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Sustainable Water Management in the City of the Future

Integrated Project
Global Change and Ecosystems

D6.1.3 Procedural Equity

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Procedural Equity

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Contents

SWITCH Deliverable Briefing Note

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D6.1.3 Procedural Equity

Audience

The document was prepared for researchers and others inside and outside the SWITCH consortium who are planning innovation and engaging with stakeholders to achieve longer term change or a better outcome, such as more sustainable and integrated urban water management.

Purpose

The purpose of the document is to provide a theoretical basis to support the process of stakeholder negotiation and cooperation in order to achieve both a more equitable process and a better outcome. The document also aims to identify the techniques and skills that are required for a more equitable stakeholder engagement process that delivers a better outcome.

Background

This is the third in the series of reports under WP 6.1 Governance by the same author. The first report "Mapping the Field" set out a review and theoretical framework for governance, in the context of aim of improving the governance of water management. The second report set out an approach for mapping governance, "Institutional Mapping" and demonstrated this approach by mapping of water governance in the city of Birmingham   This report further explores a theme raised in the first report, the central importance of social relationships – between organisations, groups, and households and how power is exercised in these relationships in the context of achieving the "higher aim" of IUWM.

Issues

How to delivering better urban water management outcomes through a fragmented mosaic of institutions and stakeholders relationships is a key challenge addressed by SWITCH.   In the context of fragmented decision making on water management issues, limited stakeholder engagement in resolving water governance challenges, conflicting policies, this report seeks to establish a theoretical basis and set a practical direction for stakeholder engagement that is both more equitable and more effective – i.e. better outcomes are delivered.

Recommendations

The report contains a list of general recommendations at the end of the executive summary, p10. They include commitment to a sustained and respectful learning process, "chaining" decisions together so that current sacrifices can be offset by future gains, allowing for external review of the engagement process and stakeholders involved identifying their moral claims and specific responsibilities relating to IUWM.

1 Recapitulation

"*The exercise of political, economic and administrative authority in the management of a country's affairs at all levels. Governance comprises the complex mechanisms, processes, and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations*" (UNDP 1997).

This is the third in the series of reports under WP 6.1 Governance. The first of those reports set out a theoretical framework for what is often a rather nebulous and contested topic, 'Governance'. The key concept that is emerging in the course of this work is the central importance of social relationships – between organisations, groups, and households. Those social relationships determine what is and what can be delivered. Hence, the five questions in implementing governance that have to be addressed are:

Effectiveness: in order to deliver integrated water management, what physical systems need to be co-ordinated, and hence which decisions and actions of which people or organisations need to be co-ordinated?

Rules: all institutions and hence organisations are prescribed by informal or formal rules covering what they must, what they may, and what they must not do (North 1990). Thus, rules create both functional and geographical boundaries. Rules are necessary for a number of different reasons but the result is that coordination has to be achieved across these boundaries. Rules can govern the objectives an organisation is to pursue, the processes it is to adopt in seeking to achieving those ends, and/or the means it is to adopt in that pursuit. Crucially, as a process, stakeholder engagement will be governed by a rule set and a key question is therefore: what should be those rules?

Power: power is the ability to influence what happens either in the physical world or the behaviour of other people (Weber 1968). Rules create power and the ability to influence the creation of rules is an expression of power. There are therefore two questions: who has power, and what forms of power to influence who or what? And, who ought to have what power over what or whom and for what purposes? Institutional mapping, the subject of the last report (Green et al 2007), is a description of what organisations have which powers in regard to the implementation of those technologies which are components of sustainable urban water management. Thus, the first group of stakeholders required to deliver integrated urban water management are those organisations who have power. The second question is: who ought to have power? Stakeholder engagement is power to influence the decisions made. Work Package 6.3 focuses on this question of who ought to have power, and on those traditionally excluded from power such as women.

Justice: procedural justice is concerned with the proper use of power: the nature of the form of power used, by whom, over whom, and to what ends. Substantive justice is simply the product of procedural justice, the working out of the forms of power. The key requirement is to deliver procedural justice. The nature of justice is a question that has preoccupied humanity for several thousand years at least without reaching definitive conclusions; we should,

therefore, be properly modest in our expectations of what can be done in both this project and in practice.

Communication tools: social relationships are articulated through the use of symbolic systems, notably language. As Panos (2007) argued: "*the political process …. is at heart a communication act.*" Classically, communities are described as a group in 'communion' with each other so conversation defines a community. Those systems are themselves expressive of social relationships (e.g. the formal and informal 'you' found in many languages). Effectiveness is dependent upon success in this articulation. A communication tool is therefore anything which promotes the necessary social relationship and may consequently include anything from an improved understanding of body language (Hall 1959), of cultural norms (Lewis 2006; McCrum 2007), group working (Katzenbach and Smith 1994), negotiation and conflict resolution (Fisher and Brown 1989; Palmer and Roberts 1998); and ways of language use (Gumperz 1982; Hargie et al 1994) to means of representing data such as GIS systems. What is central is the recognition that communication is a conversation; it represents and expresses social relationships and roles, and it is not simply about passing information or knowledge.

Figure 1   **Roman latrine**

At the same time, what we do in the physical world is an expression of social relationships (**Figure 1**), and their reciprocal, social roles, as are the ways in which we create institutions. There is a duality about things and social relationships where each is expressive of the other.   What is often important about things is what they tell us about us. Thus, as Common (1934), Marx (1981) and Coase (1991) have pointed out, property rights are no more than social relationships articulated and made manifest through the instrumentality of things. As Marx observed: "*…. Capital is not a thing, but a social relation between persons, established by the instrumentality of things.*" That 'property rights' actually refer to relations between people leads logically to the argument made by Ronald Coase (1991) that what is involved are entitlements and obligations with respect to actions rather with regard to things: "… *what are traded in the market are not …. physical entities but the*

rights to perform certain actions." 'Private property' simply means that I can enforce some claims upon other people in terms of a particular resource. In English law, Worthington (2003) has similarly asserted: *"Thus, 'property' in law is simply shorthand for a special relationship between an individual and a thing."*

Money is similarly at heart a series of social relationships; the virtue of money is that it makes aspects of those social relationships both portable and transferable. The money received as a result of one social relationship with one person can be used in another social relationship. In turn, the nature of the transactions carried out using money are themselves expressive of social relationships and roles. There is a significant difference between the same amount of money being transferred as a price, a bribe and a gift, and one may argue when to be in the social role of a 'consumer' is preferable to being in the social role of a citizen, patient or passenger (Green 2003). Technological and organisational change thus either intentionally or unintentionally change social relationships and roles.

2 Executive Summary

Justice is about what social relationships ought to exist and hence what are the consequences, in terms of outcomes, that will flow from those relationships. By establishing what ought to exist, rules as to the nature of social relationships, and specifically as to those forms of power whose use is allowable by which individuals or groups over which other groups, and for what ends, are established. Hence justice is about allowable power. Those rules may be formalised as law and rules create power and so are also an expression of power: the power to create rules. Given this relationship between power, rules and law, and justice it follows that rules and law can be simply the expression of power and have nothing to do with justice.

The distinction between justice and the law is that it is sought to derive justice from some higher principle: what ought to be the nature of social relationships. Hence, the explicit driver for justice is that it is some moral principle. The rationale for justice is that enables the continuity of those social relationships which enable communities to exist and the individual to gain those advantages produced by being a member of a community.

This is the positive side of justice: the negative side of justice is what justice precludes. Justice, whilst prescribing what forms of power may be used by whom to what ends, also makes the use of other forms of power, by some others, to some ends, illegitimate. At the same time, justice is taken to require consistency in application: the treating of like instances alike. Thus, the shortest definition of justice may be: "*a moral principle consistently applied*" (Green 2003). In order to achieve consistency, a rationale is sought, a rigorous if not 'objective' set of procedures or criteria, by which to produce a judgement. The critical problem in applying consistency is in identifying what are the 'alike' cases which should be treated as 'alike'. Aristotle (1955)

argued that justice consists of treating equals equally and unequals in proportion to their relevant differences.

Because justice is about applying a moral principle, the outcome of any decision, substantive or outcome justice, can only be unique if there is either a single moral principle which it is agreed should be applied, or all relevant moral principles yield the same outcome. This is unlikely to be the case in any single instance. Hence, the importance of substantive justice in a particular case is what it reveals about the application of procedural justice in that instance. The requirement is seek to deliver procedural justice rather than to focus upon substantive justice, since the part of the debate will be about what moral principle ought to be applied and hence what is substantive justice in the particular case. What is important is, therefore, not the particular instance but what happens in the long run; it is procedural justice which can ensure that substantive justice is delivered over the totality of decisions. This also means that it is critical to chain decisions together rather than to take them in isolation and on a piecemeal basis.

Justice matters for at least three reasons:
- Humans seem to have an innate desire to seek out some principles which ought to govern their behaviour, and particularly their behaviour in relation to others. Therefore, they expect to see societies applying those principles whatever those principles are.
- Violence is the power of the weak: in the absence of access to other forms of power, the weak have a tendency to resort to violence. It is in the interest of those with superior forms of power to avoid this violence by prescribing the use of their power over the weak.
- There are substantial gains to the individual from collective action in some instances. To achieve those gains, individuals must be prepared to cooperate; procedural justice provides the rationale for continuing to cooperate with others even when an individual will lose out from a particular decision (Hume 1969; Rawls 1971). Procedural justice allows the individual to trade-off current sacrifices against the expectation of future gains or against previous gains.

This reliance upon cooperation to produce collective gains means that the challenge for any society is to determine how much competition it can afford and in what areas. If competition becomes the generalised social norm then cooperation may break down in areas where it is essential. Firms in competitive markets frequently promote 'team building exercises' and when the British were busy extolling the virtues of sport, it was competitive team games, rather individual sport, that was being promoted. The importance of ensuring future cooperation means that those who are not stakeholders in a particular decision have a legitimate interest in ensuring that that particular decision is taken through procedural equity so as to maintain an ethic of cooperation.

Because justice is about who should have power, it follows that any person or group claiming the right to be a stakeholder in a decision process is making a moral claim to a share of power. There are those stakeholders who are

stakeholders because they already have power to influence either the decision or the success of the implementation of the decision. The second group of stakeholders are those who ought to have power in the decision process. Since the acquisition of power by any one group diminishes the power of others, the legitimacy of the claims of both those with power at present and the claims of those who seek power through engagement as a stakeholder have to be tested. Nobody has an automatic right to be a stakeholder in a decision but must be able to make a moral claim to the right of involvement. That entitlement to involvement can arise from being affected by the decision or indirectly as a claim to represent the interests either of a wider group (e.g. taxpayers) or some other group (e.g. ethnic minorities) or a general interest (e.g. the environment). Such indirect claims require that the bodies in question demonstrate accountability to the wider group or interest which they claim to represent.   Different claims may give rise to different forms of entitlement to engagement in the decision process both in terms of share and level of engagement: the entitlement may be limited to the right to be heard rather than participating in the decision making process itself.

Equally, since justice is about the use of power, rules may legitimately be set as to how power is to be used by the stakeholders in the decision process. For example, the right to power in making the decision may be considered incompatible with a claim then to be able to take action to try to overthrow that decision afterwards, except on the basis that the claims of procedural justice were violated. 'I don't like it' is not a sufficient basis for appeal; only an argument that it was not fairly done.

Procedural justice has to address the reason why the choice is necessary. A choice is only necessary when there are at least two mutually exclusive options and at least one reason to prefer one option and at least one other reason to prefer another option. In short, the two necessary conditions for the existence of choice are conflict plus uncertainty: if all are agreed that one option should be preferred to all others then the choice has been made. Choice is therefore a process during which it is sought to resolve the conflicts that make the choice necessary and to become confident that one option ought to be preferred to all others. Uncertainty or doubt as to what to do arises either because there is disagreement as to what to do, or because there is uncertainty about the consequences of adopting each course of action.

The practical question is to decide what to do; it is not necessary that there is agreement as to why that course of action should be preferred over all others, only that it is preferred. Nor is necessary that there be a consensus that the preferred course of action is the best one, only agreement that it should be adopted.   It is an agreement to agree. Procedural equity is the context in which this process of resolving conflicts and becoming confident should take place.

This report does not set out to give a set of rules which will ensure that procedural equity occurs. It does set out some principles. It also sets out some criteria for determining the success for the process. It does not seek to

set out a fixed set of rules, to provide a cookbook, because as an exercise in social relationships, the key conditionality is reflectivity: of reflecting upon the process both during the process and afterwards. It is easy to provide a principle that all interested parties should be given full voice: the difficulty is doing it in each individual instance. Secondly, a cookbook implies completion: the aim is instead constantly to learn, to improve: we can intend to do something, such as give a full voice, without having the skill or capacity to do it. Thirdly, justice is a relationship and not a state: it requires maintenance. Fourthly, there is no objective criterion of justice; it is instead about who we are and how we should relate to each other. In turn, a procedural equitable process is one which all parties regard as just in general, not in the particular instance of application.

3   Summary Recommendations

- Do not promise more than can be delivered.
- Do not expect to solve all of society's problems in one go: doing better on a small part is sufficient.
- Do not pretend that it is easy.
- Work on the basis that we are better than we think but not as good as we would like to be.
- Chain decisions together so that sacrifices made in one choice by a participant can be offset by gains in another choice.
- Frame the process as a learning process not only as to learning what each particular choice should be but also about how to make choices.
- An external review panel should be established of those with some moral authority in the society. Their responsibility is to monitor the legitimacy and accountability of the process. Any party who believes that the principles of procedural equity are being broken should have the right of approach to the panel but only during the course of the process. The panel should not otherwise intervene in the process.
- Stakeholder engagement is implicitly or explicitly about who should have what power in what circumstances. The assumption in stakeholder engagement process is that reason and knowledge are the forms of power which should dominate. This can, in turn, give power to those with preferential access to the use of reason and knowledge – one example of reasoning being lawyers, and science an example of knowledge. Consequently, it is necessary to democraticise access to reason and knowledge.
- Participants should specify by what moral claim they are a stakeholder; why it is right that they have a share of the decision making power. They should also set out what they consider to be their responsibilities as a participant in the process.
- All with an interest have a right to their views being heard and considered; some stakeholders have the additional right to argue or advocate; some have the right to decide what should be done. It is the moral argument for such latter involvement in decision making needs to be established.

- When participants appear as a representative of a group, the participant as a responsibility to define how accountability is established to that group.
- Participation costs the stakeholders time and money; therefore, those with most to lose or to gain are most likely to take part. Often the costs are very broadly spread across the community as a whole and no individual is consequently likely to find it worthwhile to participate. Some formal voice will therefore often need to be established for the generality, such as the taxpayer, otherwise some few will gain at the expense of the many.
- Those participation costs will often also effectively exclude some groups, and frequently women. The time and place of meetings is often crucial to enabling women to participate.
- Justice is a dynamic and not an end state, so it requires constant effort and cannot be wholly prescribed by rules. That constant effort is reflection upon what is happening and what has happened.
- Rules are a necessary constraint but rules are an attempt to deliver justice; justice is more important than the rules.
- The participants should agree their own rules of procedural equity in order to create ownership and hence self-enforcement.
- Because rules and power reflect social relationships, and different cultures differ in the way in which they define those social relationships, it is necessary to recognise cultural differences in approach e.g. some cultures place stress on social harmony or social cohesion.
- In turn, 'cargo cultism' should be avoided: practices should not automatically be adopted from other countries; technologically and economically more advanced countries are not necessarily also better at implementing stakeholder engagement. A research question is: which cultures are better at stakeholder engagement and why?
- Stakeholder engagement involves a redefinition of the roles of the 'expert' and the scientific community, and the relationships between them and the stakeholders. It obviously precludes such traditional concepts as 'optimisation' as it is the role of the stakeholder to make the trade-offs necessary in deciding what is best, not that of the expert. Training the experts in this new role and social relationship can be a problem.
- Inventing new options can be a very effective means of resolving conflicts and is a key element in the process.
- A procedure is just if the stakeholders consider that, in the circumstances, it was just.
- Success is essentially measured by the readiness of the stakeholders to repeat the process in other cases. That is measured by the degree to which the participants have changed their views of each other, and of the process itself, in a positive way. Thus, procedural equity and success are essentially the two sides of the same coin.
- Tools cannot replace skills, particularly social relationship skills. Overall success depends ultimately on the social relationship and communication skills of the participants. The procedure will not be just if these are inadequate.
- Tools can enable the participants to manage the task more successfully; in particular, it is necessary democraticise knowledge, information and skills.

- A consensus is not necessarily a good consensus or one reached by good means: groups tend to establish a group cohesion but that cohesion does not always lead to a good decision.
- The facilities provided must take account of such factors as ergonomics and the cultural use of space. The outcome will be poor if they are uncomfortable, tired or otherwise in bodily discomfort.

4 Introduction

Procedural equity is a specific part of the formal and informal rules governing the nature of social interactions and relationships. This is the first and a central message of this report. Secondly, thought is required in regard to respond to the specific local conditions and this report seeks to provide some understanding in order to support that thought.

For stakeholder engagement to be useful and successful, it is necessary for:
- There to be a reason to do it: that in some sense, decisions and their implementation will be 'better' than they would otherwise be. Cooperation in the particular instance must have benefits over either direct competition or a simple lack of cooperation.
- A theoretical basis by which such a better outcome can be achieved. It would be useless if whilst some 'better' outcome could hypothetically be delivered through stakeholder engagement, there was no means of reaching that outcome in practice.
- The techniques and skills to deliver that theoretical gain.

Procedural equity is a means to deliver the potential gains.

The central and probably critical issue is that of interpersonal relationships: such relationships are the core of the concepts of justice and equity. These concepts are discussed below. But stakeholder engagement also brings out all the really difficult questions, notably those of power, legitimacy, accountability, politics, uncertainty, and post-normal science. These are also about what are and what should be the nature of inter-personal relationships. In turn, success in stakeholder engagement may be argued to a significant degree to depend upon skills in interpersonal relationships, in influencing others.

4.1 What is covered?

Stakeholder engagement is being applied as a means of dealing with a number of related but different problems:
1. Cross institutional boundary cooperation between organisations
2. Conflicts between interested parties
3. Common property management

The Learning Alliances will face one or more of these problems; whilst related, these problems are different. In each of the three contexts however there is a presumption that there are benefits to be derived from cooperation either in the specific instance or over the longer run.

An area where it is not relevant is in the commercial supply of water, wastewater, and related services except in so far as the company or companies involved are part of either of the first two cases. A market, or rather the economist's ideal of a 'perfectly competitive market', involves competition, rather than cooperation, both between the individual producers and between the producers and the consumers. It is this competition which is taken to result in efficiency. For water services, there are twin problems: those services tend to be natural monopolies and the supplier to be a Joint Stock Company (one in which shares are freely bought and sold in a stockmarket). Hence, what is commonly involved is a monopoly supplier operating under the laws covering Joint Stock Companies. Those laws typically define the basic duty of the executives as being to maximise the return to the shareholders. That is, to privilege one interest above all others.

A monopolistic Joint Stock Company is a quite different animal than the competitive market populated by entrepreneurial, proprietor-owned companies about which Adam Smith wrote so persuasively. Joint Stock Companies only became relatively common in the UK after the 1844 and 1856 Joint Stock Companies Acts (Micklethwait and Woolridge 2003) and Adam Smith was against the idea. Economic theory also predicts that all monopolies will be inefficient in the economic sense, extracting excess profits from the consumer. Dealing with the problems of monopolistic, Joint Stock Companies can only be dealt with by defining additional legal requirements and, where possible, introducing competition.

5 The difficult issues

The California happy-clappy view of stakeholder engagement, that we all get together in a room we will all become friends and a consensus will emerge, is dangerous: the process will be messy and may be fractious. It involves the difficult issues of power, legitimacy, accountability, politics, uncertainty, and post-modern science. Stakeholder engagement is intimately involved with these issues. Whether any single engagement should specifically discuss the issues is arguable, although they will be part of the sub-text of the discussions, but they need to be considered when setting up a process.

5.1 Power

"*the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance*" (Max Weber 1968).

From the Weberian definition, it follows that anything which influences the action or consent of others is a form of power. Physical power may be

regarded as simply as the failure to exercise other forms of power effectively. Depending upon the context there may then be multiple forms of power (Green 2007):

1. the use or threat of the use of force
2. money including bribery
3. reason
4. information/knowledge: hence the claim to have special and authoritative knowledge
5. moral claims (e.g. 'it is not fair')
6. emotional appeals (e.g. 'it will ruin my life')
7. the threat of withdrawal (e.g. threat of legal action, of protest)
8. political influence (e.g. 'I'm a friend of the Minister')
9. social norms (e.g. 'people expect')

In this empirical sense, information and skills are forms of power; as is access to reasoning. Science is therefore not neutral because it is potentially power. A key conditionality of stakeholder engagement is therefore the democratisation of information and skills.

As Lukes (1974) pointed out, perhaps the most effective form of social power is one where another person or group act in the interest of another without resistance or without resistance arising. Hegemony (Simon 1982), where one party implicitly accepts the worldview of another party so that the first party acts in the interests of the latter, is the most effective form of power. Rules either create or are expressions of power.

Therefore, two key questions are:
• Who has power (and what forms of power)?
• Who ought to have power?

Who has power now determines what can be done and identifying who has what powers in relation to the adoption and successful implementation of specific technologies is therefore a key step. This "institutional mapping" was therefore described in the previous report (Green et al 2007) and a methodology for undertaking it was set out. Those who currently have power are obviously and necessarily stakeholders in the engagement process.

The second group of stakeholders are those who are affected in some way by the decision: those who should have power. Because engagement as a stakeholder creates a share of power, it is inappropriate to allow anyone who feels like it to have an equal share in that power. To be a stakeholder, any individual, group or organisation has to have a moral claim to a share of power.

5.2 Legitimacy and accountability

Those stakeholders who are engaged either represent their own personal interest or have a claim to represent some wider interest. Traditionally, the concept of legitimacy (Weber 1968) revolved around the nation state and was

concerned with whether the state acted legitimately. What legitimacy means in a time on the one hand of organisations acting internationally (whether those organisations are companies, international agencies, NGOs, or national governments) and on the other of stakeholder engagement is much less clear. Importantly, NGOs are now a very significant player in the policy domain. There are an estimated 40,000 international NGOs, some one million in India, and around 2100 in Brazil. Hence, their accountability and the legitimacy of their actions requires to be established.

The question of legitimacy is particularly central when bodies claim to represent some wider interest rather than a personal interest. Legitimacy might be characterised in terms of broader societal agreement, social norms, as to who should have power, what forms of power, and how that power may be exercised to what ends, in what context. Legitimacy thus encompasses procedural equity because it includes the question whether a particular person, group or body has a moral right to involvement in the decision at all. Because of the importance of procedural equity in achieving the benefits of collective action, the rest of society has an interest in any single decision process least the societal norms of procedural equity are violated in that decision.

In turn, it is possible then to define accountability (Lloyd et al 2007) as the demonstration that those powers are being used appropriately. The obvious form of accountability is democratic election and hence a clash of legitimacy can occur between elected bodies and unelected community groups and NGOs. Lloyd (2005) argues that NGOs should have the following forms of accountability:
1. Upward to donors, governments and foundations
2. Downwardly to beneficiaries
3. Inwardly accountable to their organisational mission, values and staff
4. Horizontally accountable to peers

Thus people orientated NGOs clearly should be accountable to the intended beneficiaries (Lloyd 2005) but NGOs who claim to stand for the environment lack a clear line of accountability beyond to their members.

But the distinction drawn here is that procedural equity is the assessment of the stakeholders engaged in the process itself; legitimacy is assessment of that process from the perspective of wider society. That wider society has an interest in the actions of any single sub-group because their actions will either diminish or increase social capital (Bourdieu 1980; Coleman 1988).


5.3 Politics

What the UNDP (1997) describes as the "…. *complex mechanisms, processes, and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations*" is what is called 'politics' in everyday speech. Thus, stakeholder engagement is a form of politics and it is necessary to be good at politics if

stakeholder engagement is to be successful. 'Politics' has, however, come to have a bad reputation and, indeed, the use of the term 'governance' may be no more than a rebranding exercise because 'politics' is seen as so disreputable. Changing the name does not however change the substance of the process. That substance of politics is the arguing, negotiating and debating as to what should be the objectives and which course of action ought to be adopted. This is what the stakeholders have to do and the challenge for the stakeholders is exactly the same as for politicians. The issue is to be better at 'good' politics rather than to seek to replace politics.

'Politics' must therefore be distinguished from bad politics and bad politicians. The latter are those who place self-interest above all other considerations, using inappropriate power for inappropriate ends, such as self-enrichment, or for whom power becomes an end in its own right. The need is simultaneously to balance three aspects simultaneously (**Figure 2**). 'Bad' politics or politicians are those who only consider narrow personal or sectoral interests; those who consider only moral principles are likely to destroy society; and those who consider only the interests of society are perhaps unlikely to get anything done.

Figure 2   **Conflicts in principles**

Moral principle

Sectoral interests   Interests of society
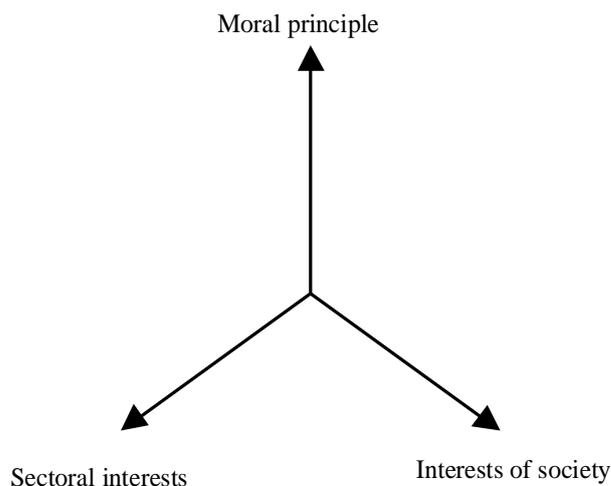
5.4 Uncertainty

"*Humankind cannot bear very much reality*"
        T S Eliot "Burnt Norton"

Faced with the complexities of reality, the human tendency is to try to avoid it by:
- To seek to deal with a simpler problem
- Find a rule which will prescribe how to deal with the situation
- Get someone else to take the decision

This is particularly true of uncertainty, but uncertainty is a necessary condition for the existence of a choice. Unless there is doubt as to what course of action to adopt, there is not a choice to be made. One reason why that doubt may exist is because of lack of information or knowledge about the possible consequences. In the most difficult case, we may not know what are all the possible outcomes, and hence necessarily are unable to define the probabilities of the occurrence of those outcomes – *uncertainty*. If we are luckier, it may be possible to define all the possible outcomes and to define the probability distribution for those outcomes – *risk* (**Figure 3**). In this latter case, the crucial problem is defining the probability distribution.

Figure 3   Risk and uncertainty
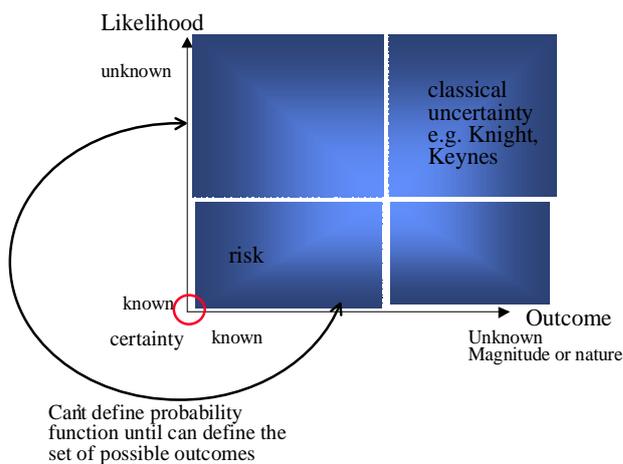
Unfortunately, we are frequently faced with the problem of uncertainty rather than risk but we should resist the temptation to pretend that it is a problem of risk. What is an appropriate response to risk may not be the appropriate response in the face of uncertainty. It may be the case that it is possible to transform uncertainty into risk by doing further research but this will not always be possible within the timeframe in which the decision must be made. The approach here is to start by identifying what are the parameters or variables whose value will distinguish between the option which it is best to adopt? Such *sensitivity analyses* should be conducted at the beginning of the decision process. Attention should be focused, where possible, on obtaining better estimates of the values of those parameters or variables. If the value of a particular parameter has no effect whatsoever on the choice, then the uncertainty surrounding its value is irrelevant to the decision. An alternative approach is to seek to determine how the response varies according to the value of the parameter, in particular whether the response is simply linear or there are variations in the gradient of the response (**Figure 4**).

Figure 4   **Variations in response to a stimulus**

Response

Magnitude of
stimulus
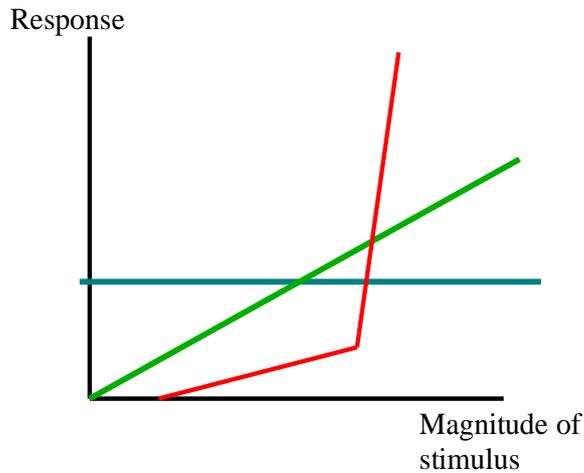
But the future may be argued to inherently unknowable. So, as a teaching exercise, I ask students: how many children will you have? How many children will they have? This only takes us out 30 to 50 years in the future, and future population numbers are a key determinant of demand for resources. Few people can answer even the first question and rarely does anyone feel it would be sensible to try to put a probability distribution on the number of grandchildren they expect to have.

Figure 5   **Predicted household per capita water demand in Germany and actual demand**

(Source: http://www.bgw.de/files/wasserfakten-im-ueberblick-oktober-2007.pdf)

Of course, we do make population projections, typically be extrapolating either past trends or what we understand to have been the drivers of population change in the past. But these and other projections are frequently spectacularly wrong (**Figure 5**). The one certainty about any future projection is that it will be wrong: the only issue is how far and in what direction will it be wrong?

The coupled questions are therefore:
- How to make choices when confronted with uncertainty?
- What courses of action should be adopted in the face of uncertainty?

One option is the use of scenario analysis (van der Heijden 1996): the identification usually of two different parameters whose values will make the maximum possible difference to what the future will be like. Scenarios neither forecasts nor predictions but means of testing proposed courses of action. Using two parameters gives a two by two matrix and **Figure 6** shows those used in the UK Foresight study of flood risk management. Any course of action that performs relatively well under all scenarios is likely to be preferable to one which depends crucially upon a particular future occuring.

Figure 6   **Foresight scenarios**

(Source: Berkhout and Hertin 2001)
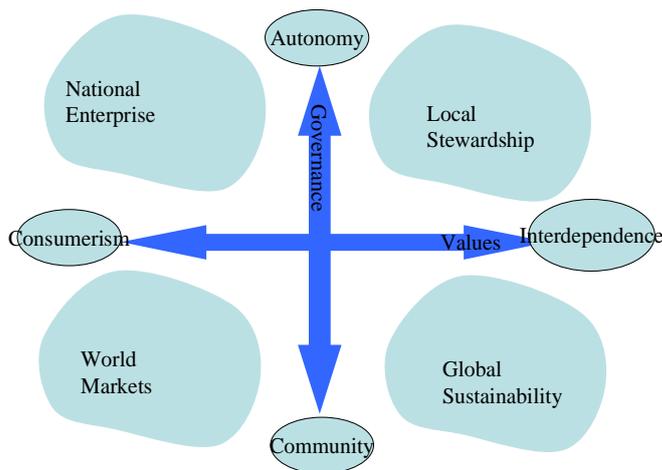
This is a specific application of the more general approach of '*robustness analysis*' (Green 2003). From the initial sensitivity analysis, it is known what are the critical parameters to which the choice is sensitive. Robustness analysis involves exploring a range of plausible values of each of those parameters to determine whether each of those values would affect the option that should be preferred. Other approaches that can be used include the 'Precautionary Principle' (Peel 2005) and another of other rules, such as the 'Min-Max' rule, that have been proposed for use in these circumstances. The 'Min-Max' rule argues that the option which has the minimum worst outcome under any circumstances should be adopted (Braybrooke and Lindblom 1970). The suggested approaches under the different conditions are shown in **Figure 7**.

Figure 7   **Strategies for coping with risk and uncertainty**
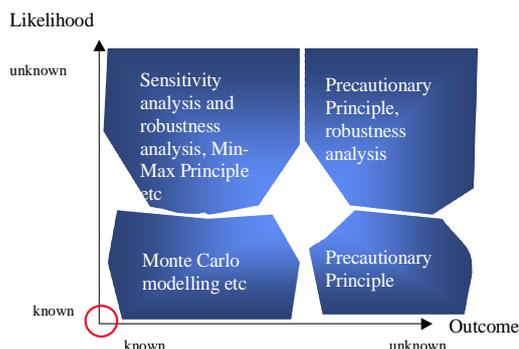
5.5 Post-normal science

Post-normal science (Funtowicz and Ravetz 1991) is a discussion revolving around two questions:
1. What is the nature of the relationship between the scientific community, 'experts', and stakeholders?
2. What is the nature of knowledge, and, therefore, who can know it and how can they know it?

The answers to these two questions determine what will be and what should be the relationships between the two groups.

The traditional view of the relationship between science and the community both expressed a social relationship and a view of knowledge. Thus, traditionally, engineers saw their role as to determine what society needed, determine the best means of satisfying those needs, and undertake that means. So, engineers (and economists) often talked of the 'optimum' solution – and complained that its implementation had been prevented by 'politics'. Economic analysis in the form of benefit-cost analysis fitted very well within that conceptualisation because it sets out to define the optimum choice. The specialists advised the elite group of decision makers what choices should be adopted.

Similarly, the traditional view of the problem was that of converting science into practice: the traditional, and rather self-serving view for researchers, was that first 'basic' or 'blue skies' research is undertaken, there is then strategic applied research followed by tactical applied research which finds some practical uses for this basic research, and its practical application is then 'consultancy'. In this conveyor belt model of research, the real research is done at the front end and then technicians convert it into practice. The basic researcher has equally no responsibility for the utility and relevance of the research: the complaint is rather why has my research not been turned into practice? So, society, or parts of it, needed to change in order to make better use of the basic research. The question this does not address is: is the right basic research being undertaken?

With the shift to stakeholder engagement, the roles of the stakeholders and the scientific communities change, along with the social relationships between them. The approach is now is shown in **Figure 8**: the two are in conversation out of which a preferred choice will emerge. The problem is provide the means so that they can have an effective, informing conversation. Solving this problem is likely to involve changes in both communities (Defra 2006). It cannot be simply that the scientific communities try to answer the questions put to them by the stakeholders, although that is part of it, because the stakeholders will not necessarily know what they ought to want to know. Equally, the scientific communities may be argued to have a duty to tell the stakeholders what they ought to want to know, even when they do not want to know it because it will make the decisions more difficult. Thus, the scientific communities have been telling the world about climate change even though

some national governments have been very reluctant to listen, and would have preferred silence on the part of the scientific communities.

Figure 8   Creating an effective conversation between stakeholders and the scientific communities
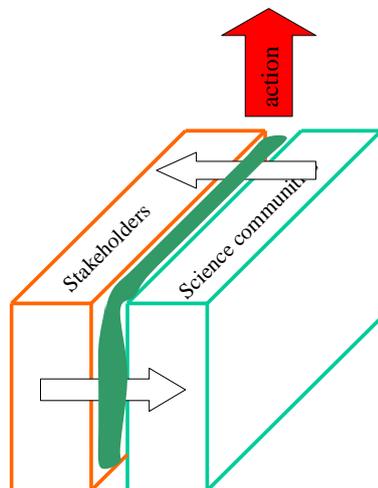
The second question, and one which particularly concerns the stakeholders, is what is knowledge and who can know it, and how. What is it, therefore, that the scientific communities can offer the stakeholders; equally, what can it not offer? What it cannot offer is certainty.

There are two quite different approaches to knowledge:
- Epistemology: the study of what we can know and how we can know it (Dancy 1985).
- Ontology: the study of the kinds and structures of reality, the categorisation of reality (Smith and Welty 2001).

These philosophical distinctions are interesting only to the extent that it defines what the stakeholders can get from science. The Ontology approach assumes that there is an objective reality 'out there'; the Epistemological approach addresses the question of how we can find out that 'reality', if one exists, and what happens along the way when we have at best only partial knowledge.   In particular, from an epistemological perspective, there are three models of scientific progress:
- Accretional
- Evolutionary
- Revolutionary

If scientific progress is anything other than accretional, then some new knowledge will reveal that our previous understanding was wrong. Kuhn (1962) in particular has argued that major scientific advance is revolutionary. This means that there is necessarily uncertainty about scientific knowledge at any given stage as it might be overthrown by new knowledge, although there are some areas or issues about which any revolutionary claim would be

greeted with disbelief amounting to incredulity (i.e. any claim that denies the third law of thermodynamics). On the other hand, there will be less surprise if String Theory does not provide a unified theory for gravity and sub-atomic particles.

In addition, scientific knowledge is increasingly suggesting that there are things which we either cannot know or can never know precisely. Heisenberg's Uncertainty theorem and Godel's Incompleteness Theorems (Penrose 1989) are two examples which appear to establish limits upon what can be known.

Finally, the understandings of the different disciplines will, if we are lucky, compose a jigsaw understanding of the world. More probably, it is a jigsaw with some pieces missing and where some of the apparently adjacent pieces do not fit together, or some pieces apparently are competitors for the same space. Therefore, the stakeholders should not expect more than delivered by science at any one time.

Nor is it the case that the only source of valid knowledge arises from the scientific community. In part this is because there is now a considerable overlap between the stakeholders and the scientific community; any scientist meeting a group of stakeholders should expect that it will contain experts in some relevant fields whether this be a welder with forty years experience in how metals can be joined together and the behaviour of welds, or a retired professor of engineering, or someone who has been studying the local insect communities for the last 60 years. There will almost inevitably be at least one area where amongst the stakeholders there lies greater expertise than amongst those in the scientific communities who are engaged.

At the same time, the stakeholders should not assume that all sources and forms of 'knowledge' are equally valid.   Judgements have to be made about the validity of knowledge; science is essentially about establishing rigorous frameworks through which to test the likely validity of a particular claim. The claim of science is that any claim to knowledge can be rigorously tested although the different disciplines, faced with different areas, can differ in the methodologies they have established to undertake such rigorous testing. It is this that forms the difference between the claims of astrology and of astronomy. Both the scientific communities and everyday knowledge seek to use reason: to derive causal chains that explain and predict what is observed. Not all of those explanations are correct and merely because it seems plausible does not mean that it is correct, not least because what we choose to observe is determined by our explanation. As Einstein observed, what we observe is determined by our theory: we do not observe that which is considered to be irrelevant.

Thus, there can be a conflict between everyday knowledge and scientific knowledge; neither one can be automatically assumed to be superior in a particular instance, the question is how to test the comparative validity of each kind of knowledge. It is not a contest but a test of comparative validity.

5.6 What is choice?

To be effective, stakeholder engagement must address the problem of choice: it must result in what are, in some sense, 'better' choices. This raises two different questions:
1. why are choices necessary? And
2. what is a 'better' choice?

As argued elsewhere (Green and Penning-Rowsell 1999; Green 2003), there are two pre-conditions for the existence of a choice:
1. conflict: for a choice to exist, there must be at least two mutually exclusive options; and
2. uncertainty; if all are agreed that one option ought to be preferred to all others, then the choice has been made.

It is also true, of course, that all choices are about the future. That a pre-condition for the existence of choice is doubt or uncertainty, and that choices are an attempt to choose a future, implies that any choice is a learning process in which those involved seek to resolve the conflicts that make the choice necessary and to become confident that one option ought to be preferred to all others. It also follows that it may be impossible to resolve the conflicts that make the choice necessary and so, whilst being perfectly informed about the consequences of adopting each option, it would be rational to be uncertain as to which option to adopt. That it is a learning process means that options may be invented or discovered in the course of the choice process.

Considerations of what is a 'better' choice seek to reconcile both the achievement of some objectives with the best use of available resources. Thus, economics can be described in the form of a Yin-Yang diagram (**Figure 9**) where it is necessary to resolve both sides of the problem simultaneously. Hence, means and ends are two sides of the same problem so that choosing the means simultaneously involves choosing the ends, and the choice of ends implies the choice of means.

Figure 9   **Choice as the achievement of objectives through the most effective effort**

(source: Green 2006)

The application of reason to choice

Resource Management
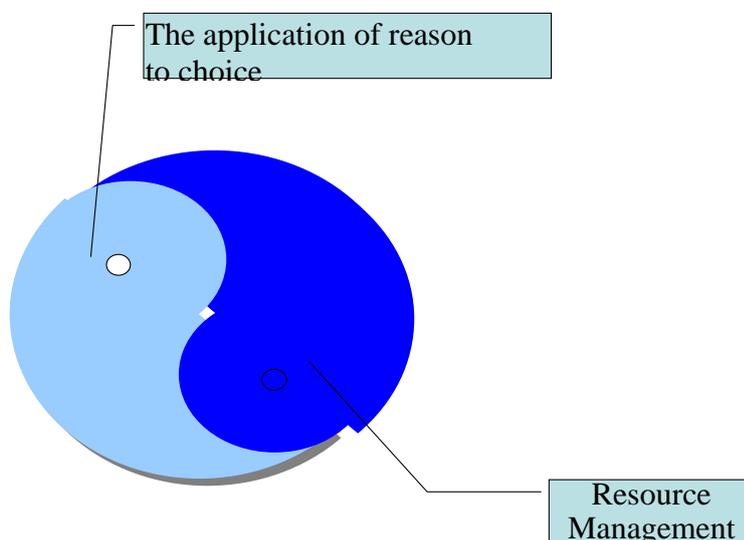
This duality was elegantly solved in neoclassical economics by the assumption of perfectly competitive markets. These equated values, on the objectives side of the figure, to costs, on the resources side of the figure, to the prices which fall out of a perfectly competitive market. Unfortunately, Coase (1991), North (1990) and Stiglitiz (2001) amongst others have demonstrated major problems with the necessary assumptions so that we can no longer rely upon the neoclassical economic model.

One of the main reasons why we are forced to make choices is that we bring conflicting objectives to a choice so that no option is superior to all others in terms of their contributions to achieving those objectives. Moreover, we typically disagree what weight should be given to the achievement of those different objectives (**Figure 10**). The options are more fundamentally in conflict when, as is generally, the case they are mutually exclusive in time, place or function (Green and Penning-Rowsell 1999).

Figure 10   **The conflicts that create choice**

(Source: Green and Penning-Rowsell 1999)
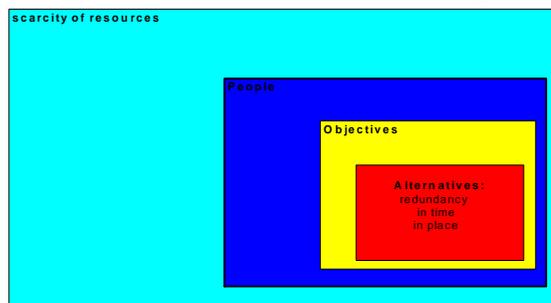
At the same time, the different stakeholders bring different interests to the choice and adoption of each of the competing objectives will have different consequences for those interests. Institutional arrangements can then either internalise or externalise those conflicts. In the simplest terms, a water supply system, for example, involves those who provide the capital to construct it; those who work for the organisation that provides the service; those who pay towards the costs of providing and operating the system; the consumers of the water supplied; and those affected in one way or another by the abstraction and use of the water, and the plant associated with the system. Those in each group have a different interest: the owners of capital to maximise the return to capital, taking account of their risk preferences; the consumers to get the best possible service; those who pay for the services, to minimise their expenditure; the owners of labour to get the best return to their labour; and those who are otherwise affected, to minimise these disruptive effects.

In the simplest case of an isolated farm with a well, the farming household has all those roles, so the conflicts between the time and energy spent lifting and carrying the water versus the use to which it is put are internalised to the household. In larger scale systems, the institutional structure of the organisation, and the context of that organisation, determine to what extent these conflicts are between different groups of people and are externalised. The nature of the system also determines the number of people who fall into

each class. As Coase (1988) recalled, Pigou observed that if self-interest does promote economic welfare, it is because human institutions have been devised to make it so.

Figure 11 illustrates two institutional arrangements for water supply: the Stadtwerke model widely adopted in Germany and the Netherlands in the nineteenth century (Blokland et al 1999). This has the institutional structure of a private company and complies with the legal structure for such companies but all the shares are owned by the municipalities served by the company. The second model is the privatisation model adopted in England and Wales when the industry was privatised. This was very much an ad hoc system which took little account either of issues of economic efficiency or the nature of water; the principle objective was simply to privatise the industry in some form. In large part, the industry was privatised at a regional rather than a local level.

Figure 11   Conflicts of interest in water supply systems

(Source: Green 2007)
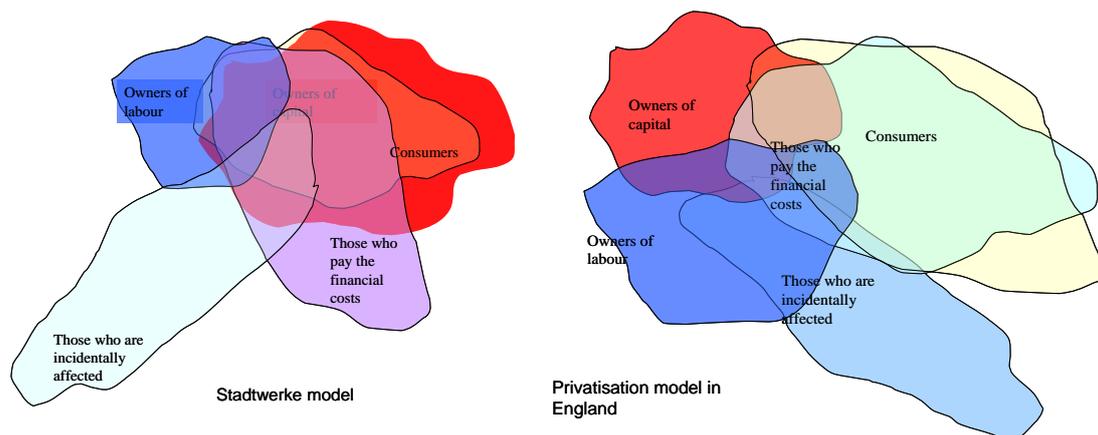
In the Stadtwerke model, capital costs were commonly raised through a commercial bond or a loan, but also through local taxes. Those who loaned the capital or bought the bond might well not live in the area to which water was being supplied. Equally, national and regional governments often provided some financial support in the form of below market rate loans or grants so the financial costs were often spread over a much wider area than the community benefiting. Thus, in France, a general tax on water was used to fund (Fond National pour le developpement des Adductions d'Eau – FONDEA) the development of rural water supplies (Reynauld 2007). Those who work for the Stadtwerke obviously usually live locally and therefore are typically also consumers. Depending upon the nature of the supply system, the number and extent of those incidentally affected could be considerably greater: for example, when upland valleys were dammed and the water transported to the cities. Indeed, the number of people incidentally affected by a water supply system, and the nature and extent of those affects, is arguable dependent upon the nature of the water source (i.e. groundwater, direct abstraction from rivers, impoundment) rather than the institutional form. Equally, it may be argued that the nature of the water source also limits the

institutional forms that are possible: small water supply entrepreneurs (Solo 1998) being found in areas where there is groundwater available at shallow depths. Similarly, Common Property Management systems of water supply are particularly common in areas, such as parts of Germany (Pant 2000) and Austria (Wiltschnigg 2008), where the ready availability of groundwater makes small, low capital intensity systems possible. But, there is a considerable degree of internalisation of the conflicts: so that, for example, one individual is an employee, a consumer, an owner of the capital and pays the costs of the service. By making the Stadtwerke a company which is required to comply with the legal obligations of companies, it is forced to have regard for the consumers since they are also shareholders.

The Stadtwerke model also appears to have a further advantage; that of avoiding the common conflict between land and water management. It is generally the case that we manage water in order to make the best use of land where land is managed in order to support a number of objectives such as employment and economic growth. The much greater adoption of sustainable water management practices, such as SUDS and green roofs in Germany (Green and Ellis 2008) may well be a consequence of the land use planners, the municipalities, also being the shareholders in the Stadtwerke.

The pattern that exists in England post-privatisation is quite different and is not a system that was designed but is rather the consequence of a desire to privatise the industry as quickly as possible, and to achieve some other ideological purposes (Green 2001). Some capital is raised in the form of equity, from shares, either in the form of a public companies with shares on the stock market and hence widespread ownership by pension funds, insurance companies, and individuals, or in the limited share ownership of a private company, much of the capital is raised in the form of loan capital from a variety of sources (e.g. the European Investment Bank). There is some overlap between those who own the capital and those who are employed by the organisation (e.g. company pension funds which own shares, employees who own shares) but nothing like to the same degree as in the traditional entrepreneurial company where the founders run the company and are a major shareholder so that the interests of the shareholders and executives are identical. Indeed, many of the calls for improved corporate governance reflect the concern of the shareholders, as owners of the capital, that the interests of the executives as employees and the shareholders have diverged.

As this example illustrates, it is a simplification to treat all those sharing an interest as having the same interest: the different owners of capital (loan or bonds versus shares) have different interests, so do frequently the different owners of labour, different groups of consumers, and so for. Those conflicts are, however, internalised. Once the conflicts are externalised then they must be managed and the focus in this paper is on going beyond that to promote cooperation and coordination through some system of incentives. In England, the external conflicts have necessarily, in the absence of any incentives, resulted in a proliferation of regulation. The Environment Agency's role is to deal with the conflicts with those incidentally affected by water management; the Water Services Regulatory Authority (OFWAT) has the twin roles of

dealing with the conflicts between the owners of capital and the consumers, and between both parties and those who pay, as well as the conflicts within those groups. The first conflict is easier to resolve because it can be resolved by spending more money and privatisation has been accompanied by a massive investment programme funded by the consumers. The problem has been primarily to reduce rent seeking by the owners of capital: given the capital intensity of water management, any form of regulation sooner or later has to address the real cost of capital, and the history of price regulation in England is that of trying to drive profits down to the real cost of capital.

The problem of cooperation and coordination across the institutional boundaries has not been solved (EFRA 2008; Green and Ellis 2008). For example, for surface water drainage, is a fragmented, incomplete mosaic of responsibilities with no clear boundaries nor any incentives for coordination across those boundaries (**Figure 12**).

Figure 12   Institutional boundaries: surface water drainage in England
(Source: EFRA 2008)
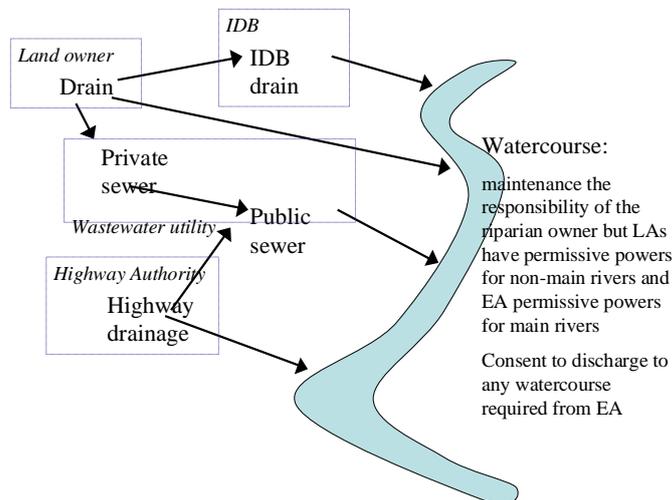
5.7 What is a 'better' choice?

Choices are always about priorities: what to do first (Green 2003). They are not about what to do last but they are always about what to do now, what action to take. Because we are concerned with what to do first, we are not concerned to, in some sense, 'optimise' the choice: we can decide what to do next later on when more resources are available. But it is reasonable to be concerned about how the choice made now will constrain future choices, those courses of action which can be chosen in the future.

The 'Yin-Yang' diagram (**Figure 9**) implies that we should seek to simultaneously do two things:
- achieve our objectives; and
- make sustainable and efficient use of available resources.

In turn, the 'value' of any action can be considered to be the contribution it makes to the achievement of an objective. Hence, any action has as many

instrumental values as we bring to the choice and we are likely to bring multiple and conflicting objectives to a choice, and to disagree about the weights to be given to each. Moreover, we are likely to disagree as the moral principles that should be used in deciding how to choose between the achievement of those conflicting objectives. This is the problem which the stakeholders must resolve but importantly they do not have to resolve the conflicts between objectives, and moral principles, they only have to decide what course of action should be adopted. As long as agreement can be reached as to what to do, there can be disagreement as to why to do it.

The objectives brought to the choice are of three generic categories:
- individual self-interest
- interpersonal relations
- maintaining environment services

Thus, we have to resolve these conflicting groups of objectives.

Figure 13   Generic categories of objectives, and hence potential conflicts

Individual self-interest

Interpersonal relations

Environmental functioning
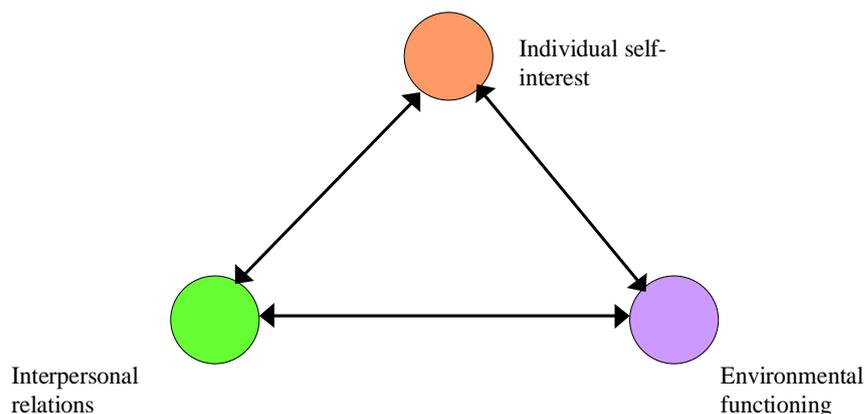
Since any economy depends upon the availability of resources and services provided by the environment, there is logically a value to maintaining or enhancing those services. The Millennium Ecological Assessment (Alcamo et al 2003) sets out a systemic framework for considering those services.

If people are asked what are your values then they usually respond in terms of those objectives or principles which they consider either do or ought to determine how they live their life. Some of those responses are in terms of individual self-interest: 'to enjoy myself' or 'to be happy'. More often, the responses are in terms of interpersonal relationships, such as: 'democracy', 'justice', or to 'make the world a better place'. 'My family' may be argued to fall into either or both categories. Not only in everyday speech are values about principles or objectives, and frequently about interpersonal relationships, but they are often framed in moral, ethical or religious terms. Thus, there are both utilitarian and moral claims to the achievement of each of these objectives where any action is likely to negatively impact upon at least one, and the attainment of each will usually require the allocation of resources which will not then be available for other purposes. The decision in any one

choice is therefore likely to impact upon others so, for example, in the decision about any one improved water supply system, those in other areas who also seek an improved water supply system are also often stakeholders. They are stakeholders because the decision to allocate resources to one water supply system will preclude them from gaining a water supply system until further resources become available. When those resources are made available by the taxpayer then the taxpayer is a stakeholder in the decision. Thus, the stakeholders are faced with moral trade-offs with resource implications where the objectives cannot be measured in the same units. Thus, Berlin (1969) pointed out: "*Everything is what it is: liberty is liberty, not equality or fairness or justice or culture, or human happiness or a quiet conscience.*" Whilst a loss of equality may be compensable by an increase in happiness, there is no overarching concept to which the two objectives can be mechanically reduced.

The way in which resolving these conflicts is approached is framed in different ways in different cultures. In the UK, it was traditional to frame the problem in terms of the 'national interest' or 'public interest'. As a way of framing the problem, this implied that:
1. There was a consensus that the choice ought to be framed in this way.
2. There exists a national or public interest over and above individual or group interest.
3. The national or public interest could be objectively be determined.

As a framing, it was both attractive to a scientific bureaucratic elitist approach to decision making and promoted the use of technocratic approaches to support decision making, notably those which sought to determine the 'optimum' solution.

In other countries, collective decisions have been framed in quite different ways:
• National or social solidarity e.g. France
• Social harmony e.g. China, traditional cultures in Africa

It is necessary to be aware of the framing which is being adopted and the importance of the framing adopted to the decision approach adopted. A further question is whether any one of the possible framings is more productive in terms of reaching an outcome and the nature of the choice that is made. No research appears to be available in answer to either question.

5.8 What is justice?

The means and result of the resolution of these conflicts between objectives and interests is justice. In English, the words 'justice', 'equity' and 'fairness' are used almost interchangeably, although 'fairness' is perhaps most associated with a claim that the principles of justice or equity have not been applied. Thus, the claim 'it isn't fair' is generally an assertion that some concept of justice has not been applied in a particular case. The most succinct definition of equity or justice is thus that this is: '*a moral principle*

*consistently appl*ied' (Green 2003). This encapsulates the general recognition that justice is composed of two elements: distributive or substantive justice and procedural justice (Lloyd 1991).

Where the arguments then arise are as to which moral principle ought to be applied in a particular case, and also on defining what is the relevant class of 'like' cases. The claim as to which moral principle ought to determine the outcome and hence the nature of that outcome, substantive justice, is combined with and inseparable from the requirement of a just process: procedural justice. Procedural justice includes the definition of the relevant 'like' class.

The first difficulty is that different moral principles result in different outcomes and those moral principles themselves conflict. There is no general agreement as to what ought to an over-riding moral principle in collective choices. The three main contending models (Pettit 1980) are:
● proprietary; the natural law model (e.g. Noznick 1974).
● contractual; distributions which the individual would choose if s/he did not know what their initial starting position would be (Rawls 1971).
● consequentialist; utilitarian welfare models following from Bentham (1948).

Equally, in practice, even if there were to be agreement as to the over-riding moral principle that should be applied in collective choices, this would only yield a unique answer in any particular case under specific, and unlikely conditions. It would require that under any over-riding principle, all subsidiary principles were completely ordered into a hierarchy so that there was no conflict between any of those subsidiary principles. But, as Sen (1992) has argued specifically in the case of equality, this is not the case.   In turn, there is no absolute standard of justice, nor could we agree upon one. Moreover, 'equality' is typically a component of concepts of substantive justice, the difference being equality of what. But, whereas efficiency is an absolute target, so that any action which increases efficiency will always have the same effect in any circumstances. Conversely, the same action, depending upon the context, may or may not increase justice (Green 2004): if you add a weight to one pan in a set of balancing scales, then the effect depends upon the weights already on the two pans. It is necessary to know what are those weights before the desirability of adding a weight to one pan can be judged. Conversely, efficiency is like a spring scale: adding a weight will always have the same effect. Thus, Mitchell et al (1993) remark that: "*Justice is not a stable, well-defined ideal end-state toward which people purposefully move; rather it is a dynamic, ever-shifting equilibrium ………..*"

In turn, such a view implies that procedural justice or equity is more important than outcome or substantive justice: how the outcome was reached being more significant than the outcome itself, the outcome being revealing of the process. Thus, that the legitimacy of the outcome depends upon the legitimacy of the process through which it resulted. Underlying agreement upon what powers can be used by whom for what ends is necessary for the stability of the community. As Wenzel (2002) persuasively argued: "*Justice serves to maintain the status and values of one's group. People strive*

towards justice, even at the cost of their personal outcomes, because justice strengthens the values of their group and thus contributes to their social identity in terms of that group." At the crudest level, violence is the power of the poor: the attempt to destroy the power of others, not infrequently being associated with attempts to destroy the symbols of power of the others.

Since achieving agreed substantive justice in each individual decision is impossible, the importance of any decision is what it tells us about the process that produced that decision. In addition, whilst agreed substantive justice is impossible in each individual decision, it may be possible over a collection of decisions. Therefore, it is critical to tie decisions together rather than take them one at a time. This chaining together of decisions may be a reason why societies exist as formal institutions at all: a society is a means of chaining choices together. Secondly, it is procedural justice that enables those decisions to be chained together: one party can accept being disadvantaged in one decision because they know that the same process will result in a gain to them in a subsequent decision.

Therefore, procedural justice takes centre stage. Even if we can agree what is the appropriate moral principles that are generally to be applied, this is not enough. Like cases must be treated alike and also in accordance with standards of procedural justice. A critical question is therefore: what is 'alike'? This is determined in turn by the decision as to which moral principle applies: those where the same determining principle applied are 'alike'.

Figure 14   Statue of the goddess of Justice, 'Old Bailey', London

This is what might be termed 'positive justice': what should be aimed for, the treatment of alike with alike. Justice can also be approached in terms of what might be termed 'negative justice': that which the concept of justice explicitly seeks to exclude. From this second perspective, justice is about who can use which powers for what purposes: specifically, what forms of power are excluded. In Europe, the Roman goddess Justicia is often taken as a symbol of justice, statues of her often being the central feature of criminal court houses (**Figure 14**). She is shown with a pair of scales, to demonstrate that the evidence will be weighed, and a two-edged sword with which to dispense

justice. From around the fifteenth century onwards, she is often shown blindfolded, symbolising that all are equal in the face of justice so such forms of power as money, fame and political importance are excluded when justice is being considered. But, in the Romano-Greek period, as a goddess she was above such considerations and did not need a blindfold in order to be impartial.

The scales also demonstrate how what is just will be determined: by the weight of the evidence on either side. Thus, that there will be rules and those rules are based upon reasoning (for example, for material to be evidential, there has to be a logical connection with the question at issue). The aspiration is some 'objective' test, and hence rules, but, given the inability to have such an objective yardstick, the aim is to have a rigorous framework. As with any case, when we must have rules, the question is: what rules to have?

Rules both create consistency but are also a Procrustean Bed: forcing the reality to fit the rules. In English law, the law of equity was originally invented to cover cases where applying the law, rules, did not self-evidently result in justice (McCoubrey and White 1999). Rules are necessarily designed to cover the usual cases: they may not be adequate to deal with the special and specific cases. Thus, there is a saying in English Common Law, a system of law built up through previous judgements, that difficult cases make bad law: the rule designed to cover the special case will not necessarily be appropriate for the general case.

Lloyd (1991) asserts that one aspect of procedural equity is equality of treatment: '*all those in the same category shall be treated as equal*'; that is, in accordance with the categories laid down by law and not in either an arbitrary or biased manner. Lloyd also differentiates between formal and substantial or concrete justice where formal justice involves treating in a like way so that there are:
- Rules setting out how people to be treated in given cases;
- These rules shall be general in character; and
- These rules are impartially applied.

Thus, both people and case should be treated in a consistent way; people should also be treated in an appropriate way according to a set of rules so as to avoid arbitrary decisions.

But again concepts of procedural justice can both differ between individuals and between contexts (Wendorf and Alexander nd). Characteristics of procedural justice that have been proposed include (Leventhal 1980; Thibaut and Walker 1975; Tyler and Lind 1992):
- Bias suppression/neutrality – applied in manner which is both unprejudiced and without self-interest.
- Accuracy – the procedures succeed in their own terms and are based upon accurate information.
- Correctability – the opportunity to appeal.
- Consistency – in application across like instances.
- Representativeness – all affected should be considered in the decision.

- Ethicality – the decision should be made according to prevailing ethical standards.
- Voice/Process control – are the interested parties given a full voice?
- Standing – are the interested parties respected as people?
- Trust – legitimacy.
- Decision control – do the interested parties have any influence on the decision?

Other literature stresses the importance that the procedure protects the worth and dignity of those involved in the adjudication (Lind and Taylor 1988). What this implies is that a just process is one which the participants agreed is just in the circumstances.

5.9 Who is a stakeholder?

The two basic questions are:
- Who should be a stakeholder?
- What does it mean if they are a stakeholder?

Because stakeholder engagement involves taking power over the decision, and power is a zero sum game so that giving power to one person or group diminishes the influence of other individuals or groups, the inclusion of one group or organisation as a stakeholder is not a decision to be taken lightly. To be a stakeholder is to claim a moral entitlement, superior to some others, to have power. Equally, once a group is deemed to have a justified claim to power, the definition of justice just given requires that the nature of the power that they use, how they use it, and for what ends also be defined.

There are those with power already and 'institutional mapping' of those arrangements (Green et al 2007) is a key first step. This does not address the question of who should have power, and the fundamental question of why they are entitled to that power.

It need not be the case that all stakeholders should have the same entitlements, and the reciprocal associated obligations. Three levels of entitlements can be defined (Green 2003):
- The right to be heard;
- The right to argue or advocate; and
- The right to decide.

The first is the traditional form of 'consultation' and there seems little reason to restrict this right at all. The right to argue or advocate implies that in the event of disagreement, counter arguments will be put forward to justify the course of action adopted. That the counter arguments are put forward and are sufficient to rebut the initial arguments is a requirement for legitimacy. The critical issue is: who has the right to decide? What is a sufficient interest in the decision to create an entitlement to power over that decision? A related question is: what share of power should be created by that entitlement?

As an affected party, a stakeholder can be an individual or individual household, a company, or a body which represents a group of such individuals or companies. Such bodies include municipalities, angling associations, agricultural associations, and NGOs. Such representative bodies are claims to represent a community, be that a community of place or of interest. Claims of representation are legitimated by demonstration that the body does itself engage with, and is accountable to, those who it argues are its stakeholders. In turn, a common problem is the conflict between bodies which are elected and those which are not formally elected e.g. between an elected municipal council and unelected community group.

A practical problem is that those who do engage are likely to be a biased sample of those who are affected. Engagement has costs for the stakeholders who engage; hence, engagement is most likely by those with the lowest costs (women typically have less free time than men and so are less likely to be engaged); higher social standing and social skills; and those who have most individually to lose or gain (**Figure 15**). The different forms of NGOs are thus means for the members of different communities to reduce the costs of engaging in particular decisions. In general, there is likely to be an asymmetry of interests between the stakeholders: some will have much more to gain or lose than others, and those with more to lose may have no reason, therefore, to engage in a process which may increase the pressure on them to make sacrifices for others in this instance.

Figure 15   **The likelihood of stakeholder engagement as a function of the consequences to the stakeholder**
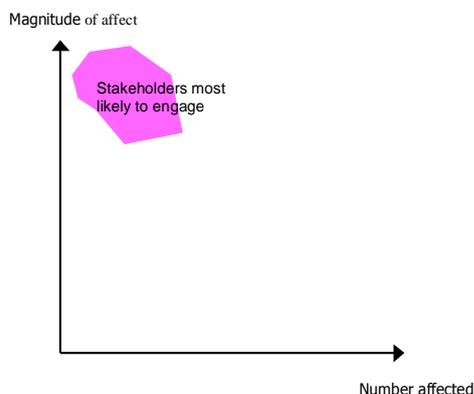
Coupled to the question of who has a moral claim to be a stakeholder is the question of how much power they then can have over the decision to be taken whether this power is ascribed formally (e.g. in the form of the number of votes that can be cast) or informally in terms of the weight given to views of those representatives. Many cultures seek to reach an informal consensus (Lewis 2006). There is no easy answer to this question as to what weight should be given.

A further necessary question is what forms of power may used to what purpose by each stakeholder. The presumption generally is that reasoning, knowledge, information and skills will be the dominant forms of power, but

with recourse also to appeals to social norms of justice. A concern in any group is that social norm pressures may force a consensus when none would otherwise exist. In small groups, there is a strong social norm to comply with the majority view (van Avermaet 1988). A consensus is desirable but a consensus will not necessarily about the best option or reached by appropriate means: it is an agreement to agree rather than agreement as to what is the best option. It is the process which is important rather than the outcome per se.

6   Stakeholder engagement as social process

Supposing that a group of stakeholders are gathered together and further suppose in principle that a collectively more desirable outcome can be achieved than the individual stakeholders can achieve working in isolation (as argued in **Appendix 1**), this does not mean that such an outcome will necessarily be obtained. It has to be understood as a 'task' and subject therefore to all the frailties and cognitive limitations of humans (Reason 1990). At least three pre-conditions must be satisfied before this achieved:

- The group must have the knowledge and skills to find the best technically achievable option. This material must be presented to them in such a way as to make it most likely that they will be successful at the task.
- The social relationships within the group, of which procedural equity is one element, must be such that they are able to converge on this option rather than break apart in enmity or satisfice with an inferior option.
- Since those relationships and knowledge exchanges are conducted through symbolic systems, notably language, which are themselves social acts, they must have the conversational skills.

Hence, what is important is skills and not tools; and it is highly desirable that these are teachable skills rather than being the product of personality characteristics.

Therefore, there are two considerations:
1. what is the task?
2. what is the process which is most likely to be successful in delivering that task?

As a task that is performed by a group of people, it is appropriate to consider whether there are other tasks which are performed by groups which are similar and in what ways the task performed by the stakeholders is different to other tasks also performed by groups.   Much of life is organised through groups whether these be juries in trials (Young et al 1999) or teams in work (Katzenbach and Smith 1994). In what way are the tasks faced by these groups different to those facing a stakeholder engagement group and in what way are they similar?

Both juries and work teams have an easier task than groups of stakeholders; a jury in a criminal trial has a relatively simple task of finding, on the basis of the evidence presented, whether this evidence is sufficient to find the

defendant guilty. There are only two outcomes, the choice is made solely on the basis of evidence – although rarely the jury may have to decide that the interests of justice are not served by a guilty verdict – and the group has a common purpose, that of reaching a verdict. Work teams have a more complex task in that they have to decide what to do but it is expected that they will put the interests of the organisation for whom they work ahead of both individual interest and the interests of the departments for which they work. The strong tendency of successful group to create a group norm of agreement acts to reinforce the drive towards a common goal.

A group of stakeholders faces a more difficult task still. The objective is to reach some form of agreement as to what to do whilst the stakeholders must still represent their own interests. It is intended that they manage the tension between maximising their own interests over the long run whilst reaching an agreement to agree on some course of action. For example, a representative of a water company who agrees a course of action which involves the expenditure of €200 million of the company's shareholders' money without any apparent return can expect to have her actions repudiated or subject to legal challenge by the shareholders. A stakeholder representative has to be able to convince those to whom she is accountable as a representative that an acceptable agreement has been struck. One power open to a representative stakeholder is therefore that to argue that whilst one possible agreement is acceptable to the representative, it will not be acceptable to those who the representative represents.

Secondly, the stakeholders do not necessarily start out with a common purpose and one has to be defined by or for them. There are at least three possible starting points:
1. One stakeholder intends to act and seeks to involve the other stakeholders. That one stakeholder has the power to do something but believes there are advantages in collective action. That stakeholder may intend to act because they identify a problem in the current situation or because they have a vision of some possible improved situation. For some other stakeholders, the present situation may be perfectly satisfactory and any change may appear to be disadvantageous from their perspective. Those others may consequently either join in to protect their interests or avoid engaging.
2. There is commonly recognised problem, a situation where a significant number of the stakeholders experience that problem. The stakeholders seek collectively to resolve that problem.
3. The converse to experiencing a problem is a vision of a 'better' potential future. The second and third starting points are to some extent linked because unless there is a potential means of apparently resolving the experienced problem, there is little incentive to think more about that problem. Hence, not infrequently we see a stakeholder introducing a possible new solution as a way of redefining the problem. This is essentially the SWITCH approach: the new water paradigm is presented as a way of simultaneously showing the limitations of the current paradigm and of resolving those problems.

Creating a common purpose is seen by Benson (1987) as an essential prerequisite for the success of a group. Hence, it would appear easiest to do so in case 2. The second aspect of purpose is the cultural framing of choice; previously, it was noted that traditionally in the UK this was taken to be the 'national interest' whilst in other cultures it was framed as social harmony or social solidarity. Attempting to reframe it in a particular cultural context is likely to be problematic; hence, the privatisation of water has meet strong opposition in many cultures because it involves a dramatic redefinition of social relationships.

Groups establish their own dynamics rather rapidly along with a set of group norms, or rules. Those processes may be dysfunctional as well as functional: 'group think' being one of the earlier forms of dysfunctionality identified in social psychology (van Avermaet 1988). Thus, it is not sufficient that a group reach agreement and successfully implement a course of action; we also want them to reach both the 'right' answer and by an appropriate process. Unfortunately, we cannot know in advance, or in short term hindsight, what is the 'right' answer. We have instead to judge entirely on the basis of the process by which they reached it, and their ability to reach agreement and implement a course of action. This places great stress on the group's ability to reflect upon the processes by which they reached agreement.

There are apparently very significant cultural norms in the form of social process involved in a meeting, notably in the importance given to consensus and the way in which differences in opinion or view are expressed (Lewis 2006; Lustig and Koester 1993). We all tend to assume that our cultural norms are either universal or, if not, superior to those in other cultures. But the practical question is:

- Is any one set of cultural norms more likely than others to result in successful outcomes from stakeholder engagement processes?

It maybe, for example, that Anglo-Saxon societies, which adopt adversial processes in courts and parliaments, may be culturally ill-equipped for successful stakeholder engagement. Or, alternatively, those societies which place a greater importance of maintaining agreement simply obtain a mere surface agreement.

As a social process, it is necessary to build both the community of stakeholders and the social process (Figueroa et al 2002). Classically, communities are described as a group in 'communion' with each other so conversation defines a community. Conversely, the oldest definition of conversation given in the Oxford English Dictionary is: "*The action of living or having one's being in a place or amongst people*."

Many of the exercises proposed by Chambers (2002) are centred on community building and there is generally a strong emphasis on collective action to build a community. Such approaches include building models of an area, or drawing a map, or putting up stickers on a wall on key issues. Successful stakeholder engagement techniques seek to promote the creation of group cohesion; as Aristotle (1955) argued, virtue is a matter of habit.

Similarly, Veblen (1919) said that institutions, rules, are: "*settled habits of thought*". In turn, the decision making approach will tend to seek to progressively eliminate options rather than to find an 'optimum' solution, because it is often easier to agree that some options are undesirable than to agree that one option should be preferred. Similarly, it is often preferable to focus initially upon areas of agreement rather than on issues about which there is a conflict.

The engagement process will become governed by a system of implicit or explicit rules, and those rules can strongly affect the success of the process. Thus, in jury trials, starting deliberations by setting out to agree what are the key evidential points upon which establishing guilt depends has been found to be more 'successful' than going around the table asking for initial votes on guilt (Darbyshire et al 2001).

The frequent emphasis on 'leadership' as promoting successful stakeholder engagement shows that the importance lies in skills rather than the adoption of techniques. Those skills are those of interpersonal relations: such as in conversation (Stone et al 1999), emotional intelligence (Goleman 1996), intercultural communication (Lustig and Koester 1993), and team working (Handy 1999).

Those social relationships are conducted in some spatial arena. The spatial arrangements, notably seating arrangements, are expressive of social relationships and roles (Somner 1969). Thus, for example, in China meetings, which in England would held in a 'boardroom', are conducted in what are often described as 'negotiation rooms'. Similarly, rather than sitting on executive chairs around a long table equipped with paper and pens, a frequent arrangement is armchairs around the walls. Those appropriate cultural expectations should be followed which promote interaction rather than listening.

Furthermore, the task is a difficult one and a tiring one. People who tired or uncomfortable do not perform well and ergonomics has developed to establish those environmental conditions which promote performance (Pheasant 1991). So, Weisbord and Janoff (1995) emphasise the need for an appropriate room, wall space, chairs and furniture.

7   What is success?

Earlier it was argued that a key condition is that we learn to do better, and go on learning. To do this we need to define what we mean by success, what we mean by 'better'. 'Better' requires a positive change to that which would otherwise occur. This question can be approached in terms of the outcome of the decision and there is quite a lot of evidence, summarised in Green (2007), that stakeholder engagement can result in better outcomes. But the underlying argument has been that the importance of procedural equity lies in promoting a long term engagement which will enable the benefits from

cooperation to be obtained more readily and more frequently. The centrality of social relationships has also been emphasised.

Therefore, it is appropriate to define the key criteria as change and the sustainability of the process, then we should be seeking to measure change amongst the stakeholders engagement: the extent and direction of the changes that occurred during the process. The relevant changes are those the individual stakeholders perceive in themselves but more particularly in the social relationships with other stakeholders, and, consequently, in their assessment of the process itself as these promote continuity.

Thus, it is appropriate to track over the time, starting before the engagement process begins (Tunstall and Green 2003):
1. The stakeholders' assessment of their own knowledge and skills in relation to the choice
2. Their assessment of the knowledge and skills of the other stakeholders
3. Their assessment of what are the critical issues involved in the choice
4. Their assessment of the attitude of the other stakeholders towards the process
5. Their assessment of the contribution of the other stakeholders to the process
6. Their assessment of what the other stakeholders want out of the process
7. Their attitudes towards each of the other stakeholders
8. Their personal or organisational preference as to the nature of the course of action that should be adopted

Such indicators can usefully be included on a regular basis within the engagement process itself. If the attitudes towards one stakeholder of all the other stakeholders become increasingly hostile over the course of engagement process then either that stakeholder is making very effective use of power to force the other stakeholders to adopt the option preferred by the stakeholder in question, or that stakeholder is being very unsuccessful in changing others in a way that supports their case. If it is the latter, then the knowledge of their failure would offer them a chance to change tactics.

In addition, it is appropriate to seek the stakeholders' evaluation of the process itself:
1. Was the process fair and equitable?
2. Was each stakeholder treated in a fair and equitable way? Were their views given due consideration? Were their contributions valued?
3. Was a sufficient range of options considered?
4. Did any individual stakeholder or group of stakeholders impose their views upon the group as a whole?
5. Was adequate technical support and information made available?
6. Did the process result in any change or was the decision effectively already made?
7. Did you learn anything from the process?
8. Did you derive any personal satisfaction or benefits from the process? Would they be prepared to repeat the experience?

8 Conclusions

Stakeholder engagement and making choices are both difficult. Because moral or ethical considerations lie at the heart of choices, perhaps choices ought to be understood to be difficult. Similarly, because justice or equity is a dynamic rather than an end state, it will always require work: it is almost literally a balancing act. Again, because procedural justice is about interpersonal relations, it is inter-personal relations that have to be considered and these are something which cannot be 'mechanised'; it is a problem of skills rather than tools. In turn, rather than there being any 'objective' yardstick of justice, a process is just when the internal and external stakeholders regard as having been just within the wider context.

In turn, rules are a double-edged sword: rules are necessary but rules cannot be comprehensive to cover all cases and may inhibit innovation. Nor can the rules be completely ordered. So, whilst rules are necessary in order to help us to do better, to do better may ultimately require some of those rules to be reconsidered.

So, the key principle is to seek to be constantly learning both within each stakeholder process and also from other stakeholder processes. Here, lessons from failure may be equally if not more useful than lessons from success.

9 Appendix 1: Under what conditions could a cooperative solution be superior?

Arrow (1963) demonstrated that collective choice is impossible in the case of the consequentialist model which underlies neoclassical economics, as illustrated in **Table 1**.   This argues that unless the rank order of preferences of the individuals across the options happen to coincide, there is no means of reaching a choice even by a majority vote.   In this example, there are three people and three options and the table gives the rank order of preference for each individual across the three options. It can be seen that there is a 2 to 1 majority against each option being ranked as the best option. In turn, this means that there cannot be a Pareto Improvement in these circumstances.

Table 1   **Arrow's Impossibility Theorem**

9.1.1.1.1 OPTION	INDIVIDUAL		
	A	B	C
P	1	3	2
Q	2	1	3
R	3	2	1

Arrows' Impossibility Theorem depends upon two assumptions:
1. The individuals cannot negotiate, and
2. They have nothing to negotiate about.

The example given in **Table 1** is the maximum uncertainty outcome: it is impossible to differentiate between the options in terms of preference. **Table 2** is a slightly modified version in which the sum of the ranks is lowest for option R but for individual A, this is the worst possible option. There are then two ways forward in this example:
1. Seek means of improving the outcome of option R for individual A, possibly involving some sacrifice by individuals B and C; or
2. To chain choices together so that in another choice, individual A gets their first preference.

In practice, the first approach is not always possible.

Table 2   **Modified example**

OPTION	INDIVIDUAL		
	A	B	C
9.1.1.1.1.1 P	1	3	2
Q	2	2	3
R	3	1	1

In this second approach, the decision in any one choice is influenced by and influences decisions in other choices. There is negotiation across the chain of choices. Thus, if a Pareto Improvement is impossible in any single choice,

then a Pareto Improvement may be possible across the chain of choices as a whole. For chaining to be possible, the weight then falls upon procedural equity because this is what enables each person to trust that across the chain of choices substantive equity will be delivered. In turn, this means that institutions are critical because these are what delivers procedural equity by means of rules about process.

Arrow's Impossibility Theorem may be argued to represent a special case. In **Figure 16**, suppose that 1 and 2 represent what individuals A and B could respectively achieve acting on their own. If they act collectively, then the two outcomes that they could achieve are 3 and 4. In total, both 3 and 4 represent an improvement on both the current position, the zero point, and outcomes 1 and 2. However, outcome 3 leaves B worse off than they could achieve acting on their own (2) and outcome 4 leaves A worse off than they could get acting on their own (1). In this case, considering this single decision, they are both better off seeking to act on their own unless A and B have power to limit the action of the other. The outcome then depends upon the balance of power of A and B; if they have exactly equal power then neither outcomes 1 or 2 can be achieved and they are left in the present position at zero. Hence, negotiating across choices is the only means of both parties coming out ahead in the long run.

Figure 16   Possible outcomes from a two person choice
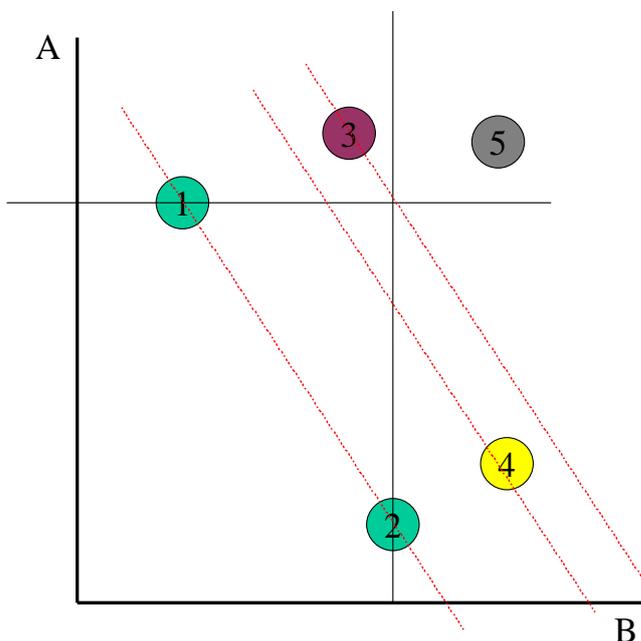
But if there is an option 5, then both A and B will clearly benefit from acting together since for A that option is preferable to both the present position and what A can achieve acting on their own (1) and for B it is also superior to the present position and what they could obtain by acting on their own (2).

Thus, faced with a choice between options 1 and 2, when these outcomes can only be achieved collectively, A and B are faced with three possibilities:

- Negotiate within the framework of the two options i.e. pay the other
- Negotiate across a series of decisions (e.g. consider a second choice which has precisely the opposite outcome to that just considered).
- Try to invent a new option equivalent to option 5.

In reality, the picture is more messy because the outcomes are likely to be more or less uncertain so that A will need to decide that the option 1 is superior to option 2 for person A.

In order to lubricate the stakeholder engagement process, this analysis suggests two approaches:
1. Decisions should be chained together
2. The stakeholders should be encouraged and helped to invent or discover new options.

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