that this rate structure will empower them to impose demand management during the next drought or as water becomes less available for other reasons.

The genius of this particular solution is its explicit focus on fairness. Proposals for conservation pricing have foundered elsewhere when advanced solely on the basis of efficiency. Furthermore, the procedure for establishing the rate embodies three competing principles of equity, at least one of which can be seen to appeal to each of the ways of organizing and perceiving to be found among the stakeholders. These are principles of parity, proportionality and priority.<sup>5</sup> First, each household is allocated the same fixed allowance for human consumption (i.e., for drinking, cooking, bathing, etc.) thus meeting the requirement of *parity* characteristic of the egalitarian perspective, in which water is viewed as a basic need and human right, rather than as a commodity. Each household then receives an additional variable allowance for use outside the house – mainly irrigation of lots (front and back gardens). This allowance is determined by a formula that includes the area of each lot (obtained from real-estate records), the evapo-transpiration rates of typical plantings and records of seasonal temperatures.

Thus the allowance varies by lot size and by month to allow for efficient irrigation of gardens. Charts showing usage alongside allocation have proven effective in correcting householders' tendency to over-water their yards late in the growing season. This second allowance satisfies hierarchical preferences for *proportionality* in allocation. Consumers wishing to consume in excess of these allowances are, in principle, subject to an escalating scale of charges, the rate rising more precipitously as consumption increases, although in practice punitive levels of charging have seldom been reached. However, this does allow for individualistic householders to assert their *priority* in allocation, should they choose to do so. Those adhering to individualistic beliefs are also attracted by the market-like emphasis on establishing prices and clarifying property rights.<sup>6</sup>

Hence, all three 'active' ways of perceiving, justifying and organizing social relations are included in the policies chosen. From the egalitarian vantage point, one can detect a strong instrument that motivates conservation as well as protecting everyone's access to sufficient water for basic needs. Through the hierarchical looking glass, one can appreciate the rationality of the strategy and its ability to help in long-term planning. From the individualistic viewpoint, it is possible to appreciate how the strategy protects the customer's freedom of choice to use as much water as can be afforded.

## In the Bay Delta

Responding to the multiple problems in the Bay Delta was more complex. One piece of the novel strategy was the creation of the Environmental Water Account (EWA) to provide water for fish, while imposing no additional burdens on other users. The EWA allows fish agencies to acquire water reserves through markets; they can then time the release of purchased water so as to best protect fish habitats and thereby avoid the conditions that trigger the Endangered Species Act. Water contractors, cities and agricultural districts are guaranteed 'no surprises' that would interrupt the reliability of water supplies and no additional costs. The EWA represents a sharp change in California water policy in that it uses market-like mechanisms to provide water for fish protection. This replaces the previous reliance on state and federal regulations.

The example of the EWA also demonstrates that solutions embodying competing principles are possible. As policy theorists have observed, solutions may emerge from actions that at the time appear unremarkable.<sup>7</sup> Though it was not entirely clear at the time, the EWA signalled a backing away from the regulatory approach of fish protection under the Endangered Species Act. Instead of simply mandating water releases and letting water contractors bear the cost of saving endangered species, fisheries agencies themselves started to own and manage water to protect the fish. This required the fisheries managers to take on the unfamiliar role of budgeting



their water expenditures so that their supply would last the season. Farmers, too, faced a new context. Since the EWA involves voluntary water sales and contracts to a federal agency, farmers came to see sales to the EWA, not as a threat to their livelihood, but as a reasonable management option, whenever crop prices were low or farming conditions were bad. The EWA guarantees that water will be available for fish without any uncompensated cost to the contracting agencies (cities and farms). The water facilities operators (i.e., the people who turn on and off the spillways) were forced by the EWA to interact with fisheries managers in timing EWA water releases. Mutual learning began to take place as fisheries managers became sympathetic to the constraints of the built system, and operators started understanding the life cycles of fish. The EWA, in bringing about a close working relationship between fish managers and others not previously sympathetic to fisheries problems, modified the contentious relationships among the actors adhering to alternative ways of organizing and perceiving. As one water manager told us, 'Peace is not enough; we need to make progress on fisheries restoration'.

A key feature of EWA's innovative design is its dependence on water acquisition through voluntary markets rather than by governmental mandate. Water markets typically encounter considerable resistance from farming communities that see individual sellers as enriching themselves, while farming communities are impoverished.<sup>8</sup> Moreover, while markets make the allocation of water more efficient, they do little to halt the urban growth and development that many environmentalists oppose. Consequently, many water sales are quite controversial, even though they occur regularly and have been taking place for over thirty years. For example, the sale of water from the Imperial Valley to the City of San Diego, which transfers 200,000 acre-feet annually, took nearly a decade and the expenditure of enormous political capital to accomplish. Indeed, that transfer continues to have bitter enemies among farmers in the Republic of Mexico, some of whom will inevitably suffer negative effects. In contrast, the EWA, developed through a clumsy (and political capital-conserving) design, was negotiated in months rather than years, has moved almost as many acre-feet as the Imperial Valley transfer and has a favourable public image.

The underlying genius of this solution is that no single way of organizing is perceived as winning, and each gets just enough to make its adherents believe that the agreement represents some progress toward ultimate objectives. From the individualistic view, one can rejoice in the extension of market-like arrangements in California water systems that now move as much as ten per cent of the water.<sup>9</sup> Bringing the interests of fisheries explicitly into water management agreements mollifies egalitarian concerns about the natural world. And, hierarchical organizations remain the major actors in water management although both fisheries and operators take on new and unfamiliar roles.

Both these solutions to water problems in California appeal to each of the alternative ways of organizing, perceiving and justifying human relations

that are set out by cultural theory. These solutions are appealing from the individualistic perspective, as they rely on market-like mechanisms to discipline demand. The strategies also serve the environmental and social goals stressed in the egalitarian view by valuing fish protection, encouraging water conservation and ensuring equity in water pricing. Finally, the hierarchical rationale is respected, because bureaucratic agencies are not supplanted by other decision-makers, but instead take on new roles and relationships.

## The conditions conducive to clumsy solutions

The emergence of clumsy water management regimes in California might never have come about, if the participants had not been convinced that they had no viable choice other than to accommodate principles that might otherwise seem anathema to them. Those who espoused individualistic values had to give up on the full dominance by markets; those who favoured egalitarian solutions had to accept the existence of unfair differences; and those inclined towards hierarchical beliefs and norms had to cede some amount of power to individuals and non-governmental organizations that do not share similar objectives. Even as the adherents of the alternative ways of organizing and perceiving make doctrinal sacrifices, they avoid big losses and have reasons to see progress in the solutions. Each group gets just enough concessions for it to be able to claim 'progress' towards its goals. Nor does it see any other group's interests and values being unduly privileged over its own.

As the introductory chapter makes clear, the alternative ways of organizing, perceiving and justifying social relations fundamentally lack a common interest. To adopt the strategies of the other is viewed as a clear defeat. However, if entering into an accommodation is seen as essential to long-term survival, collaboration can be viewed as a means to protect interests. Further, even very small gains (or no further losses) can be rationalized as the first step in the right direction. However, it would be a mistake to think that a clumsy solution will be readily adopted – no matter how astute it may be. Policy change ordinarily follows an established trajectory, responding to problems in conventional ways.<sup>10</sup> Since participants will tend to follow the dictates of their preferred way of organizing and perceiving, unless it is clear that there is no option but to participate in the crafting of a clumsy solution, clumsy solutions (like the EWA, and the conservation water rates) are likely to occur only when certain conditions are met. In the Californian examples, as we have seen, the following four conditions were conducive to the emergence of clumsy solutions:

*Accumulating problems.* Mother Nature can always be blamed for catastrophes beyond what anyone can expect agencies to plan for. Moreover, it is always possible to claim that success is just around the corner. However, when problems seem to come so frequently that they appear endemic, they begin to be

interpreted as water management failures. By the 1990s, it was hard to deny that California water management was in trouble, even though everyone was looking in different directions for solutions. The sunshine and warm climate, the long growing season and the attractive life styles drew many to arid southern California, and the state's developers and water managers always assumed that they could bring water to wherever people wanted to settle. In general, water transfers triggered little (or ineffective) resistance; water flowed (uphill, in some instances!) from the relatively unpopulated northern and eastern areas of the state to the Los Angeles region. Water was also always available to support the large agribusiness of California, and any adverse environmental impacts were largely ignored or partially mitigated until the rise of the environmental movement. From an environmentalist's perspective, water is an inseparable element of an ecosystem. The characteristics of water, including its quantity, chemical composition, temperature and turbidity, are specifically suited to the place in which it is found. Stream temperature, for example, is finely tuned for salmon habitat and will be affected by water impoundments, thereby making the stream unsuitable for its native species. For environmentalists, ecological problems represent a flawed relationship between humans and the environment, not an engineering problem that can be fixed.<sup>11</sup> The challenge of an environmental perspective on water is supported in part by state and federal regulations, especially the Endangered Species Act and the Clean Water Act, both of which recognize that northern California water supplies are required in their natural basins to support threatened habitats and to protect water quality. However serious the need in the south, water could no longer be taken from the north, where it was needed to support endangered species and to provide potable water for a growing population. By the end of the twentieth century, it was clear that water agencies would have to find new ways of supplying water to growing populations: ways that had less impact on fish habitat and water quality.

*More to lose by inaction.* Water politics in California came to be governed by a vicious triangle. Agricultural users, often with the most senior water rights, believed they were unfairly burdened by environmental regulations. Farmers could point to innumerable sacrifices and investments made by them to preserve and protect water-based habitat. Many asserted that continued agricultural production, essential to the California economy, was in danger. Unless farmers prospered, they argued, rural communities would wither and farm-related businesses would fail. Municipal water utilities, however, maintained that residential and industrial use of water represented a much higher economic value than agriculture; moreover, the lives of many people, rather than just crops, were at stake. For urban users, implementation of the Endangered Species Act was causing problems for water reliability and quality, the organizational imperatives for municipal water utilities. Environmentalists, as the newcomers among water managers, believed that they should not have to make any sacrifices to urban or agricultural interests,

since the ecosystem had already been dangerously over-exploited. The notion of further water development was intolerable and could only compound the existing problems. All three interests were convinced they had nothing more to relinquish in compromise. On the outside of this fractious water community, Californians were beginning to believe they were poorly served by the policy-making system. The drought and the 'smeltdown' raised public consciousness about water problems and mobilized parties outside the triangle. For example, the Chamber of Commerce began to worry about the business climate in California.<sup>12</sup> National figures, like then-Secretary of Interior Bruce Babbitt, and then-Governor Pete Wilson, deciding it was time for political intervention, threatened to remove decision responsibility from the usual players. At this point, the members of the triangle realized they had more to lose in a deadlock or delay than by considering new approaches. Finding peace among the warring parties (even if it meant deferring the satisfaction of core values) became a high priority for all involved. Without some sort of accommodation, each perspective faced certain loss of autonomy and reputation.

*Experience with settlement.* In the California examples, there is evidence of experimentation with collaborative arrangements, especially as water resource agencies became increasingly involved in multi-purpose water projects. Since multi-purpose water projects include as many beneficiaries as possible, water agencies have reached beyond their usual constituencies to include recreational users (boaters, fishers, bird watchers) and environmentalists, as well as fish and wildlife agencies. Over time, however, demands from these new constituents have changed project designs from the traditional storage and transfer structures to include non-structural alternatives such as conservation practices, protection of floodplains and other habitats.<sup>13</sup> As water problems worsened in California, multi-purpose projects became more contentious and cooperation faltered. Even so, representatives of the competing interests were able to collaborate on specific projects when it was clearly in their mutual interests. For example, agricultural interests and municipal water utilities collaborated on the Peripheral Canal proposal to bring increased water supplies to the south by bypassing the Bay Delta. While this particular proposal was ultimately defeated, the parties came to accommodate one another's values, and environmentalists and municipal water utilities subsequently collaborated in support of agricultural reforms such as the Central Valley Improvement Project, which transferred 800,000 acre-feet per year from agricultural uses to improve fish and wildlife habitat.

Pressure to break the long-standing deadlock over water management in the Bay Delta was intensified when then-Governor Wilson ordered the state to withdraw water quality permits. To defuse some of the conflict, federal agencies took the initiative to coordinate all the federal resource agencies through a Federal Ecosystem Directorate, more popularly known as

'Club Fed'. The state Water Policy Council agreed to join with Club Fed to coordinate activities in the Delta. There followed a series of semi-formal meetings that included not only federal and state agencies, but also representatives of water contractors, farmers and environmentalists. Ultimately, the federal government agreed to purchase additional water, beyond that needed for protections under the Endangered Species Act, in exchange for water user groups contributing resources for fish protection. This was only one of many experiments using collaboration to resolve water problems in California.

*Leadership willing to take risks.* The kind of leadership needed to craft clumsy solutions is different from that usually found in bureaucracies. What characterizes 'clumsy' leaders is not their roles, positions or access to resources, but their willingness to take risks that appear to challenge alternative perspectives. The motivations for risk-taking are hard to generalize, as they arise out of particular contexts. For example, informants who explained why San Juan Capistrano adopted an innovative rate structure said that they were so small and marginal that they saw themselves as partial outsiders to the municipal water utility community, and were able to 'reject orthodoxy' that insisted on cost of service rates. In contrast, the environmentalist representative in the group that first considered the EWA actually changed his mind during the course of discussion. He came to understand the positions of other users and accepted that fisheries should operate under the discipline of a water budget – just as do agriculture and municipal water utilities. Leaders looking for clumsy solutions are often self-selected; nothing in their job description or experience would lead them to deviate from organizational norms. The impetus for change seems to be a result of the factors described above. They know the accumulation of previous failures and they understand the unsupportable costs of continued stalemate. Further, they are the ones who have previously participated in collaborative efforts. In face-to-face encounters they hear other values articulated and realize that their own answers are not satisfactory to their collaborators. Leaders, more than other engaged parties, realize that creativity is required for finding viable solutions.

## Conclusions

The examples in this chapter illustrate the usefulness of the theory of socio-cultural viability, in both illuminating problems and crafting solutions. While the physical problems of a growing population and of dealing with water scarcity are real, underlying the deadlock that characterized water politics in California at the end of the twentieth century was a fundamental value conflict among upholders of different ways of organizing and perceiving. The bureaucrats, who had long dominated water in their time-honoured hierarchical manner, were challenged on two fronts: by more egalitarian groups interpreting the problems through ecological and social equity terms, and by more individualistic organizations looking to markets as an obvious solution.

As described in the opening Chapter, collaborative and seemingly messy solutions may offer the only viable alternatives for many long-standing and apparently intractable resource problems. In addition to the design of clumsy solutions, the examples provided in this Chapter suggest that the process of clumsy collaboration may be as important as the designs themselves. As we have observed, the beginning of the process is often the realization that the status quo is simply not sustainable. This challenge often comes from those outside the immediate decision making arena, and participants have to choose between collaborating or losing control over outcomes.

Policy change is often described in terms of dramatic discontinuities and obvious innovations.<sup>14</sup> What we observed in these Californian cases, however, was that change was preceded by tentative experiments as well as narrow, short-term agreements. Adherents of the different ways of organizing, perceiving and justifying, it would seem, need to practice collaboration, gaining capacity for forging agreements across values and organizational objectives, and gaining trust and respect for other perspectives and participants. Those who see policy change as a reframing of issues may overlook the extent to which the core values of the participants remain the same. Collaborators do not have so much a change of heart, as a recognition of new realities. A part of clumsiness has to do with the awkwardness of carrying forward distinct values and norms, as participants gain experience and skill in collaboration with those adhering to alternative ways of organizing and perceiving. Because clumsy solutions carry the history of their making along with them, they are understandably inelegant.

Prior to the progressive era, more individualistic organizations and people dominated natural resource management, and the result was over-exploitation and system failure.<sup>15</sup> In response, science and bureaucracy were elevated in order to manage resources rationally to serve more orderly economic development.<sup>16</sup> As a consequence, California had a 'golden age' of expansion, growing to the sixth largest economy in the world.<sup>17</sup> Unbalanced control by the hierarchically-minded, however, produced system-inefficiency and severe environmental and social inequity. Sensing an opportunity for their turn to dominate water policy in California, egalitarian groups pressed for a new era of decentralization, appropriate technology and the husbanding of all natural resources, including water. Our study suggests that holding onto such singular hopes, or expecting to return to some singular past, leads only to deadlock. Clumsy solutions to California water problems begin to look like very good solutions that others can learn from.

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# 11

## Clumsy Conclusions: How to Do Policy and Research in a Complex World

*Marco Verweij, Michael Thompson and Christoph Engel*

John Maynard Keynes, who was not renowned for his politeness, once wrote on a Treasury paper that had been passed to him for comment: 'I would be in full agreement with this if the word "not" was inserted in every sentence.'<sup>1</sup> Much the same, we feel, holds for orthodox policy analysis. Indeed, as we have argued for some time now,<sup>2</sup> much progress can be made simply by slipping the words 'not' or 'never' into the precepts that have long been drummed into the heads of those who aspire to be policy analysts:

- A single, agreed definition of the problem is the first essential.
- Always clearly distinguish between facts and values.
- Establish a simple metric – dollars, quality adjusted life years, expected utility, etc – so as to be able to compare and assess policy options.
- Optimize.

Turning all these 'dos' into 'do not's', we might expect, would be mightily resisted, both by those who analyse policy, and by those who make or implement it. Indeed it was, when these heretical shibboleth-inversions were first proposed, twenty or so years ago. Back in the 1980s, for example, when John Adams first spelt out the implications of the risk compensation hypothesis for Britain's road safety policy (recounted in Chapter 6 of this book), enraged cabinet ministers demanded that he be dismissed from his university position. A few years later, a senior British policymaker, Sir Kenneth Barrill, told Brian Wynne (who had been predicting that the insistence of the British government on a single definition of technological and environmental issues would lead to a decline of public trust and consent; predictions that later materialized spectacularly with the crises over mad cow disease and foot-and-mouth disease)<sup>3</sup> that, whilst there was much truth in what he said: 'when it comes to the actual business of deciding policy, you can sod off!' Around the same time, when one of us proffered similarly helpful advice to the United Nations Environmental Programme (in relation to environmental



and developmental issues in the Himalayan region), he was told that it was 'completely useless' and 'academic bullshit' to boot.

But those dismissive responses seem now to be things of the past, and the previously threatening messages seem to have got through and to have been absorbed (to some extent, at least) both by the policy analysts (who are now beginning to understand that there are contending discourses, and are actively taking on board the sort of implications that come with what is sometimes called 'the argumentative turn'<sup>4</sup>) and by policymakers (who now quite welcome the idea of plural rationalities framing and its associated notion of clumsiness). Indeed, some of these practitioners (especially if they are at the 'street level' – nuclear installations inspectors, for instance) embrace the theory quite eagerly because, as they explain, it makes good sense of what they actually do (whilst the orthodox theories suggest that if that is what they are doing, then they should not be doing it). Indeed, John Adams and one of us recently wrote a 'clumsy report' – *Taking Account of Societal Concerns about Risk* – for Britain's Health and Safety Executive which, far from being fed straight into the shredder, is now publicly available on their Website.<sup>5</sup>

So something seems to have happened. Elegance-imposition, it seems, is no longer the force it used to be, and clumsiness, though not yet all the rage, is no longer being rejected out of hand. All of which encourages us to draw some rather ambitious, albeit tentative, conclusions by linking this evident transition to some of the grander transitions that have been (or are) happening on the world stage: transformations that have been rather inadequately captured by notions such as The End of History, The New World Order, Globalization, The Clash of Civilizations, The Age of Empire, Communitarianism, Postmodernity, Global Risk Society, and so on.<sup>6</sup> However diverse and informative these notions might be, all of them have been proposed from, and advocate, a singular – and not a plural – logic, and have therefore captured but a part of our forever changing worlds.

## What has ended? What has taken its place?

A bold suggestion would go something like this: the acute importance of what we mean by clumsiness becomes clear once we take the terrible events of the last century into consideration. This time-slice, of course, was what Eric Hobsbawm has called 'The Age of Extremes'.<sup>7</sup> Indeed, it was the century of the 'isms': communism, Maoism, Leninism, Marxism, Third Worldism, colonialism, imperialism, national socialism, fascism, culminating (in the eyes of some of those who are still stuck in the singular mode) in the triumph of capitalism and liberalism, though punctured from time to time by Muslim fundamentalism and terrorism. In large parts of the world, in the Age of Extremes, one or more of the voices have found themselves silenced. Neither the individualistic nor the egalitarian voice could make itself heard

in the Soviet Union, for instance, as is evident in the Brezhnev-era joke: 'we [the fatalised masses] pretend to work and they [the upholders of hierarchy] pretend to pay us'. Attempts to govern by severely repressing other ways of organizing and thinking – spectacular instances would include Pol Pot's 'Year Zero' in Cambodia, the McCarthy 'Un-American Activities' era in the United States, and Mao's Cultural Revolution in China – have created much misery by imposing a debilitatingly simplistic sets of principles.

Misery, moreover, that could have been avoided, had ways been sought out to resist the various simplifying and voice-silencing urges. One might instance the terms that were imposed in 1919 on Germany and its allies by the Treaty of Versailles, the centralization of both economic and political power in post-colonial Africa, the imposition of import-substitution policies in Latin America that were later replaced by equally one-sided structural adjustment programmes, Western development 'aid' to places like Nepal, Free World support for local tyrants who were supposed to be anti-Soviet Union ('He may be a sonofabitch, but he's *our* sonofabitch!', to recall the realist Cold War refrain) and communism in the whole of central and eastern Europe, Cuba and China.<sup>8</sup> So many policies and programmes have gone so horrendously wrong and, for all the variety of the principles that underlay them, they all share a single defining characteristic: they are all, in their different ways, over-elegant. Demonstrably over-elegant, we would add, when assessed in relation to the four-voice scheme that we have been relying on for our own concept of clumsiness.

But why, it could be objected, should *four* be enough? A number of answers are possible. 'Because there only *are* four' would be the hard-line answer. 'Because four is better than three or two or one, and going beyond four seems not to confer any further improvement' is the better response: an instance of the sorts of answers that, if the bible is to be believed, turneth away wrath. And then, of course, we might point to the oft-noted and apparently rather formidable cognitive limits on decision-making.<sup>9</sup> Given these constraints, four is probably about the most we can imagine!

Of course, just because things have become clumsier as we have emerged from The Age of Extremes, it does not follow that all those over-simplisticisms have now gone away. Stalinism is still up there in the saddle in North Korea, much of Nepali's countryside at present is in the *de facto* grip of Maoism, and fundamentalism is alive and well in many Islamic countries. But, as is evident from the chapters in the second half of this book, many parts of the world – Hungary, California (if it was a country, then it would be ranked 7th in the world in terms of economic clout) and even China – are clumsier than they were and are, in many instances, getting clumsier.

If we think in terms of a tetrahedron, with each of its four apices corresponding to the 100 per cent representations of just one of the ways of organizing and perceiving, then we can visualize a 'feasibility space' (for clumsiness) towards the centre of gravity, (Figure 11.1) and away from each

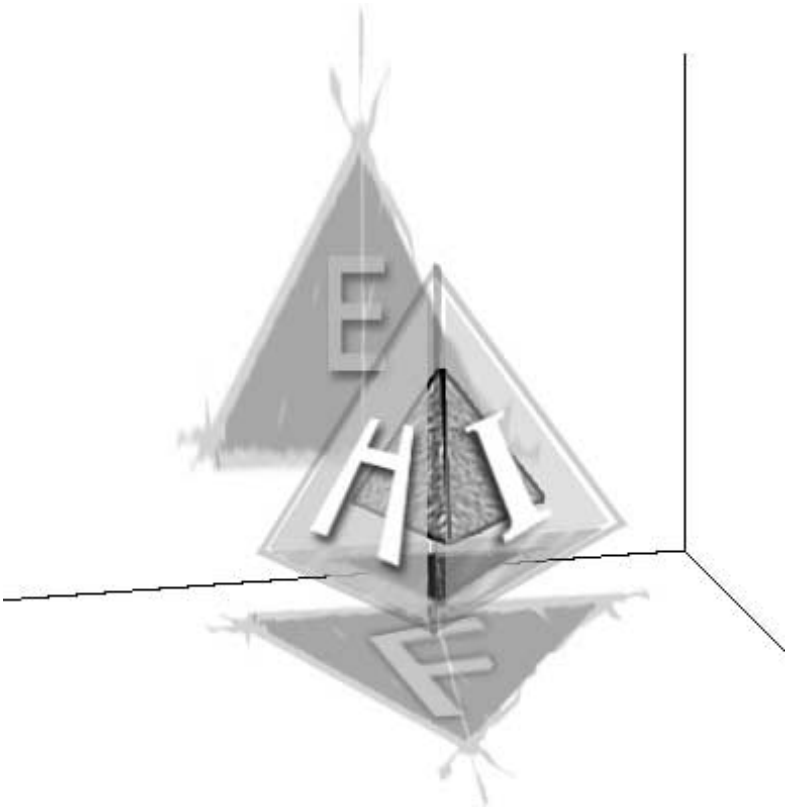


Figure 11.1 Visualizing a feasibility space for clumsiness towards the centre of gravity

of the four apices (where one voice drowns out the other three) and from each of the six edges (where two voices drown out the other two), and from each of the four faces (where three voices drown out the fourth). Throughout *The Age of Extremes*, many countries found themselves out towards the apices, the edges and the faces, and rather few were located within the feasibility space.<sup>10</sup> Now – or so we believe and hope – the pattern is changing: quite a lot of countries are within (or moving towards) the feasibility space, and only a diminishing number are out towards the voice-silencing apices, edges and faces. That, we would suggest, is a more sensible way of depicting the grand transitions than are those that are currently on offer: Empire, End of History, Globalization, Triumph of Capitalism, and so on.<sup>11</sup>

We believe that this is a much more discriminating scheme, and one that could be made operational. (Charles Hawkins, an American ‘China watcher’ is currently doing this, using, in the absence of any other available data, a

Delphi-sampling of his fellow experts on China. His tentative conclusion is that China is not yet in the feasibility space but appears to be moving towards it).<sup>12</sup> Such a scheme would allow us to keep track of both the shifts towards clumsiness within countries, and the regimes that are resisting these shifts (or even moving themselves, or being propelled, in the opposite direction. This also brings us to the whole question of how we should change the way we do Social Science.

### **Some worthwhile changes in the way we do social science**

A first, and we hope, very obvious point is that the approach by way of clumsiness is most certainly not a way of avoiding having to know a lot about the particular issue you are concerned with. Cultural Theory's fourfold scheme is not some nifty little gadget that you can slap down onto gun control, flood risk, road safety, Himalayan hydro, the Internet or whatever and then read off the clumsy answer. Rather, and as we hope is evident from all the preceding chapters, it is a way of extracting that extra (and crucial) little bit of practical insight, once you have equipped yourself with a thorough understanding of the issue that you are addressing. Achieving all that, unaided, though possible, is not easy, which we feel, goes a long way towards explaining why so many of the chapters in this book have more than one author.

So we can begin by pointing to an oddity: that empirical research within the natural sciences is usually a team effort, whilst empirical analysis in the social sciences is often an individual undertaking. (Think, for instance, of the usual requirements for a doctoral degree in the social sciences.) The oddity is then compounded, once we concede that it is usually more difficult to observe social phenomena (nationalism, say, or social capital-formation) than natural phenomena (the polarity of a magnet, for instance, or the thinning of the ozone layer). Hence, why the lone social scientist (however intrepid he or she may be)?

Clumsiness makes it even more difficult for the social scientist to go it alone, in that the clumsiness notion, as well as requiring the researchers to know all the ins and outs of their cases, debars them from the straightforward path that is followed by so many of their more elegant fellows, who are able to accept 'the problem' as it is defined in some World Bank or United Nations report, and then to take the analysis from there. That path is closed off in the world of the would-be clumsy practitioner, who has to begin from the assumption that all definitions of any issue (and the solutions that follow from these) – all the technical reports, statistical tables, cost-benefit analyses, computer-based models, etc – are systematically analysed in terms of the fourfold plural rationality scheme that is provided by the theory of socio-cultural viability.

Doing all that is a tall order. It may well involve her or him in teasing out the particular 'model of stability and change in nature' that is being relied on unquestioningly in, for example, the determining of the assimilative capacity of the North Sea in relation to a pollutant such as titanium dioxide (an ingredient in most toothpastes). Then he or she will need to burrow into the cost-benefit analyses that have been relied upon, so as to discover the particular discount rate that is being used: is it high and uniform (the individualistic construction), or low or even negative (the egalitarian construction), and so on. And how are 'infinite responses' – such as 'No amount of money will compensate for the loss of this rare species of mammal that is found only in the threatened patch of tropical rainforest, or for this Norman chisel that happens to lie in the path of this proposed airport runway' – being coped with? (These responses cannot be entered into any cost-benefit analysis as presently constructed, as it takes only a single infinite value to incapacitate an entire cost-benefit analysis.)<sup>13</sup> Are such infinite responses being factored in as significantly higher than the highest of the finite responses, or have they been excluded completely (as happens, for instance, in COBRA: the cost-benefit model that is used by Britain's Department of Transport, in which priceless landscapes are ascribed zero value on the grounds that they have no development value)? Our would-be clumsy researcher will also need to stick her or his nose deep into the tables setting out the various levels of the statistical harm, so as to ascertain the particular dose-response curve that is being used; is it linear (hierarchy), quadratic (individualistic: radiation, in low doses, is actually good for you) or parabolic (egalitarian)?<sup>14</sup> And, when risk-acceptability is being so dispassionately calculated, what method is being used in determining the level of consent: expressed preferences (egalitarian), revealed preferences (individualistic), or natural standards (such as the level of background radiation – hierarchical)? On and on.<sup>15</sup>

Another well-trodden path is foreclosed to the clumsy analyst. While pursuing research, one cannot be guided by one ideology only, or a single set of normative concerns. The clumsy analyst cannot, for instance, expose yet another contradiction of late capitalism, or argue that some claim of environmental destruction has been exaggerated, and then sit back self-contently. One must consider social and political processes from a variety of normative viewpoints, and can only suggest a practical course of action, or label a policy 'successful', if it appears worthwhile from a plurality of normative concerns.

To be able to get oneself into a position to ask all these sorts of questions, to then dive into the purportedly mental, scientific and factual accounts of what is going on so as to pinpoint the unquestioned assumptions – the myths of nature – that are at work, and to then map the entire hubristic terrain that has been so cavalierly rolled out so as to obscure the true extent of the uncertainty that is entailed in any particular policy issue, requires much more than just a spot of interdisciplinarity. It calls for a much rarer

commodity: complete transdisciplinarity (including all the social sciences collapsed into one another,<sup>16</sup> engineering, chemistry, ecology, geomorphology and so on). Challenges like this, it seems to us, are best handled by transdisciplinary teams. Rare individuals, we concede, may be able to do it all on their own – rather in the way that Reinhold Messner was able to climb Everest solo and without oxygen – but they are few and far between (nearly all of those who reach Everest's summit are members of expeditions, and most of them also rely on oxygen to get there).

Indeed, Dipak Gyawali is the Reinhold Messner of this volume. He has no co-authors, but only because he is fluent in Nepali, Hindi, Russian and English, is a water engineer trained in the most prestigious school in the then Soviet Union, holds a master's degree in political economy from Berkeley, has dedicated his whole life to the analysis and alleviation of poverty in South Asia, and has done a stint as a cabinet minister with responsibility for water resources. But more often than not – *much* more often than not – complete transdisciplinarity will have to be achieved by teamwork. Such teamwork, as many a social scientist has ruefully concluded, is about as easy herding cats! Difficult, yes; impossible, no.

Our world, we believe, is a complex and dynamic one. Nowadays, most people live in a multitude of constantly splitting, merging and overlapping social domains that are intertwined in ever-changing ways with a wide array of equally dynamic and varied ecological and technological domains. Our book has been an effort to describe some of the regularities that can be found amidst all this endless change, and to explain how we can rely upon these regularities in our never-ending efforts to exploit the opportunities, and avoid the dangers, that the continuous transformations of our social, technological and ecological worlds bring about.

May our futures be clumsy!

## Notes

1. This is recounted in Robert Skidelsky, *John Maynard Keynes, Volume Three: Fighting for Freedom, 1937–46*. (New York City: Viking, 2002).
2. An early instance is Michael Thompson and Michael Warburton, 'Decision Making under Contradictory Certainties: How to Save the Himalayas When you Can't Find Out What's Wrong with Them', *Journal of Applied Systems Analysis* (Vol. 12, 1985), pp. 3–34. More refined versions of the same argument are set out in Michael Thompson, 'Rewriting the Precepts of Policy Analysis', in Richard J. Ellis and Michael Thompson (eds), *Culture Matters: Essays in Honor of Aaron Wildavsky* (Boulder, CO: Westview, 1997); Michael Thompson, Steve Rayner, and Steven Ney, 'Risk and Governance Part I: The Discourses of Climate Change', *Government and Opposition* (Vol. 33, No. 2, 1998), pp. 139–66; Michael Thompson, Steve Rayner, Steven Ney, 'Risk and Governance Part II: Policy in a Complex and Plurally Perceived World', *Government and Opposition* (Vol. 33, No. 3, 1998), pp. 330–54.
3. For some of his publications, see Brian Wynne and Alan Irwin, *Misunderstanding Science? The Public Reconstruction of Science and Technology* (Cambridge: Cambridge

- University Press, 1996); Brian Wynne, Scott Lash and Bron Szerszynski (eds), *Risk, Environment and Modernity* (London: Sage, 1996).
4. Frank Fischer and John Forester (eds), *The Argumentative Turn in Policy Analysis and Planning* (Durham, NC: Duke University Press, 1993).
  5. John Adams and Michael Thompson, *Taking Account of Societal Concerns about Risk* (London: Health and Safety Executive, 2002) Research Report 035, available at: <http://www.hse.gov.uk/research/rrpdf/rr035.pdf>. Accessed 10 April 2006.
  6. These notions are discussed in, respectively: Francis Fukuyama, *The End of History and the Last Man* (New York: Penguin, 1992); Jagdish Bhagwati, *In Defense of Globalization* (Oxford: Oxford University Press, 2004); Samuel Huntington, *The Clash of Civilizations and the Remaking of the World Order* (New York: Simon and Schuster, 1998); Michael Hardt and Antonio Negri, *Empire* (Cambridge, MA: Harvard University Press, 2001); Amitai Etzioni, *From Empire to Community: A New Approach to International Relations* (New York: Palgrave, 2004); Perry Anderson, *The Origins of Postmodernity* (London: Verso, 1998); Ulrich Beck, *Risikogesellschaft: Auf dem Weg in eine andere Moderne* (Frankfurt: Suhrkamp, 1986).
  7. Eric Hobsbawm, *The Age of Extremes* (New York: Vintage, 1994).
  8. It might be objected that there simply was no way of resisting these simplifications that were imposed in the expansion of communism, but the fact that they were resisted in Malaya (which went from civil war and colonial status to independence and multi-party democracy) suggests otherwise.
  9. Alan P. Fiske, 'Social Relations: Culture, Development, Natural Selection, Cognition, the Brain and Pathology', in P.A.M. van Lange (ed.), *Bridging Social Psychology* (London: Lawrence Erlbaum, 2005); Alan P. Fiske and Susan T. Fiske. 'Social Relations in Our Species and Our Cultures', in S. Katayama and D. Cohen (eds), *Handbook of Cultural Psychology* (New York: Guilford, 2005); Nicholas Haslam, 'Four Grammars for Primate Social Relations', in J. Simpson and D. Kenrick (eds), *Evolutionary Social Psychology* (London: Lawrence Erlbaum, 1997).
  10. Some of these – called the stable democracies – were the ones Almond and Verba focused on, in the immediate post-Second World War years, in their classic study of political culture: Gabriel Almond and Sydney Verba, *The Civic Culture* (Princeton, NJ: Princeton University Press, 1963).
  11. Nadia Molenaers and Michael Thompson, 'The Cultural Conditions for Democracy and their Implications for Transitional Societies', and Steven Ney and Michael Thompson, 'Consulting the Frogs: The Normative Implications of Cultural Theory', both in Michael Thompson, Gunnar Grendstad and Per Selle (eds), *Cultural Theory as Political Science* (London: Routledge, 1999); Michael Thompson, 'Don't Let It Put You off Your Dinner: First Steps Towards Ethical Policies Shaped by Cultural Considerations', *Journal of Comparative Policy Analysis* (Vol. 4, No. 3, 2002), pp. 347–63.
  12. Charles Hawkins (2004, personal communication).
  13. John Adams, *Risk* (London: University College London Press, 1995), chapter 5.
  14. This refers to the shape of the curve at low levels of exposure, which is where all the uncertainty and controversy is concentrated. For a more detailed treatment of these curves and of the ways in which upholders of the various solidarities tend to favour one and distance themselves from the others, see Adams, op. cit., pp. 47–50.
  15. Up to at least 60 questions, at the last count. See Patrick Hofstetter, *Perspectives in Life Cycle Impact Assessment* (Dordrecht: Kluwer, 1998), pp. 55–6.
  16. Neo-classical economics is mono-rational: it assumes that the individualistic way of organizing and perceiving holds sway everywhere and always. The new

institutionalism is bi-rational: it allows for both markets (individualistic transactions) and hierarchies, and for two-way traffic between these two forms of organizing. Social capital, in its latest formulation – encompassing bonding social capital (egalitarian) bridging social capital (individualistic) and linking (hierarchical) – is tri-rational, and so on. It is by such a process of subsumation that the various varieties of the social science disciplines can be folded into one another. See, for instance, Michael Thompson, Marco Verweij and Richard Ellis, 'Why and How Culture Matters', in Robert Goodin and Charles Tilly (eds), *The Oxford Handbook of Contextual Political Analysis* (Oxford: Oxford University Press, 2006).



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## **Clumsy Solutions for a Complex World**

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