

Chapter 8

Cultural Theory, Climate Change and Clumsiness

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Cultural Theory offers an approach for understanding and resolving the disputes that characterise environmental policy. Its four-fold typology of forms of social solidarity is able to make explicit the different social constructions of nature, physical and human, on which environmental debate is premised. This paper applies Cultural Theory to the 'policy stories' around climate change and makes the case for 'clumsy' institutional arrangements that forego elegance to accommodate the diversity of social solidarities, harnessing contestation to constructive, if noisy, argumentation.

'They will never agree', said the nineteenth century wit, the Reverend Sidney Smith, when he saw two women shouting at each other from houses on opposite sides of an Edinburgh street, 'they are arguing from different premises'. Cultural theorists (e.g. Adams 1995: 50 and Douglas and Wildavsky 1982:174) like to use this story as a way of getting to grips with the disputes that characterise environmental policy. The different premises, in these disputes, concern human and physical nature, and cultural theory maps them in terms of a fourfold typology of forms of social solidarity (Figure 1). Two of these solidarities – individualism and hierarchy -- have long been familiar to social scientists; they are usually referred to as markets and hierarchies (e.g. Williamson 1975 and Lindblom 1977). The theory's novelty lies in its addition of the other two solidarities and in its making explicit the different premises – the different social constructions of nature, physical and human – that sustain these four fundamental arrangements for the promotion of social transactions.

Hierarchies institute status differences (asymmetrical transactions) and, by requiring forms of behaviour appropriate to those of differing rank and station (accountability), set all sorts of limits on competition. Markets – the transactional arrangements that accompany individualism

– do the diametrical opposite; they institute equality of opportunity (symmetrical transactions) and promote competition (no accountability, as in ‘If I don’t do it someone else will’). The other two permutations: symmetrical transactions with accountability (labelled *egalitarianism* in the cultural theory scheme), and asymmetrical transactions without accountability (labelled *fatalism* in the cultural theory scheme) tend to be ignored by social science in general and by policy science in particular. This, for instance, was evidently the case with the enormous Brent Spar oil storage structure, the deep ocean disposal of which was proposed by the market actor – Shell – and approved by the hierarchical actor – the British government’s regulatory agency. Had there been only markets and hierarchies the Brent Spar would now be mouldering in its watery grave, but of course it isn’t! Another actor – Greenpeace – from a third form of solidarity (egalitarianism) forced its way in, at the eleventh hour, by audaciously, and very publicly, landing a helicopter on the structure as it was being towed out into the Atlantic. The disposal plans were abruptly abandoned by Shell (motorists, particularly in Germany, having stopped buying its petrol) and the British government was left with egg all over its face (John Major, the prime minister at the time, called Shell’s senior management ‘wimps’). Shell then entered into lengthy negotiations with Greenpeace, and the Brent Spar has now been cut up into cylindrical sections to help form a ferry terminal in Norway. Those British citizens who managed to remain ignorant of the whole affair (and they were many), or who found themselves totally convinced by whoever they happened to have last seen arguing their case on television, were evidently bound into none of these ‘active’ solidarities -- individualism, hierarchy or egalitarianism – and constituted a fourth and rather ‘inactive’ solidarity – fatalism -- assuring one another either that ‘ignorance is bliss’ or that ‘nothing we could do would make any difference, anyway’.

So cultural theory, by doubling-up from two solidarities to four, is able to make sense – predictive sense – of something that must always remain beyond the explanatory reach – a perennial source of surprise – of those who have equipped themselves with the conventional social science wisdom. That, I would argue, is why this theory merits our attention.

The four solidarities

- For upholders of the *individualist* solidarity, nature is benign and resilient – able to recover from any exploitation (hence the iconic myth of nature: a ball that, no matter how profoundly disturbed, always returns to stability) – and man is inherently self-seeking and atomistic. Trial and error, in self-organising ego-focused networks (markets), is the way to go, with Adam Smith’s invisible hand ensuring that people only do well when others also benefit. Individualists, in consequence, trust others until they give them reason not to and then retaliate in kind (the winning ‘tit for tat’ strategy in the iterated Prisoner’s Dilemma game [Rapoport 1985]). They see it as only fair that (as in the joint stock company) those who put most in get most out. Managing institutions that work ‘with the grain of the market’ (getting rid of environmentally harmful subsidies, for instance) are what are needed.
- Nature, for those who bind themselves into the *egalitarian* solidarity, is almost the exact opposite (hence the ball on the up-turned basin) – fragile, intricately interconnected and ephemeral – and man is essentially caring and sharing (until corrupted by coercive and inegalitarian institutions: 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.

- The world, in the *hierarchical* solidarity, is controllable. Nature is stable until pushed beyond discoverable limits (hence the two humps), 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 then kept within those limits).
- *Fatalist* actors (or perhaps we should say non-actors, since their voice is seldom heard in policy debates; if it was they wouldn’t be fatalistic!) find neither rhyme nor reason in nature, and know that man is fickle and untrustworthy. Fairness, in consequence, 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. With no way of ever getting in sync with nature (push the ball this way or that and the feedback is everywhere the same), or of building trust with others, the fatalist’s world (unlike those of the other three solidarities) is one in which learning is impossible. ‘Why bother?’ therefore, is the rational management response.

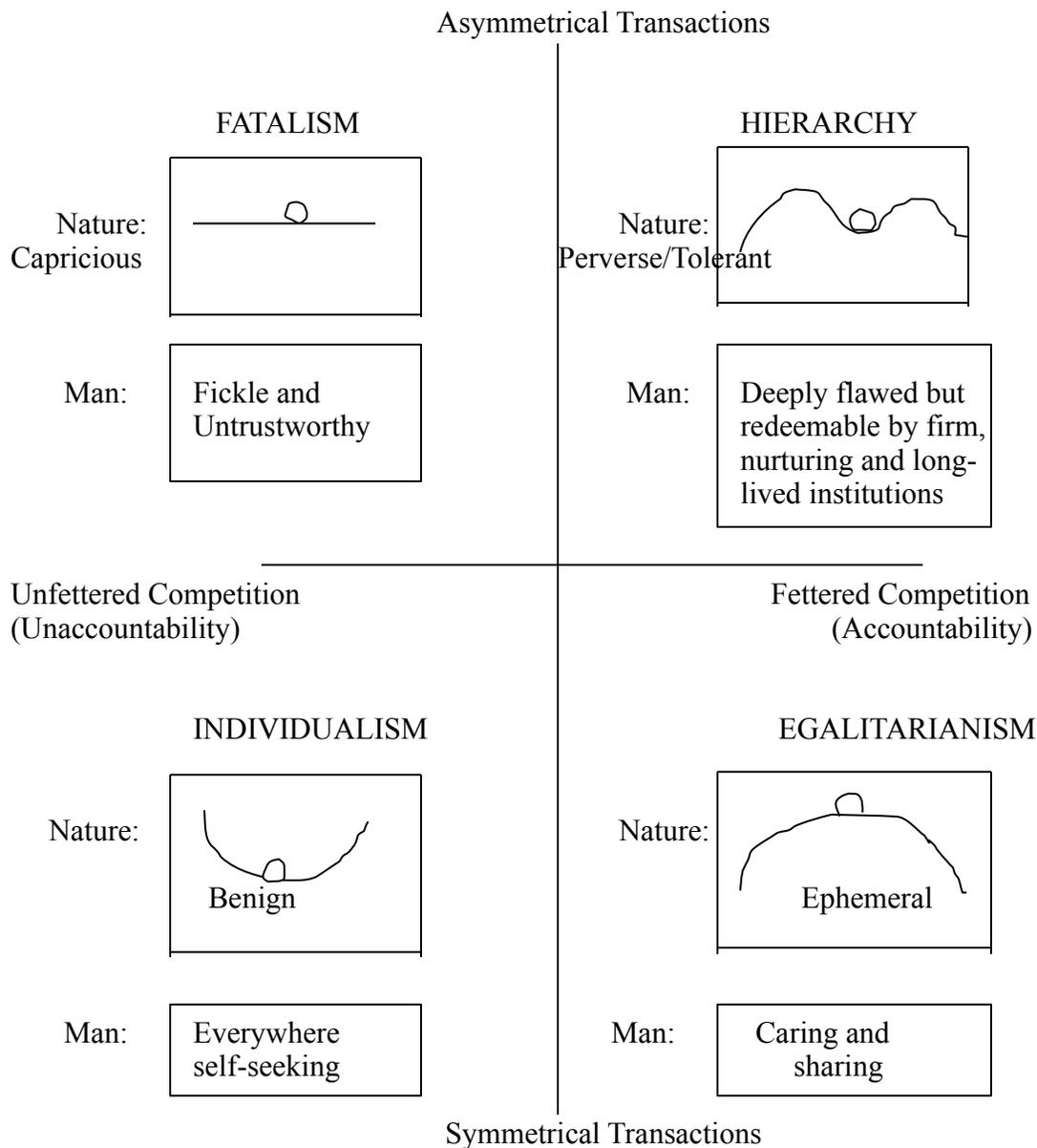


Figure 1: The four forms of social solidarity and their associated premises (or myths of nature).

These solidarities, in varying strengths and patterns of pair-wise alliance, are clearly discernible almost anywhere you care to look: in debates over water engineering in South Asia (Gyawali 2001); in the international fora where delegates struggle to do something about climate change (Thompson, Rayner and Ney 1998; Verweij 2001); in the different ways international regimes cope with trans-boundary risks such as water pollution (Verweij 2000) and

municipalities go about the business of transport planning (Hendriks 1994); in the various ways households set about making ends meet (Dake and Thompson 1999); in the different diagnoses of the pensions crisis in countries with ageing populations (Ney 1997); and in the different panaceas that are variously championed and rejected by theorists of public administration (Hood 1998), to mention but a few.

In all these examples we find that each solidarity, in creating a context that is shaped by its distinctive premises, generates a storyline that inevitably contradicts those that are generated by the other solidarities. Yet, since each distils certain elements of experience and wisdom that are missed by the others, and since each 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, it is important that they all be taken some sort of account of in the policy process. That, in essence, is the case for *chumsiness*, and I can now expand it with the help of a worked example: climate change.

The contested terrain of climate change¹

The global climate change debate, of course, is still going on, but an analysis of that debate in the mid-1990s provides us with a convenient point of entry: three *policy stories* (three, because the fatalist solidarity has no voice; if it had 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). Depending on the socio-institutional context of the particular policy actor, each story emphasises 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 industrialised 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 a fundamentally moral and ethical issue. The setting for this story is a world in which everything is intricately connected to everything else: Nature Ephemeral (Figure 1). 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 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's 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 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 organisations and individuals who have managed to see through the chimera of progress in advanced industrial society. They are those groups and persons that 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 organisations of protest such as, most prominently, Greenpeace or Friends of the Earth. These organisations, I need hardly point out, are strongly biased towards the egalitarian social solidarity.²

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 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 industrialised North produces most of these emissions, the onus is on advanced capitalist states to take action. Of course, this policy argument calls for a total and complete ban on chlorofluorocarbons.

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 professionalised bureaucracies and huge centralised administrations, the advocates of the profligacy story suggest we decentralise decision-making down to the grassroots 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.

- *Population: a hierarchist story.* This policy argument tells a story of uncontrolled population growth in the poorer regions of the world. Rapidly increasing population in the South, this story argues, is placing local and global eco-systems under pressures that are fast becoming dangerously uncontrollable: more people mean more resource consumption which inevitably leads to environmental degradation. The setting of the population policy story differs slightly, but significantly, from the settings in the other two diagnoses. Like the protagonists of the profligacy story, the population policy argument maintains that global climate change is a moral issue. Human beings, due to their singular position in the natural world, are the custodians of Planet Earth; since civilisation and technological progress have allowed us to understand the natural world more than other species, we have a moral obligation to apply

this knowledge wisely. Unlike the profligacy story, the population tale assumes that humans have a special status outside natural processes. The population story, like that of the proponents of the pricing argument (see next story), contends that human actions are rational. However, unlike the pricing argument, the population story tells us the sum of individual rational actions can lead to irrational and detrimental outcomes. The population story, then, is set in a world that needs rational management in order to become sustainable. Yet, while the motive of rational management is an ethical duty to preserve the planet, the means of management are technical. Economic growth, and the socio-economic system that underpins that growth, are necessary components in any global climate change policy response. However, economic growth in itself is no solution: it must be tempered, directed, and balanced by the careful application of knowledge and judgement.

The villain in the population tale is uncontrolled population growth. Since each individual has a fixed set of basic human needs (such as food, shelter, security, etc.) and these needs are then standardised at every level of socio-economic development (the hierarchist's social construction of human nature), population increase, other things being equal, must lead to an increase in the aggregate demand for resources. Humans, the story insists, satisfy their basic human needs by consuming resources. It follows that population growth must lead to an increase in resource consumption: more people will produce more carbon dioxide to satisfy their basic needs (Though this can be mitigated, in the longer term, by carefully planned and managed changes in technology: away from fossil fuels and towards renewables or nuclear – fission and eventually fusion). Given the limited nature of most resources, population growth must invariably lead to over-consumption and degradation of natural resources.

The heroes of the population story are those institutions with both the organisational capacities (that is, the technical knowledge) and the ‘right’ sense of moral responsibility. In short, the global climate change issue should be left to experts situated in large-scale, well-organised administrations (the IPCC – the Intergovernmental Panel on Climate Change – for instance). In terms of our typology of ways of organising, the population story emerges from hierarchically structured institutions.

The moral of the population story is to rationally control population growth. In particular, this means the introduction of family planning and education in the countries most likely to suffer from rapid population growth. Here, the onus for action is quite clearly on the countries of the South. Rapid population growth has eroded societal management capacities; if we are to tackle the global climate change issue we must first establish the proper organisational preconditions.

- *Prices: an individualist story.* This story locates the causes of global climate change in the relative prices of natural resources. Historically, prices have poorly reflected the underlying economic scarcities; the result, plain for all to see, is a relative over-consumption of natural resources.

The setting of the prices tale is the world of markets and economic growth. Unlike the profligacy story, the prices diagnosis sees no reason to muddy the conceptual waters with extraneous considerations of social equality. Yes, it says, global climate change is an important issue, but it is an issue that is amenable to precise analytical treatment. It is, in short, a technical issue to which we can apply a technical discourse. Economic growth, far from being a problem, is the sole source of salvation from environmental degradation. Environmental protection, the

proponents of this policy argument contend, is a very costly business. In order, then, to be able to foot the huge bill for adjusting to a more sustainable economy, societies will have to command sufficient funds. These funds, in turn, will not materialise from thin air: only economic growth can provide the necessary resources to tackle the expensive task of greening the economy.

In sum, the prices tale takes place in a world determined by the Invisible Hand. Here, people know and can precisely rank their preferences (the individualist's social construction of human nature). In the prices story, individual pursuit of rational self-interest (economic utility) leads, as if by magic (though economists such as Hayek prefer to call it 'self-organisation'), to the optimal allocation of resources. If market forces are allowed to operate as they should then resource prices will accurately reflect underlying scarcities; the price mechanism then keeps environment-degrading consumption in check. However, if someone (usually the misguided policy-maker) meddles with market forces, prices cannot reflect real scarcities; this gives rise to incentives for rational economic actors to over- or under-consume a particular resource.

The villain in the prices story is misguided economic policy. Barriers to international trade, subsidies to inefficient national industries, as well as price and wage floors, introduce distortions to the self-regulatory powers of the market. These distortions have historically led markets to place a monetary value on natural resources that belies the true market value. The result, the protagonists of this policy argument maintain, has been wholesale over-consumption and degradation of the natural world. The heroes of the prices story are those institutions that understand the economics of resource consumption. In the global climate change debate, these institutions comprise players such as the Global Climate Coalition and trans-national energy companies.³ In terms of the cultural theory typology, the heroes of this story are those institutions

that are strongly permeated by the individualist solidarity (*The Economist*, for instance, and think-tanks such as Britain's Institute of Economic Affairs and the US's Competitive Enterprise Institute).

The moral of the prices story is as simple as its prognosis: in order to successfully face the challenge of global climate change we have to 'get the prices right'. Unlike the profligacy story, the prices tale sees no necessity to restructure existing institutions. If it is the distortions of global, national and regional market mechanisms that undervalue natural resources then any climate change policy that fails to remove these distortions is 'fundamentally flawed'. Policy responses must work 'with the market'. Here, concrete policy proposals consist of both general measures, such as the liberalisation of global trade, as well as more specific measures, such as carbon taxes or tradable emission permits (with a strong preference for the latter, taxes being seen as more likely to distort the market).

Consequently, 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 and logic 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 organisation.

- 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.⁴
- 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 prices views holistic eco-centrism as amateur pop-science and pours scorn on the naïve belief in benign control. Last, the population 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 can ignore only at their cost, for two reasons. First, each policy story, as we have seen, thematises a pertinent aspect of the climate change debate; very few would argue that Northern consumption habits, population growth or distorted prices have no impact on global climate change at all. However, as we have seen, each story places a different emphasis on each aspect. 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, and more significantly, 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 Brent Spar and, more recently, with the World Trade Organisation 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.

So these three policy stories have important implications, not just for global climate change policy-making, but (and this is where the range of applications I mentioned earlier comes back into the picture) for policy, and for risk management, generally.

- *Endemic Conflict*: In a policy process where politics matters (that is, in any policy process) there will always 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, irrelevant.
- *Quality of Communication*: Since policy-making is inherently conflictual, and since effective policy responses depend on the participation of all three voices, policy outcomes crucially depend on the quality of the communication within the debate. A policy debate that can harness the inherent communicative and argumentative conflict between different story-

tellers will profit most from the potentially constructive interaction between different proponents. Conversely, a policy debate in which all three positions are sharply polarised 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. If this is not the case, then the policy debate will be an unconstructive dialogue of the deaf (Sabatier and Jenkins-Smith 1993).

Summarising 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 puts 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 mind-set characterised 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.

Making ourselves clumsy

The term ‘clumsy institution’ was coined by Michael Schapiro (1988) 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. Clumsy institutions, we can say, now that we have the cultural theory typology, are those institutional arrangements in which none of the voices -- the hierarchist's calling for ‘wise guidance and careful stewardship’, the individualist's urging us to ‘get the prices right’, the egalitarian's insisting 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 (optimising around just one of the definitions of the problem and, in the process, silencing the other voices) once we realise that what looks like irreconcilable contradiction is, in fact, *essential contestation*. Moreover, since each voice usually argues that its solution will strengthen democracy, whilst those being urged by the others will weaken it, democracy too becomes an essentially contested concept: a concept which, following Gallie (1955), can never be pinned down in a single way but can be clarified only through regular argument; that is, through discourse.

Each solidarity, therefore, has its own social construction of democracy: its ‘model’ (Hendriks and Zourides 1999) or ‘image’ (Jensen 1999). Clumsiness, in consequence, has normative implications that link policy, technology and democracy in ways that mainstream political science has disregarded (see, for instance, Ney and Thompson 1999, and Tranvik, Thompson and Selle 2001)⁵. If we haven’t got all the models of democracy – clearly voiced and

engaged with one another in the public sphere – then, so the normative argument goes, we haven't got democracy!

- *Hierarchists*, siding with Plato and his philosopher-king, subscribe to the *guardian* model, in which it is only right that those with superior insight and virtue should do their trustee-like duty and make all the decisions. Democracy should be indirect, majoritarian and representative, with the political class being given primacy over public affairs on the basis of popular elections every few years.
- *Individualists* see self-determination as crucial and dislike both paternalism and majoritarianism (which, they point out, can result in even quite large minorities being prevented from 'carrying out their plans'). Theirs is a *protective* model and, siding with Locke, they see government's *raison d'être* as 'the protection of life, liberty and estate'.
- *Egalitarians* are more with Rousseau, rejecting deference and seeing self-interest as something to be reined in, not amplified. They plump for the *participatory* model, in which the equal right to self-development is what matters, and this means that choice should be by broad and direct participation, ideally in a small-scale, face-to-face way and at a single level: the grassroots.
- *Fatalists*, too, have their distinctive, and characteristically unenthusiastic, model: a *non-model*, really. Despite the other solidarities' fine words about public goods, private goods and common-pool goods, fatalists know that these are all really club goods, from which they have been excluded. Hence struggling to define who the decision-maker should be is a waste of effort. It does not matter who you vote for, fatalists assure one another, the government always gets in.⁶

From the reflexive vantage point that is afforded us by our fourfold typology (Figure 1), 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 Organisation, 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 modelling) and policy precepts (the insistence on a single agreed definition of the problem, the clear separation of facts and values, and the focus on optimisation) are similarly flawed.

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¹ENDNOTES

This section is based on Ney and Thompson (2000).

² Earth First!, however, is probably a better example now, since both Greenpeace and Friends of the Earth have in recent years gone some distance along the egalitarian-to-hierarchist road: a road that Weber dubbed the *routinisation of charisma*.

Indeed, they are now so far along that road that Earth First! is able to define itself in contradistinction to them:

To avoid co-option, we feel it is necessary to avoid the corporate organisational structure so readily embraced by many environmental groups. Earth First! is a movement, not an organisation. Our structure is non-hierarchical. We have no highly-paid 'professional staff' or formal leadership [<http://www.earthfirstjournal.org/efj/primer/index.html> (26 July 2002)].

All this helps to make clear that 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.

Cultural theorists, therefore, are in full agreement with Guiseppe di Lampedusa (author of *The Leopard*) when he writes 'If things are to stay the same then there's going to have to be some changes'.

³ These players call themselves contrarians, because they do not accept the problem definition by which the global climate change debate is at present framed. In consequence, they tend to find themselves excluded from that debate. For an analysis of 'hegemonic discourses' such as this, and their inevitable transformations, see Box 4.3, pp. 292-3, Vol. I of Rayner and Malone (1998).

⁴ 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!), 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 Thompson, Warburton and Hatley (1986) and Adams and Thompson (2002).

⁵ Though I have not dwelt explicitly on technology in this article, it is of course central to the whole business of climate change. It is our technologies that have put the greenhouse gases into the atmosphere, it is our technologies that have enabled us to detect that increase, and it is changes in our technologies – from fossil fuel-based to renewables – that will help us remedy the situation.

⁶ The interlocking of the social constructions of public, private, common-pool and club goods with the social constructions of democracy (and, for good measure, of information, technology and information technology) is explained in Thompson (2000), along with the acknowledgement that the former is shamelessly borrowed from Verweij (1999) and the latter from Hendriks and Zourides (1999).