Institutions, climate change and cultural theory: towards a common analytical framework

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Abstract

Institutions are the multitude of means for holding society together, for giving it a sense of purpose and for enabling it to adapt. Institutions help to define climate change both as a problem and a context, through such socialised devices as the use of scientific knowledge, culturally defined interpretation of scientific findings, and politically tolerable adaptation strategies. This paper briefly reviews the origins and current status of the 'new' institutional theories that have recently developed within the social sciences. The conclusion is that they are based on such contradictory interpretations of human behaviour that, although appealing, a complete synthesis will never be possible. In effect, there is a fundamental institutional 'failure' over the interpretation and resolution of climate change. Cultural theory helps to explain why this is the case by throwing light on the inherent contradictions that beset us all when confronted with global warming. © 1999 Elsevier Science Ltd. All rights reserved.

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There is a growing literature on the relationships between institutions and climate change (O'Riordan and Rayner 1991; O'Riordan and Jordan 1996; O'Riordan et al., 1998). Our purpose here is to look at the so-called 'new' institutionalisms as devised by social and political theorists, to see if they constitute a unified theory of how social institutions define and respond to climate change. We argue that they do not do so because they are based on fundamentally different interpretations of human behaviour. So we turn to fresh ideas arising out of cultural theory, notably canvassed by Thompson and Rayner (1998), to see if that approach offers anything. We conclude that it does, although only by skating over key debates surrounding the precise relationship between human action and institutional structures which divide new institutionalists.

1. On institutions

Institutions are the multitude of means for holding society together, for giving it a sense of purpose, and for

enabling it to adapt. Institutions apply both to structures of power and relationships as found in organisations with leaders, membership, resources and knowledge, and to socialised ways of looking at the world as shaped by communication, culturally ascribed values, and patterns of status and association. Institutions define anthropogenically induced climate change both as a problem and a context, through such socialised devices as creating and interpreting scientific knowledge and selecting politically tolerable adaptation strategies. Some observers even claim that institutions shape the very needs and wants that create the processes that induce climate change, although as will become clearer, this view is disputed.

2. What are social institutions?

It is an article of faith that institutions – however defined – are absolutely central to understanding and responding to global environmental change (O'Riordan et al., 1998). The Brundtland Report summarises this argument in two widely quoted paragraphs:

> The objective of sustainable development and the integrated nature of the global environment/development pose problems for institutions, national

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and international... Yet most of the institutions facing those challenges tend to be independent, fragmented, working to relatively narrow mandates with closed decision processes... The real world of interlocked economic and ecological systems will not change; the policies and institutions concerned must (World Commission on Environment and Development, 1987, p. 9).

In the Brundtland report institutional change is presented as *sine qua non* of sustainable development. But what are social institutions and how do they change? Some use the word institution narrowly to mean government structures, but this elides more sociological interpretations. Summarising a vast theoretical literature, there seems to be a general agreement that institutions:

- Embody *rules* that encapsulate values, norms and views of the world. Rules define roles and provide a social context for action. They define the 'game' of politics, establishing for players both the objectives and the range of appropriate tactics or moves.
- Take *time* to develop. They cannot be created instantaneously, but come about through recursive processes. Accordingly, the sociologists Berger and Luckmann (1967, p. 70) regard institutions as human actions that have become *habitualised* over time.
- Once developed have a degree of *permanence* and are relatively *stable*. For Giddens (1984, p. 24), they constitute the enduring regularities of human action.
- Are, contrary to the image of fixity frequently associated with them, *never completely static*. They are continually *re-negotiated* in the permanent interplay between conscious human agency (action) and the wider structures in society (e.g. laws, the economy, common perceptions) over which individuals have relatively little control. This is the essence of Gidden's (1984) theory of structuration.

Beyond this, however, there is a heated debate about the exact relationship between institutions and human behaviour. At the core of is what Grafstein (1992) terms the "paradox of constraint". Put simply, how do institutions constrain and shape behaviour when they are themselves the products of human choices? Obviously, individuals do have an element of free choice in what they do, but they are also institutionally conditioned as to what is right and wrong, what is possible and what is not, what is legitimate and what is plainly unacceptable. The exact amount of 'elasticity' in the institutional structures that frame human agency is, however, a matter of considerable debate within social science.

The mechanisms of predicting outcomes, or of organising response, or of preparing for possible danger and of accommodating to stress or hardship, are constitutive of the political debate about climate change. This is why institutions have to involve rules, regulations and legit-imating devices. An example of the informal role of institutions in mediating the politics of climate change can be found in the activities of the Intergovernmental Panel on Climate Change (IPCC), although there are countless other examples. From the vantage point of climate change science, the institutional norms of consensual roles provide a background to the peer group pressures of conformity. In a study of how members of the three original IPCC Working Groups, and non-members, adjudged the credibility and consistency of the science, Skea (1996, pp. 7–10) produced some revealing conclusions. Readers will recall that in the original IPCC review, three Working Groups were formed, one looking at the science, one the adaptation strategies, and one the socio-economic dimensions.

Skea found that Group members and non-Group outsiders felt comfortable with Group I's competence on 'scientific inclusiveness'. But even Working Group members themselves were uneasy over the comprehensiveness of Group III (responses), while outsiders took a very jaundiced view. On the matter of how far each grouping believed that the executive summaries provided a clear message for policy makers, Group I got a high rating, while Groups II and III received the thumbs down, even from their own group members. The outsiders were particularly sceptical. According to Skea, even Group I scientists become embroiled in institutional controversy. In order to include the state of the art research, the authors incorporated work that had not been peer reviewed. This set up an argument with one of the most vocal 'contrarians', Patrick Michaels of the University of Virginia, who complained that his (partially peer-reviewed) work was being over-looked. Phil Jones (1997, p. 43) offers a personal view of events from within the mainstream climate science community:

> we cannot take the chance that Michaels and his colleagues may be right. Even an increase of the order of 2°C will have diverse inputs, – some good but more probably bad – because many aspects of the environment are tuned to the present climate. Even if the action we take to control emissions of greenhouse gases is not as stringent as it needs to be, those actions could slow the rate of future change... If Michaels wishes to influence climate change science in the future, he should publish in the peer reviewed literature. Only with this background will he gain the respect of other scientists around the world.

Michaels (1998, p. 4) retorted that Jones "grossly defames my professional record". But Jones was careful in his reply pointing out that there were few peer-reviewed papers in the narrow area of matching pattern-matching techniques to climate models of global temperature change. Jones did not indicate that any of Michaels work in this area had been peer reviewed.

There we have it. The Working Group I consensus was forged in the institutional heat of external peer review. The contrarians were scientifically routed because their arguments could not hold up against the weight of consensual opinion. To get heard, the institutional force of received wisdom would have to be overcome. Michaels may be right or he may be wrong. But the 'big hitters' of the climate science, who gain prestige and scientific publications, will determine how right or wrong he is. This vignette nicely illustrates the point made at the outset: institutions guide and cajole; they also include and exclude. To be included means either one plays by the pre-determined institutional rules, or one exploits the opportunism that institutional instability creates.

3. 'New' institutionalism and climate change politics

Institutions remain a core subject in political science and sociology. However, the way they have been studied has changed greatly in the past 50 years. A 'new' institutionalism (NI) has emerged in the last decade in sub-areas as diverse as International Relations (Keohane, 1989), the European Union (EU) (Pierson, 1996; Armstrong and Bulmer, 1998; Jordan, 1999), British (Hall, 1986; Elgie, 1997) and US politics (Weaver and Rockman, 1993). According to Hall and Taylor (1996, p. 936), NI does not yet constitute a unified body of thought – distinct NIs have developed in political science, rational choice theory and sociology – although they remain optimistic about the possibility of achieving a synthesis (Hall and Taylor, 1996, p. 957).

What, if anything, do these NIs have in common? They all arose out of a growing dissatisfaction with the agent-centred behaviouralism which dominated political science in the 1960s and 1970s, and an eagerness to 'rediscover' the role of institutions (however defined) in shaping political outcomes (Crawford and Ostrom, 1995, p. 582). Behaviouralists study the policy process in terms of systems, stages, subsystems and arenas, rather than particular actors such as executives, legislatures and constitutions. Proponents of NI try to bring institutions 'back into' the frame of analysis in order to make explicit the links between human agency (i.e. process) and structure (i.e. organisation and position) (O'Riordan and Jordan, 1996). This was not explicitly the case for those studies undertaken in the historic-descriptive tradition which merely described the main governmental organisations such as Parliament and the judiciary, their history, structures, functions and power relationships. NI attempts to address this deficiency by placing the policy process within the context of political institutions. In a seminal contribution, Peter Hall (1986, p. 259) argues that institutions exist and have an important long-term impact on how decisions are made, "but they do not eliminate the free will of policy makers".

Within political science, the other main exponents of NI are March and Olsen (1984, p. 1989). While starting from a somewhat different position than Hall, their work also seeks to show that institutions structure politics in critical respects. Once created, institutions are said to 'take on a life of their own', acting as independent or intervening variables between the preferences of the actors that created them on the one hand, and the ultimate outputs and outcomes of the policy process on the other. The following quote captures the essence of their argument:

> political actors are driven by institutional duties and roles as well as, or instead of, by calculated self-interest; politics is organised around the construction and interpretation of meaning as well as, or instead of, the making of choices; routines, rules, and forms of evolve through history-dependent processes that do not reliably and quickly reach equilibria; the institutions of politics are not simple echoes of social forces; and the polity is something different from, or more than, an arena for competition among rival interests (March and Olsen, 1989, p. 159)

The main claim being made is that the configuration of inherited institutions *shapes* any subsequent process of amendment by constraining the choices available, moulding the preferences of actors, and thereby lending policy a path-dependent character. 'New' policy problems such as climate change are not considered de novo but in the context of existing institutions. Policy becomes its own cause. In situations of path dependency, institutions may acquire consolidating political stability – so strong, in fact, that considerable effort may be needed to move policy onto a new trajectory. To put it another way, institutionalists argue that it is easier for political actors to work with the grain of institutions than against it.

To take another example from climate change politics, one only need look at the fate of the European Commission proposal to impose a carbon/energy tax on Member States to see that politics is institutionally framed (see Zito (1995) for a good summary). The tax would progressively have raised the price of a barrel of oil beginning in 1994 and extending over ten years. The Commission's proposal was set in the context of a wider debate about the efficacy of green energy taxes as instruments of environmental policy. It was blocked for three main reasons:

- The main proponent, environment Commissioner Carlo Ripa di Meana, badly mis-read the prevailing political *zeitgeist*. Too many uncertainties were in the air and, with an economic recession biting, the

Member States were keen to avoid anything that imperilled economic growth. No one was sure what would be the effects on the competitiveness of key industrial sectors and the job markets, and the implications for penalising the poor were only dimly analysed. Here, therefore, was a good case of a new problem – climate change – being framed in the context of existing institutional arrangements of tax, benefit, economic competitiveness and inter-regional trade that could not rapidly and peaceably be broken.

- Through intensive political pressure, certain Member States, including the UK, forced the proposal off the political agenda on the grounds that taxation was a matter solely for states not supranational bodies. Under the terms of the Maastricht Treaty, fiscal matters require a unanimous vote, so any single nation had veto power. This is what political scientists term a 'joint decision trap'. The institutional rules of the Community therefore favoured the *status quo* despite the best efforts of greener Member States.
- European industry mobilised political bias to fight the proposal on the grounds that their leading competitive position would be undermined and that the case had not been made for justifying the policy measure. The oil and large energy consuming lobbies were particularly adept at citing the uncertainties of the science in Working Group I, and using this as a weapon to aim at the politicians, faced with the prospect of possible job losses. This was a powerful lobby of considerable stability.

It now remains extremely unlikely that any Euro-wide tax measure will be imposed for climate change reasons, though, in time, there may be movement for reasons of fiscal reform more generally. Crucially, at the 1997 Amsterdam summit, the Community rejected proposals to place taxation policies under qualified majority voting (Jordan, 1998). No actor in this process was 'free' to change the structure of policies, the overall perception of 'the problem' or the formal and informal rules for making decisions. The patterning of policy coalitions, legal frames and political biases selectively ruled out the tax option.

The problem with much of the 'new' institutionalist literature to date, however, is that it is unclear on vital questions (e.g. how do institutions develop and how do they change?), is replete with ambiguities and is too discipline bound. In an extremely useful review, Hall and Taylor (1996) differentiate between three main variants: *historical institutionalism; rational choice institutionalism; sociological institutionalism*. The main differences are elucidated in Table 1. It is apparent that each provides very different answers to such fundamental questions as the definition of an institution, the relationship between social structure and conscious human agency, and the correct methodological tools to be applied.

3.1. Historical institutionalism (HI)

HI is rooted in comparative politics and arose out of a wish to explain why similar policy problems are dealt with differently by states. The core argument is that policy outcomes need to be understood in the light of the specific configuration of institutions and organisations that exist within each country. Some configurations are conducive to certain political outcomes, whereas others will lead to rather different policy trajectories. Above all, institutions play a *determinant* role. In the spirit of Giddens, proponents of HI claim that sometimes institutions shape the actions of individuals, and sometimes are affected by collective and individual choices:

> By shaping not just actors' strategies (as in rational choice), but their goals as well, and by mediating their relations of co-operation and conflict, institutions structure political situations and leave their own imprint on political outcomes (Steinmo et al., 1992, p. 9).

Once created institutions take on a life of their own acting as intervening variables between the preferences and power of actors on the one hand and ultimate policy outcomes on the other. Significantly, the existing configuration of institutions shapes any subsequent process of amendment by constraining the choices available and modifying actor preferences. Institutions, in other words, lend policy a path-dependent character in the face of new information about the nature and cause of policy problems and changes in actor preferences

3.2. Rational choice institutionalism (RCI)

RCI is much closer to neo-classical economics in its conception of institutions, seeing them as largely epiphenomenal. Individuals are said to behave rationally and strategically, using whatever resources they command to maximise their utility. They have a given set of preferences which are generally fixed over time. Institutions are created because they reduce the transaction costs of undertaking the same activity over and over; because they help stabilise expectations by transferring information; and because they promote compliance by building trust and creating enforcement mechanisms in circumstances where trust is weak or absent. In contrast to HI, institutions are regarded as having the capability to affect individual choices but are not capable of determining them. One of the main problems with RCI is that it tends to take a functionalist view of institutions in that it deduces the preferences of actors from the structure of existing institutions, when in fact they may embody past choices that no longer reflect current concerns. In general, rational choice institutionalists are happy to treat preferences as *exogenous* variables: they want to know how people go about getting what they know they want.

Table 1
The 'new' institutionalisms in social science

	Historical institutionalism	Rational choice institutionalism	Sociological institutionalism
Disciplinary base	Comparative politics; state theory	Rational choice; economics; game theory	Sociology; anthropology
View of institutions	Mostly organisations and the rules they promulgate for their identity and survival	Generally formal rules of procedure, conventions and protocols	Moral templates and cognitive scripts that offer frames of meaning
Decision logic	Calculus/cultural: without denying individual rationality, preferences regarded as fluid	Calculus: logic of rationality – preferences are stable and exogenously defined	Cultural: preferences are unstable and endogenously defined through association and bonding
Origins of institutions	Contingent: new institutions develop in a world replete with existing institutions	Functional: institutions are created to serve the interests of members	Contingent: new institutions develop in a world replete with existing institutions
Institutional change	Institutions normally stabilise politics, but certain forms create change	Change occurs only when actor preferences change in order to restore equilibrium	Institutions shape world-views: actors choose from a series of templates when designing new institutions.
Strengths	Tries to link decision logics; eclectic	Clear precepts permit theory development and testing	Analyses preference formation
Weaknesses	Ambiguous about key relationships; too inductive; too emphirically orientated: insufficient theory building/testing	Weak at explaining change: do institutions persist *only* because they are efficient? Core assumption of rationally is simplistic; view of institutions is too intentionalist/functionalist	Ambiguous about key relationships; too deterministic
View of history	Generally inefficient at matching outcomes to exogeneous pressures	Generally efficient: changes in preferences automatically and rapidly feed through to institutional change	Generally inefficient at matching outcomes to exogeneous pressures
Level of analysis	Meso	Micro	Macro
Summary	Institutions have lives of their own and resist re-steering. They are *independent* variables. Institutional structures shape and are shaped by the stragegy of individual actors	Institutional structures are shaped by the strategy of individual actors. When preferences shift, the institutions shifts accordingly. They are *dependent* variables	Individuals may behave 'rationally' through socially determined mores. They are only 'rational' when set in such frameworks.
Relationship to cultural theory	Egalitarian/hierarchist	Individualist	Egalitarian/hierarchist

but ignore the equally important question as to why people want what they want in the first place (Wildavsky, 1994, 1997).

3.3. Sociological institutionalism (SI)

In contrast to political scientists, sociologists see the influence of institutions in almost every aspect of human life, from the way people eat to the way they shake hands and engage in conversation (Powell and Di Maggio, 1991). Institutions are immanent. They can be habits and social protocols right through to cultural templates and frames of meaning. For SI, institutions do not simply reflect the strategic calculations of individuals behaving rationally, but themselves *define* what is expected and what is regarded as 'rational' or appropriate in a given situation. Institutions, in other words, help to shape the

very preferences that rational choice theorists regard as fixed and 'unmalleable'. But these institutions are themselves dependent upon larger 'macro-level' variables such as cultural bonding and society.

4 Towards an interpretative framework

We believe that the NI amounts to considerably more than "a disposition to oppose the mainstream" and a "slight shift of ground by some of those interested in the state" (Jordan, 1990, pp. 482, 484) (see also Lowndes, 1996; Hay and Wincott, 1998). It is tempting to assert that the notion of institution is discipline-bound and hence all but impossible to reconcile into one definition. Consequently, the study of institutions will always be frustrated by the absence of agreement on the core topic

being studied. Here, in other words, is an excellent example of the "contradictory certitudes" raised by Thompson and Rayner (1998, p. 303). This is the argument that each of the frameworks cannot be reconciled because each position actively defines itself in distinction to all the others. They have different epistemologies and are based on very different ontologies. We now attempt to see if cultural theory can move the debate on.

Rayner (1994, p. 2) provides a valuable starting point. Quoting Gerlach (1991), he sees a changing social order in the late 20th Century associated with a decline in faith in both market capitalism and centralised socialism. This altered view of the social order has begun to alter the notion of governance and social relationships. The relative failure of capitalism and socialism to provide a sufficiently fair distribution of human welfare has thrown into doubt whether humans can successfully operate on the basis of organising ideologies that assume dominance or control over nature. In terms of the analysis posed here, this enables those advocating an early and comprehensive effort aimed at reducing greenhouse gas (GHG) emissions to create a reductionist interpretation of climate change. This in turn suggests that huge shifts in economic organisation and social behaviour are legitimated by 'top-down' rule-bound structures that intervene in the dominant social order. Rayner calls this a *hierarchist perspective* for it is based on adherence to rules that are determined on the basis of differential status that oblige acquiescence and supportive response.

However, the hierarchist position is not the only one that influences either informal or formal collective institutions. For there are those who believe that 'the state' as an interventionist entity is too cumbersome and inflexible in its handling of such a wide ranging set of policy linkages that make up the response to climate change. They believe that contracts, freely yet flexibly arrived at by people enabled to determine what is good for them on the basis of adequate information and access to markets, can reach both formal and informal arrangements that determine both their individual, and ultimately, the common good. This viewpoint Rayner terms *market contract*.

But the way of the modern world is also becoming less rule bound, more networked, and more localised. This is a process that Gerlach (1991) describes as "institutionalising ecological interdependence" in the face of increasing demands for greater fairness and community sharing in the conduct of social affairs. This perspective searches for an individual autonomy within a supportive common good. It is encompassed by the rather vaguely defined notion of communitarianism. Not only is this more *community* focused perspective promoted by a sense of treating people and ecosystems with respect and without status. Its is also encouraged by patterns of governance that prefer informal networking of varying interest groups alliance and social arrangements that weave in and out of associations of interest groupings.

So one organising framework for examining the role of institutions in climate change politics could be this triple structure of *market, hierarchy*, and *community*. This triple perspective draws on a more sophisticated four-fold breakdown based on social structure and degrees of social interaction, we shall return to below. What we are visualising here is a device for allowing different interpretations of institutions to be carried across disciplines, given a common meaning, and applied to climate change through a changing world order. In so doing it is important to grasp that these three perspectives are *equally* valid. They carry no normative connotation. None is more 'right' for climate change response than any other. It is the clash of these perspectives and the struggle for some kind of mediated way forward, that may provide the most suitable basis for examining the institutional context of climate change.

Cultural theory adds an important social dimension to this typology. The essence of this approach, was originally outlined by Mary Douglas in her book on Natural Symbols (Douglas, 1970) but possibly best encapsulated in Thompson et al. (1990). By emphasising bondings, or solidarities, cultural theory suggests that personalities are of lesser importance than the individual as identified through various social settings and processes. Thus, individuality comes through involvement with others. That involvement is in turn patterned by the nature of the social relationships we have, and the degree to which these relationships reflect the hierarchist, market based and communitarian positions outlined above. Rather than debate *ad infinitum* the precise meaning of the word 'institution', cultural theorists instead define human interaction rather more loosely using two main coordinates – grid and group – to produce four 'ways of life'.

Fig. 1 provides the classical approximation of cultural theory. The axis of *group* refers to the extent to which an individual feels bonded to larger social units, while the axis of *grid* denotes the degree to which an individual's life is circumscribed by externally imposed order. Cultural theorists maintain that people's policy choices are supportive of and rationalised on the basis of these different 'ways' or value orientations.

Proponents of cultural theory claim that these four ways provide a much more sophisticated treatment of the conflicting rationalities and actions than the traditional left–right, conservative–liberal cleavages. Significantly, each way of life generates a quite different interpretation of the world and is associated with a separate set of justifications for undertaking a given course of action. Hence, *individualists* typically regard nature as opportunistic, resilient and responsive, assuming that markets can signal the need to overcome scarcity, or to substitute resources, techniques and management styles when needs arise. The stereotypical individualist is a self-made person, free from control by others, who strives to impose order on his or her environment. Generally,

High degree of
social regulation

| FATALIST | | HIERARCHISTS |

• Nature is a lottery, capricious

• Outcomes are a function of
chance

• Nature is tolerant if treated with
care

• Outcomes can be managed to
be sustainable

Low degree of   High degree of
social contact   social contact

• Nature is resilient

• Outcomes are a personal
responsibility

• Nature is vulnerable

• Outcomes require altruism and
common effort

| INDIVIDUALISTS | | EGALITARIANS |

Low degree of
social regulation

Fig. 1. The four 'ways' of life

individualists oppose 'top-down' interventions by the state, preferring instead personal responsibility. They are generally optimistic about the prospects for continued growth and prosperity unless it impinges on their own individual prospects and have little truck with precautionary arguments. Organised societal 'learning' is therefore anathema to individualists. From the vantage point of the various interpretations of institution set out in Table 1, individualists appear to have a lot in common with the 'rational' atomistic actors which populate the world of RCI but shun the sociological interpretations of institutionalism.

Hierarchists prefer to regard nature as tolerant within definable limits, which can be manipulated by incorporating ecological principles into all management approaches and accounting techniques. They are, therefore, likely to be sympathetic to the defining principles of "ecological modernisation" (Weale, 1992), namely the application of technology and rule-based-norms to the management of complex human choices. While the individualist will prefer voluntary arrangements brokered by prices and markets, the hierarchist looks to contracts and regulations that incorporate the workings of the natural world into human evaluations and management systems. This is because such arrangements are judged more readily to respect authority and more directly to monitor and enforce agreed contracts. This permits the entry of approaches such as ecological risk assessment, eco-auditing, integrated assessment and 'green' accounting.

Egalitarians regard the fragility of nature as part of their reason for existence. They symbolise this in the economic and social marginality of groups who lose out in a market-driven or hierarchically organised society.

This process of marginalisation they regard as intrinsic to the management approaches and world-views of the other two groups, hence their concern for fairness, justice and rights to survival of both humans and 'critical' ecological processes. Douglas (1996) argues that the rise of new social movements around such concerns as the environment and alternative medicine, and the emergence of religious sects and cults, are symptomatic of a growing desire to restructure society along egalitarian lines. Egalitarians prefer to work in environmental pressure groups such as Greenpeace and believe decisions should be taken following open and frank debate: they try to be the true democrats. Characteristically, they favour the application of the precautionary principle where science is uncertain and are generally opposed to management techniques like cost–benefit analysis which attempt to commoditise nature. They share a strong belief in the need for, and power of, societal deliberation and learning. Thus, they fall more happily into the frame of reference adopted by sociological and historical institutionalists.

Fatalists tend to see nature as a lottery, opening and closing options and acting in unpredictable ways. Fatalists do not get involved in moral discourses, nor do they enjoy rules or competition. They survive in a world that is to some extent manipulating their lives, and they may engage or disengage according to circumstances. They are resigned to their fate and see no benefit from trying to re-shape it. Consequently, they do not join pressure group, do not get involved in societal debate and see no sense in society trying to 'learn' about how to mitigate and/or adapt to climate change because, ultimately, it is hopeless.

Cultural theory sheds light on why we as individuals find it hard to agree on how to respond to a 'mega' risk like climate change. *Hierarchists*, for example, are likely to trust climate scientists and those in authority, and will show little anxiety over 'technofixes' so long as they are sanctioned by experts. They will accept rules and state interventions, so long as these are openly arrived at and appropriately legitimised. *Egalitarians* on the other hand, are suspicious of anyone in authority. They fear 'mega' risks which are seen to produce irreversible consequences and impacts that are inequitable in their severity. This perspective is evident in critiques of climate change policy emanating from both developed world action groups, and developing world NGOs. *Individualists*, on the other hand, are particularly concerned about problems that impinge upon their freedom and autonomy. By its very nature, climate change involves just such responses. In relation to climate change, the *fatalist* is mesmerised by the uncertainty of the science. The *egalitarian* may also be confused as to the likelihood of global cooling or global warming, but sees both as presenting a fearful challenge. This translates into a call for the application of the precautionary principle and the need for urgent action.

5. Putting cultural theory to the test

Douglas (1996) argues that cultural theory has two main uses. It can be employed to predict the views and values of actors on the basis of their preferences. It can also serve a more emancipatory purpose, allowing people to understand the social and political systems that are upheld by widely shared beliefs and values. To look at this in the context of grounded research, O'Riordan et al. (1997) reported on a detailed survey of residents of Norwich, UK, sampled statistically for representativeness of the population as a whole. During the first phase of the study, respondents were asked to fill in a questionnaire that included the check list of responses designed to elicit cultural solidarities. But this was not the only basis for selection. Respondents were also asked to select different ways of determining fairness rules for hypothetical circumstances. The two sets of responses were compared to create a grouping of actual people with apparent pre-dispositions to cultural groupings of the kind outlined in Fig. 1. It must be stressed that only about 23% of the sample clearly fitted into these groupings. So the actual methodology of this choice is a matter of some difficulty, as yet not fully resolved (see Marris et al., 1996).

The selection of groupings as identified by the first phase of the study met as carefully managed focus groups aimed at electing their outlooks on a number of key themes relating to risk perceptions. Two statements were used to tap cultural orientations towards key aspects of climate change, namely fairness and acceptability, in the context of principles of natural justice.

● It is not fair that some people benefits from climate change while other people suffer the consequences without any gain for themselves.
● A risk is less acceptable if it affects future generations.

The results are presented in Figs. 2 and 3.

Before reading on, a warning over the empirical justification of cultural theory is order. The problem lies partly in theory, where claims are made that the method of soliciting cultural solidarities relies on simplistic psychometric tools that reinforce the very outlooks being examined (Boholm, 1996). Others such as Sjöberg (1995) argue that cultural theory is an empirically misguided notion, and that beliefs in 'naturalness' and political efficiency are far more likely to be agents of value mutation than shifting ways of nature.

The conclusions summarised in Figs. 2 and 3 may appear simplistic. However, what was remarkable for the researchers was the unanimity of view *within* the groups and the huge divergence *between* the groups. This finding is a tribute to cultural theory, which is sometimes criticised because it lacks empirical testing via organised case studies and recognised social science techniques. The data in Figs. 2 and 3, therefore, represent the 'core' of social solidarities as defined and explained by cultural theory. They are the considered and agreed voices of citizens acting out their interpretations of risk, where that risk is global, potentially irreversible, and affecting others in a way that may be nor reflect their responsibility for the cause of their possible affliction.

From the data in Fig. 2, it can be seen that fatalists accept that perpetrators of risk do not own up to their mischief, nor do they believe that regulatory bodies are willing to apportion blame or responsibility. For them, the issue is which people are knowingly in danger, and hence whether there is a moral responsibility to protect them. Egalitarians, on the other hand, recognise that the wish to consume goods and services brings with it a blame for corporate abuse, and in any case, the poor always lose: that, for them, is the inevitable outcome of capitalism. Egalitarians see injustice in the maldistribution of blame and suffering for any risk. Individualists look to themselves to get informed, but not that it is unfair to place any risk on those who cannot reasonably be expected to know of the dangers. This particularly applies to future generations. Hierarchists accept that there will always be losers, but, expect the losers to find out from the relevant sources just what risks they faced, and act accordingly.

From Fig. 3, a similar pattern emerges, with individualists believing that 'the next generation may not regret what they never experience'; heirarchists accepting that harming the futures may be 'wrong, but it is the lesson of history'. Fatalists also take a moral position of

It is not fair if some people gain the benefits while other people
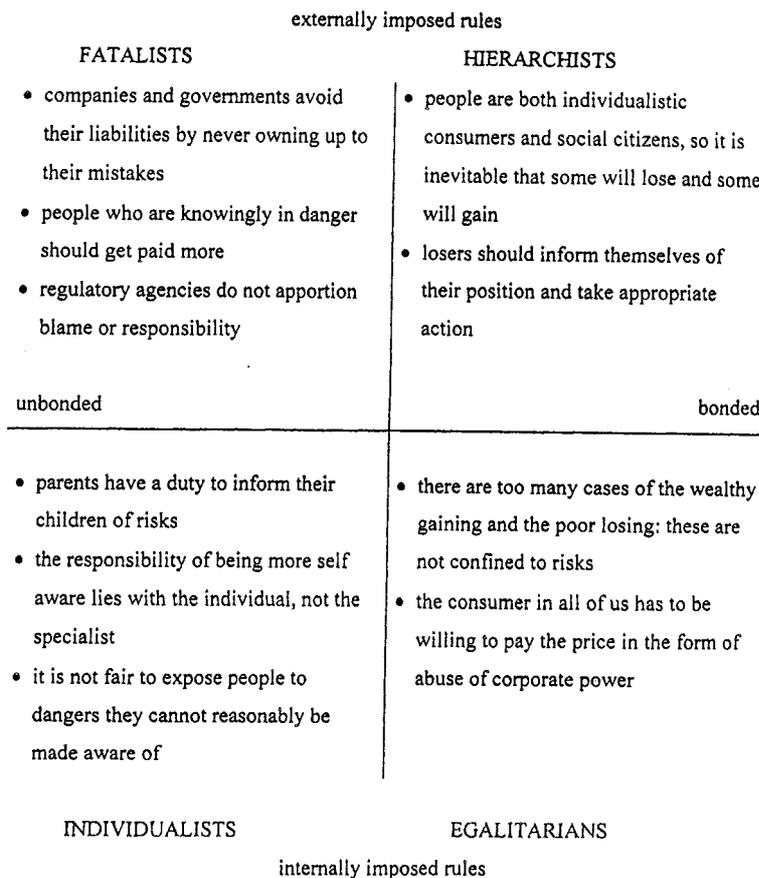
suffer the consequences without any gain for themselves

externally imposed rules

FATALISTS	HIERARCHISTS
• companies and governments avoid their liabilities by never owning up to their mistakes • people who are knowingly in danger should get paid more • regulatory agencies do not apportion blame or responsibility	• people are both individualistic consumers and social citizens, so it is inevitable that some will lose and some will gain • losers should inform themselves of their position and take appropriate action
unbonded	bonded
• parents have a duty to inform their children of risks • the responsibility of being more self aware lies with the individual, not the specialist • it is not fair to expose people to dangers they cannot reasonably be made aware of	• there are too many cases of the wealthy gaining and the poor losing: these are not confined to risks • the consumer in all of us has to be willing to pay the price in the form of abuse of corporate power
INDIVIDUALISTS	EGALITARIANS

internally imposed rules

Fig. 2.

responsibility, but note the future generation is always 'better off', so it is important to weigh these gains against any benefits. Egalitarians see the harm to future generations as 'irresponsible', but no more so than the harm that is already being inflicted on innocent present generations.

6. The 'new' institutionalism and cultural theory: a comparison

We see in both the 'new' institutionalism and cultural theory a thoughtful attempt to address the enduring problem within social science of how to explain the relationship between conscious human agency and social structures. Each perspective provides the context for the other, although to date they have developed in isolation from another despite their obvious similarities (see Thompson and Rayner (1998, pp. 323–325) for a preliminary comparison). The agent centred or actor freedom view suggests that the values and preferences of indi-

viduals, the power and resources that they hold, are treated as self-evident. Institutional settings are the conscious product of human designs, combining opportunism with contextual bias. Game theorists also tend to view institutions as dependent variables, specifically as equilibrium outcomes of successive rounds of games. Cultural theory, however, does not treat interests as self-evident 'facts', but as the observable manifestation of a whole series of conscious and unconscious calculations made by people as part of particular groupings. Although an individual's preference for a particular way of life cannot be entirely eliminated, people are not completely free to behave as they choose. The patterns of solidarity constrain what they do and the way they interpret the world. Since each way of life generates its own set of rationales and justifications of action, individuals are encouraged to adjust their behaviour to suit the prevailing institutional context. If individuals feel ill at ease in that institutional context – in a particular job for example – cultural theory argues that they will try to move to another realm where they feel more comfortable,
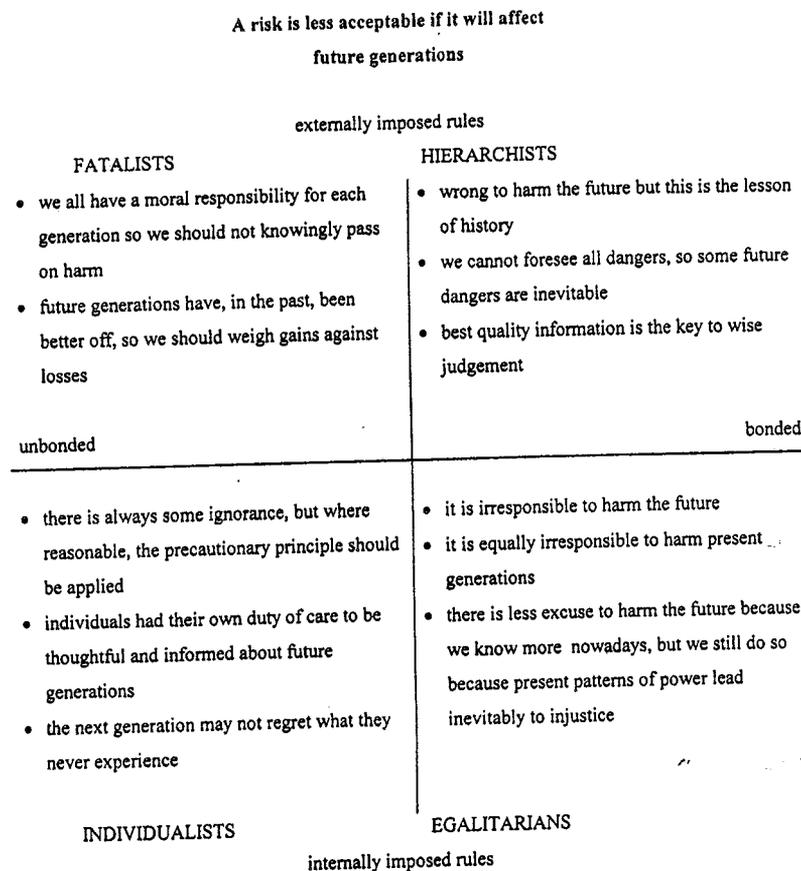
A risk is less acceptable if it will affect

future generations

externally imposed rules

FATALISTS	HIERARCHISTS
• we all have a moral responsibility for each generation so we should not knowingly pass on harm • future generations have, in the past, been better off, so we should weigh gains against losses	• wrong to harm the future but this is the lesson of history • we cannot foresee all dangers, so some future dangers are inevitable • best quality information is the key to wise judgement
unbonded	bonded
• there is always some ignorance, but where reasonable, the precautionary principle should be applied • individuals had their own duty of care to be thoughtful and informed about future generations • the next generation may not regret what they never experience	• it is irresponsible to harm the future • it is equally irresponsible to harm present generations • there is less excuse to harm the future because we know more nowadays, but we still do so because present patterns of power lead inevitably to injustice
INDIVIDUALISTS	EGALITARIANS

internally imposed rules

Fig. 3.

and where their behaviour is regarded as more appropriate. What the cultural theory perspective therefore provides is what the rational choice theorist ignores, namely how do individual preferences originate, what world-views are these preferences attached to, bearing in mind that such world-views may be socially rather than agency determined, and how certain are these views held when challenged.

The structuralist or organisation-centred view on the other hand argues that the contextual properties of society and the arrangements of power and judgements that are created, form a constraining influence over individual actions. In this case, institutions regulate the use of authority and power, and provide actors with resources, legitimacy, standards of evaluation, perceptions, identities and a sense of meaning. Marxist theory falls into this category since it downplays the importance of individuals in favour of explanations of human behaviour that reflect the impersonal logic of historical materialism. Cultural theory provides a more loosely structured interpretation of these institutional shaping factors, more centred on social relations than organisational arrangements.

This perspective is profoundly important for climate change politics. Structural biases broadly reflect an era

when climate change was not politically important. Both agency (i.e. individual power relationships) and organisational arrangements reflected viewpoints that led to climate change, in the form of increased GHG emissions, higher GHG loadings per capita as development proceeds, and perspectives on possible solutions that distort the relationship between rich and poor. The pattern of response of any nation to the climate change agenda will be conditioned by the pre-existing configuration of ministries and regulatory offices, the arrangement of economic incentives (including distorting subsidies), societal expectations, and political opportunities. This in turn shapes the character of needs and wants and, in turn influences the relationship between 'scientific' analysis and political perceptions of what is tolerable or intolerable.

We also suggest that emerging views on institution allow for a linkage between two sets of perspectives. On reflects the overarching influence of political and organisational structures and routinised ways of proceeding evaluating and bargaining, that in themselves are creatures of power and prejudice. The other seeks to reveal the freedom of individual actors to change that order partly by their own world-views finding companies other structures. This may in turn provide the scope for

forming a common ideology across, not just within, institutional structures. Institutions, in other words, regulate and shape the interactions between adherents to the four ways of life. 'New' institutionalism seeks to explain how the ensuing political conflicts and efforts to encourage policy learning, lead to particular policy outcomes.

What can cultural theory add to NI? Cultural theory certainly cannot settle one of the key debates within NI, that of defining what is meant by an institution, because it adopts a fairly broad interpretation of grid and group. Its unwillingness to specify the exact relationship between human agency and institutional structure in specific situations – be that a bureaucratic agency, court or international agreement – counts as another drawback in the eyes of political scientists. What really inspires the latter is the wish to identify and, where possible, quantify the independent, causal role of specific institutions on political outcomes vis à vis other causal variables, although as Hay and Wincott (1998) warn, this courts tautology:

All too frequently institutionalism takes the form of a residual explanation or compensating addendum – anything that cannot be explained adequately by other factors is attributed, arguably arbitrarily, to institutions. In militating against the behaviouralist tendencies of much existing political science, [institutionalists]… merely point religiously to the significance of institutional factors, tirelessly posing [the]… question 'do institutions matter' and refusing to rest until it has been answered in the affirmative.

The criticisms RCI makes of SI could also be levelled at cultural theorists, namely that in focusing on macro-level themes such as 'culture', they lose sight altogether of precisely *how* individuals go about achieving their culturally framed preferences in a world replete with institutional constraints and opportunities which favour certain strategies over others. Not all constraints are cultural as NI is at pains to point out. There is also the self-interest of other actors and more enduring institutional regularities which channel policies down political paths. The danger is that a picture of climate change politics painted with the broad brush strokes of cultural theory will fail to pick out the role of conscious human agency – what Hall and Taylor (1996, p. 954) term "action without agents". There is certainly a marked tendency within cultural theory to rely on the four ways of life as blunt categories without specifying the precise causal relationships between agency and structure. Cultural theorists share SI's desire to uncover the underlying process of preference formation, but also inherit its unwillingness to specify the links between individual world-views and political outcomes. Many of these differences relate to the fact that the theories operate at different levels of analysis. One of the main attractions of cultural theory is its comprehensiveness – proponents go out of their way to trumpet its

all-encompassing explanatory power: "regardless of time and space", Thompson et al. (1990, p. 22) write, "individuals will always face (and as long as human life exists, always will) five[1] ways of relating to other human beings". The problem is that the more comprehensive a theory the less successful it is at explaining *specific* situations.

Cultural theorists also remain silent on the processes that lead individuals to adopt one of the myths of nature, or to change from one myth to another in the course of their lifetimes. Are people born into a specific set of rationalities, or is someone's 'rationality' dependent upon a steady process of acculturation over time? There is dispute among cultural theorists on this point. Douglas's own admittedly "extreme version" of cultural theory (Douglas, 1996, p. 99) holds that each person's thoughts and actions are characterised by a single way of life. On this view, 'born hierarchists' will try to homogenise their experience in all their social interactions and engagements. This view vests individuals with very little intentionality. Following more closely the basic precepts of sociological institutionalism, it is more reasonable to assume that individual action is *au font* context and role specific (Rayner, 1992, p. 107). A person's calculation of what is best therefore depends upon what is deemed to be appropriate in a given *context* or organisational setting; the same person can assume different ways of life in the various social contexts of his or her life. Therefore, an individualist wishing to succeed in a hierarchical organisation will need to deploy different arguments from those used in more egalitarian setting. All this suggests new avenues of research at the interface of cultural theory and NI.

There is a lot here that cultural theory can learn from political science and organisational analyses about how individuals adjust their world-views to fit particular bureaucratic roles and standard operating procedures. Allison's (1971) pithy aphorism "where you stand depends upon where you sit" neatly describes an important characteristic of many bureaucracies: departmentalism. It would not be surprising, for instance, to find an individual moving from a Government department to a pressure group like Greenpeace altering his or her world-view, becoming less hierarchist and more egalitarian. Again, institutional factors are at work here – particularly the relationship between individual beliefs and situational constraints – which could be 'put back' into a cultural theoretic approach.

Finally, 'new' institutionalists would feel uneasy about the claim that fatalism offers a new contribution to social science understanding of climate change. Cultural theory could be criticised for paying too much attention to the three 'active' quadrants of Fig. 1. Political scientists

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[1] The fifth way is that the 'hermit' who voluntarily shuts out the world and plays no part in debating its future.

addressed the issues of non-participation and fatalism in exhaustive detail in the 1950s and 1960s (Lukes, 1973). Some people may indeed be fatalistic given the exercise of second and third dimension power, whereas the powerful need not necessarily take an active role in politics when the "dominant community values, myths, and political institutions and procedures" (Bachrach and Baratz, 1963, p. 632) organise certain issues out of politics via a mobilisation of bias. Equating non-participation with fatalism risks underplaying the importance of institutional factors in perpetuating climate change. In areas such as energy use and transport individuals are routinely forced to behave in ways they know to be unsustainable by the underlying organisation of society. Economic and political factors prevent them from adopting their behaviour to that associated with another cultural type.

7. Conclusion

We have repeatedly commented that the basis for the evaluation of institutions is not yet in the literature, nor is there likely to be much agreement amongst would-be designers if cultural theory is to be believed. If gently applied and not dogmatically pursued, cultural theory may at least help to explain how certain patterns of thinking may shape the communication, information gathering and interpretative aspects of climate change politics and science. What is still needed is both an improved theory and sound analytical research to test if the cultural orientations posited by cultural theorists do indeed create particular institutional arrangements that genuinely influence the manner in which climate change is analysed, evaluated and responded to.

This would involve some extensive analysis of key individuals, their world views and their organisational biases. Such an undertaking would frankly be difficult as Boehmer-Christiansen (1995) described much to her frustration. But we do believe that there is a link between the subsets of the 'new' institutionalism and cultural theory through the pattern of responses to the climate change debate. These could involve:

- a serious examination of the relationship between changing structure of negotiating machinery and the reconfiguration of solidarities that result;
- a thoughtful set of experiments of inclusive negotiated participation over climate change avoidance strategies in areas such as transport and energy options involving key stakeholders;
- a re-analysis of the 'third dimension' dependency on carbon dioxide emitting behaviour patterns in travel, warmth, cooling and other conception patterns in the light of both institutional sets above.

The post-Kyoto era looks as if it will involve more ethical and social justice considerations in the climate debate than heretofore. At whatever level of governance, this entry will require new institutional arrangements and feasible solidarities. This paper may appear to be a piece of arcane theorising. We think not. Understanding the nature of the relationship between individuals and institutions is vital for the development of effective policy response over the coming decade. We honestly believe it is as important as that.

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