

Uncertainty and participatory democracy

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Abstract

The article deals with some implications of radical uncertainty for participatory democracy, and more precisely for Participatory Technology Assessment (PTA). Two main forms of PTA are discussed. One is aimed at involving lay citizen and highlighting a public opinion. The other is addressed to stakeholder groups and organisations, not only in terms of interest mediation but also of inclusion of their own insight into a problem.

Radical uncertainty makes 'intractable' many environmental and technological issues and brings into question traditional and new approaches to policy-making. Its consequences are explored from the viewpoint of new science, deliberative democracy, and network governance. Radical uncertainty calls for a rethinking of the aims of public deliberation, and a reinterpretation of the divide between opinion- and position-oriented PTA. To look for a public opinion, understood as shared principled view, can prove misleading, as well as to think of stakeholder participatory arrangements in the usual way. When facts and values overlap, and are deeply controversial, the only opportunity for mutual understanding may be to look for practical, 'local' answers, based on different positional insights. Moreover, radical uncertainty affects also interest determination and pursuit, and may enhance the opportunity of joint, inclusive, non-strategic issue-definition and solution-devising.

This vision of public deliberation is consistent with the idea of network governance. However, fragmentation can affect the effectiveness and legitimacy of participatory policies. Trying to handle fragmentation from the top, as many suggest, is unlikely to be successful. A more promising endeavour is to foster deliberative settings which, although positioned at the level of 'local' and often contingent networks and commonalities, are open to include 'Otherness' – other contexts, other problem definitions, other concerns.

Introduction

This article¹ deals with some consequences of radical uncertainty for participatory democracy, and more precisely for Participatory Technology Assessment (PTA). This expression is used here with reference to a number of models and experiences of participatory policy analysis and policy-making related to science, environment and technology flourished in the last years, which can be regarded as part of a broader process of change of the democratic institutions.

A feature of many current issues, radical uncertainty highlights the shortcomings of traditional policy approaches. It is thus a major factor leading to the present concern for participation, but it impinges as well on the development of participatory arrangements. The interest of PTA lies in the fact that innovative participatory designs are prompted by, and confronted with, the deep uncertainties involved in many technological issues.

Two basic forms of PTA – their features, aims and problems – are analysed first. To consider the implications of radical uncertainty three different perspectives are then adopted, and their connections explored: science, democracy, and governance. Discussion shows that radical uncertainty calls for a rethinking of the aims of public deliberation and the way to handle fragmentation, a major problem of new governance approaches.

Technology assessment and participation

The relevance of a public promotion and regulation of scientific advancement and technological innovation has grown in the last decades. Technology assessment (TA) aims at enhancing the quality of the policies – their effectiveness and legitimacy – by making decisions better informed and more reasoned, more aware of the implications of technological development.

The idea of TA dates back to the late 1960s, prompted by raising public and institutional attention to the negative impacts of industrial development, but also by awareness that science and technology represent major resources in international competition. Practised at government as well as corporate and R&D institutes level, TA is initially viewed as an early warning system about the impacts of new technologies. Technological innovation is seen as something fundamentally exogenous to society and TA as a task for experts. Experts should provide decision-makers with objective, factual considerations. Their disagreement is considered as transitory. It can be overcome by means of closer examination of the issues. Since expert advice may be sensitive to political or corporate pressures, independent advisory bodies may be called for – this was a major reason leading to the creation of the US Office of Technology Assessment in 1972 (Bimber and Guston 1995). However, expert assessment is in principle value-free, or its value basis is uncontroversial, or value differences can be expressed according to a single measure (for example by interpreting them as monetizable preferences).

The evolution of TA reflects the increasingly widespread perception that, rather than a given, technology is ‘a construction that is actively shaped by a variety of both technical and

¹ I am indebted with the organisers and participants in the working session on ‘Risk, regulation and governance’ of the Conference *New natures, new cultures, new technologies*, organised by the International Sociological Association, Research Committee on Environment and Society (RC24) (Cambridge, 5-7 July 2001) for their invaluable comments, which helped me to rethink and develop various passages of my argument. I benefited also from comments of the participants in the Annual Conference of the Italian Society for Political Science (Siena, 13-15 September 2001), panel ‘What governance of the EU?’, where a different version of the paper was presented. Many thanks also to Jerry Ravetz for his insightful comments.

social forces' (Joss and Durant 1995: 9). The reasons for that are manifold, but a major role is played by the commodification of science and its intertwining with politics, the growing dependence of research on corporate interests and policy programs. More 'inclusive' forms of TA are thus developed. Two basic directions can be singled out. Introduced in the Netherlands in the mid 1980s and covering a variety of methods and experiences, the concept of 'Constructive TA' proposes a product/user-oriented approach to PTA. The idea is to include TA already in the design and development of new technology, as well as in its implementation. Developers and different categories of users and stakeholders are brought together, the latter providing the former with insight into their needs and interests, to which innovation can thus be made more responsive (Hamstra 1995; Rip 1999). Other forms of PTA, from consensus conferences to scenario workshops, from deliberative opinion polls to citizens' juries and planning cells (Fishkin 1991; Crosby 1995; Diemel and Renn 1995; Fixdal 1997; Joss 1998; Andersen and Jaeger 1999), express a more policy-oriented approach. Sometimes dating back to the 1970s in their first formulations, but worked out in the late 1980s and early 1990s (consensus conferences and scenario workshops in Denmark, planning cells in Germany, citizen juries and deliberative opinion polls in the US), these models are mainly used to address topics relevant to differently-sized communities but framed as basic choices concerning technology development or implementation (ideally, though rarely in practice, including the 'zero' option).

On the whole, interest in PTA grows because of an increase in the 'perceived need for bridge building in or between four important communities in society – citizens, politicians, experts and stakeholders' (Europta 2000: 42). The issues raised by the different models and experiences of PTA have often been addressed in terms of general design/evaluative criteria. For example Webler (1995), drawing on Habermas's discourse theory, focuses on fairness and competence. The former refers to three activities (agenda and rule making, moderation and rule enforcement, discussion) and four needs (the possibility to attend, speak, discuss and influence the final outcome of the process). The latter concerns four kinds of discourses (explicative, theoretical, practical and therapeutical, which have respectively to do with comprehensibility, truth, norms, and authenticity and sincerity), and refers to the access to information and its interpretations and the use of the best available procedures for knowledge selection. Rowe and Frewer (2000: 11) distinguish between acceptance and process criteria. The former 'are related to the effective construction and implementation of a procedure' (representativeness of participants, transparency and independence of the process, timeliness of involvement, impact on policy). Process criteria 'are related to the potential public acceptance of a procedure' (resource accessibility, task definition, decision-making mechanisms, cost-effectiveness).

As these examples show, discussion revolves around four main questions. 1) Who is entitled to participate? 2) How discussion has to be organised? 3) How the participatory process is connected with the decision-making? 4) How the participatory process is connected with the problem setting?

Schmitter (2000) maintains that there is a variety of qualities or resources which define the entitlement to participate (and the identity of participants): rights (citizens), spatial location (residents), knowledge (experts), share (owners), stake (beneficiaries/victims), interests (spokespersons), status (representatives). In this way, entitlement can be understood as a matter of competence. We can basically distinguish a cognitive and a normative competence. Participants are entitled because of their (supposed) knowledge and insight, or because of the recognised relevance and legitimacy of their kind of involvement in the issue at stake. So it is possible to talk of two main dimensions of inclusion: a normative one, with reference to whatever kind of interests and concerns, and a cognitive one, with reference to knowledge (Pellizzoni 2001a).

As for the procedural aspects of PTA, a crucial one is how the frame of an issue, its dimensions, questions and concerns, are initially defined and subsequently modified. Again in ideal-typical terms, we can distinguish between a top-down and a bottom-up approach, that is, the agenda may be set up and controlled by the promoters or the participants in the process (Pellizzoni 2001a).

As regards the relations between PTA and decision-making, they can differ widely, both in theoretical and in practical terms. A framework for evaluating the impact of PTA exercises is provided by Guston (1999). It includes: categories of impact (actual impact, impact on general thinking, on training of knowledgeable personnel, on interaction with lay knowledge), target of impact (policy, politics and people) and type of impact (substantive, procedural, reflexive).

According to a recent, comprehensive (sixteen case studies in six countries) survey of European PTA experiences (Europta 2000), the problem setting is first of all influenced by the characteristics of the technological development and/or the involved technological system. Discussing new technologies is a different matter from involving affected groups in the assessment of technological developments, or looking at some established technology as a means for fostering a process of change. Another influential dimension is the degree of institutionalisation of the setting – i.e. the presence of structured and recognised social positions – which is of course weaker for new technologies. The level of antagonism among the actors is also relevant. A high one implies that a strong effort is required to overcome the existing situation and start a cooperative exercise. Whether or not an issue figures on the public agenda is relevant too².

PTA and its basic divide

The Europta study highlights two basic kinds of PTA arrangements. The first one is represented by arrangements where ‘experts or stakeholders become actively involved within the TA process, [and in this case] we speak of expert/stakeholder PTA’ (van Eijndhoven and van Est 2000: 114). The other one, defined as public PTA, is represented by arrangements, ‘of which the Danish type of consensus conference is the typical example’ (Europta 2000: 35), where the ordinary citizens are given a central role. As regards the first category, I prefer to talk simply of stakeholder PTA. Experts are invariably present in PTA arrangements. What counts is whether their role is of advisers (as in consensus conferences) or direct actors in the process (as in scenario workshops). But in this case they can be regarded as playing the role of a particular kind of stakeholders. They are invited as representatives of specific cognitive/normative positions, the latter being interpretable not only as principles and assumptions (for example linked to different disciplinary perspectives) underlying factual descriptions, but also as the material interests (power/money) professional groups may have in the issue.

The Europta study’s distinction between public and stakeholder PTA reflects a widespread concern for the differentiation of the publics affected by the implementation of technologies. Although more refined distinctions have been made (McGarity 1990), the basic one is between non-organised lay citizens and interest group representatives (Laird 1993; Fixdal

² Studies show that this depends on a number of reasons (e.g. Hilgartner and Bosk 1988). The media often play a major role. Media coverage of environmental and technological issues is usually judged negatively (sensationalism, superficiality etc.) by experts, stakeholders, government officials, and media people themselves. However, as Jerry Ravetz observes (personal communication), even the tabloid press ‘has done great service in raising issues of official incompetence, tyranny or cover-up’.

1997)³. Thus, some PTA arrangements aim at unveiling a 'public opinion'. Their purpose is to make it come into light, to clarify and specify it, to settle as far as possible the existing conflicts or confusion. Their purpose is to devise policy recommendations based on a vision of the 'common good'. Other arrangements aim at confronting different and specific, i.e. socially located, positions. Their goal is to produce 'a set of negotiated and commonly acceptable policy recommendations' (Fixdal 1997: 368), also thanks to new knowledge allowed by the confrontation of each position's insight into the matter (Hajer and Kesselring 1999; van Eindhoven and van Est 2000). Therefore, what PTA is concerned with is either throwing light on, and confronting, a constellation of general opinions and ideas, principles and values, or addressing in a cooperative and dialogical way a dispute among well-defined social positions having a direct stake in an issue.

The Europta study shows that differences in the problem setting affect the choice between the two kinds of PTA. Opinion-oriented PTA typically concerns highly debated new technologies in an antagonistic but unstructured social context. Position-oriented PTA, on the contrary, concerns established technologies in a social context characterised by well-defined and often antagonistic positions, with possible lack of public debate.

Opinion- and position-oriented PTA address in different ways the four questions mentioned above. As regards the entitlement issue, for public PTA the essential quality of participants is their normative competence, understood in terms of opinions, preferences, principles and values. Participants are not expected to provide new knowledge on the issue at stake, but to confront their views with the 'facts' provided by the experts and assessed through the deliberative process. Legitimation to participate is grounded on political citizenship, the citizens' right to take part in public matters. For stakeholder PTA, normative competence is understood in terms of interests or 'stakes'. Legitimation to participate is grounded on civil citizenship, on people's right as individuals and groups to pursue their own goals. But a crucial quality seems also their cognitive competence. Participants are not involved only for reasons of recognised legitimacy (or sometimes of political opportunity), but also for their possible contribution to a better understanding of problems and devising of solutions, thanks to their social, economic or territorial 'location'. What is typically expected from participants is thus more than simple 'representation' of interests: democratic systems already offer many other opportunities of interest-based conflict resolution. It is also a 'positional insight' into the issue at stake, deriving from their being looking at it from a specific professional or social viewpoint, and often for a long time.

As regards selection of participants, for public PTA the issue is how to decide which is the relevant constituency. It is easy to maintain that this should be dictated by the nature and scale of a problem. However, such nature and scale often represent a core aspect of the conflict. The issue is also how to include a sufficiently broad variety of views. The latter aspect raises a tension between two different ways to understand participation. Are participants to be selected 'as representatives for others with similar characteristics, interests and values or as citizens who, whilst reflecting on their own values and experiences, are also open to the possibility of transformation in light of their reflections and deliberations with other participants' (Smith and Wales 2000: 57)? In the first case, the aim of selection is to mimic a statistical representation (sometimes, random selection is actually used). But the small size of

³ Participatory arrangements may involve members of organisations, like consumer and environmental ones, acting as representatives of the citizens. Does this constitute an intermediate category, between public and stakeholder PTA? The issue may be questionable. However, one should not take for granted such organisations' alleged representativeness of public concerns. They have their own interests as organisations. They are involved in the policy-making dynamics at national and international level beside the various interest groups. Moreover, they are involved because of their own insight into technical and social matters, which is socially located just like any other. This suggests these arrangements usually represent forms of stakeholder PTA.

samples makes easily questionable such attempts. Above all, they ultimately seem to contradict the very spirit of PTA, as an alternative or complement to the aggregative forms of democracy. The basic problem for stakeholder PTA is, on the contrary, that there may be relevant interests and positions not powerful enough to be 'visible', or not sufficiently organised to express representatives capable to ensure their constituencies will accept and comply with the outcomes of the process.

Moreover, opinion- and position-oriented PTA face some different procedural issues. Take the problem of outcomes. For opinion-oriented PTA, a major issue is whether there must be a general consensus, or a majority rule represents a viable solution. The latter option may be supported by the consideration that a 'deliberative' majority, as emerging after open discussion, is different from an aggregative one, typical of opinion polls (Dewey 1984). However, this point remains controversial. For example, in the consensus conference a split statement is allowed, but the lay panel is strongly encouraged to reach agreement on the final document. This because of the greater political impact of a shared conclusion (Fixdal 1997; Andersen and Jaeger 1999). For stakeholder PTA, a major problem is rather to what extent consensus reached through discussion is distinguishable from strategic bargaining (I'll come back in a moment to this point).

The agenda-setting issue is also different in the two cases. In public PTA, a truly bottom-up approach is problematic because the average citizen enters the process with very few notions about the question at stake, and finds it difficult to organise the agenda, define the basic questions, select witnesses and so on. The relation between lay people, experts and organisers/facilitators is thus critical and many different solutions exist. However, even when, such as in consensus conferences, the participants can modify the agenda, experts still act as 'filters'. They frame and bias the participants' attention to the various aspects of a problem. In stakeholder PTA, a top-down approach does not so much raise the risk of manipulation, but rather of some actors' exclusion from the game. By rigidly controlling the terms of discussion, a rock-solid frame restricts also the boundaries of the legitimation to participate. It may therefore facilitate confrontation, but at the cost of privileging some stakeholder (predictably, the stronger ones).

As regards the relation with decision-making, the problem for public PTA is not so much whether and how to ensure a direct impact, but how to produce at least some indirect effect, for example by stimulating a change in the political agenda, or further investigation of the problem. Participants should feel that their efforts are not completely useless. To this purpose, formal arrangements are sometimes made between participants, organisers and commissioning body, the latter committing itself to comply with the recommendations or provide reasons for behaving otherwise (Smith and Wales 2000). For stakeholder PTA the problem is different, as the Europta study highlights (van Eijndhoven and van Est 2000: 126 ff.). The closer the process is felt to the decision-making, the lesser the participants are ready to give up fixed ideas, daily routines and patterns of thinking and adopt an open-minded attitude, as well as to renounce existing power relations in favour of a more balanced representation of positions. In other words, the lesser they are willing to give up their usual strategic attitude. A future-oriented perspective makes this easier, but then the problem may be how to get people interested in participating. A viable solution is to appeal to strategic rationality. Stakeholders may be led to think that, if they withdraw, they miss a unique opportunity to exert influence. This may be obtained, for example, if a key player supporting the initiative makes the invitations. But if participants enter PTA arrangements with a strategic attitude, the problem is again how to make them think and behave differently, how to approximate an ideal speech situation. A future-oriented perspective, unless projected on a very distant future, does not warrant against strategic behaviour, hidden behind a dialogical,

other-regarding, surface attitude. Participants could still believe the outcome of deliberation will affect their immediate interests, behaving accordingly.

<i>type of Pta</i>	<i>type of legitimation</i>	<i>major issues</i>	<i>emerging tension</i>	<i>consequence of uncertainty</i>
public PTA	- normative competence (values) - political citizenship	- manipulation of opinions - minority visions - influence on decision process	representativeness vs. exemplarity	facts & values overlap
stakeholder PTA	- normative & cognitive competence (interests, knowledge) - civil citizenship	- visibility of positions - legitimation of positions - closeness to decision process	understanding on common problem vs. strategic compromise	difficult interest definition

Table 1 - Types of PTA: main characteristics

The differences between opinion- and position-oriented PTA are thus remarkable (see Table 1). Some core problems are different in the two cases. For the former a central one is manipulation. It is important how experts relate with the lay participants, how the interplay is handled of facts and values, cognitive and normative dimensions. For the latter a central problem is strategy. It is important how the tendency of stakeholder PTA arrangements to relapse into usual interest negotiation is countered.

But, as the far-right column in the table anticipates, there is more to be said. As noticed, concern for PTA is largely due to the perceived need of an enlargement of the policy-making processes, as an answer to the lack of effectiveness and legitimacy of traditional ones, centred on the institutional representation of interests, bureaucracy, and technical expertise. Uncertainty, or better ‘radical’ uncertainty, plays a crucial role here, and, as we shall see, influences the way the divide between opinion- and position-oriented PTA has to be understood.

Radical uncertainty and intractable controversies

Conceptually, PTA emerges at the intersection of three different areas, respectively drawing on philosophy and sociology of science, political and social theory, and political science. From the first viewpoint, PTA is a matter of ‘new science’; from the second, of ‘deliberative democracy’; from the third, of ‘governance’. These perspectives express the instance of a theoretical and practical revision of scientific research, democracy and policy-making, particularly in front of radical uncertainty. Understood in different ways, the problem of radical uncertainty is actually at the core of many environmental and technological issues, from GMOs to BSE, from electromagnetic fields to climate change (Stirling 1999; Gallopin et

al. 2001) – and not exclusively of them⁴. By radical uncertainty I mean a kind of uncertainty which differs from the one typically addressed by rational choice theory. It is a situation where not only the means, but also the goals and structure of a problem are ill-defined. Radical uncertainty brings into question the model of rational actor which is at the basis of traditional conceptions of science, democracy, and policy-making.

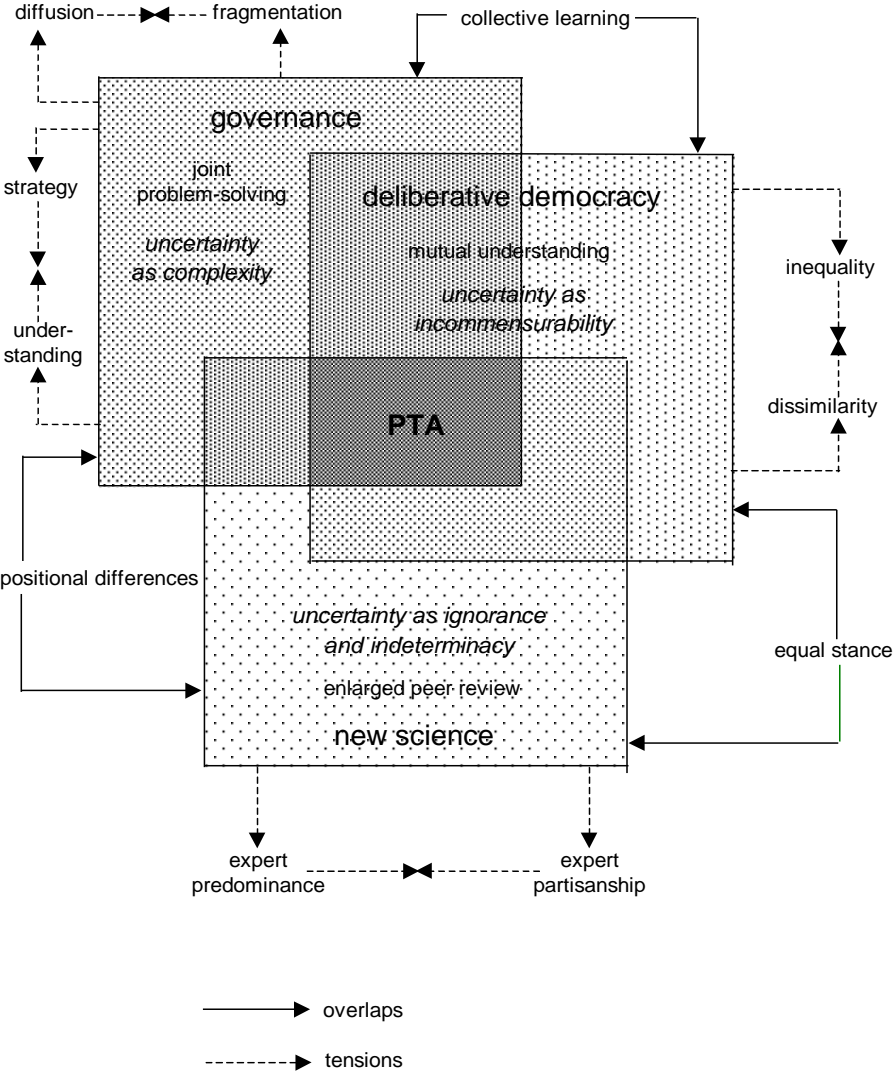


Figure 1. Uncertainty and participatory technology assessment

Radical uncertainty is a typical feature of intractable controversies (Schoen and Rein 1994). Intractable controversies are different from the simple ‘disagreements’ of routine political debate. The latter can be resolved by appealing to ‘facts’ – that is, by using shareable kinds of rational argument referred to scientific research, witnesses, past experience, and so on. The former cannot. In this case, the parties in dispute tend to emphasise different facts, or

⁴ Think for example of the dispute over abortion, where the issue is not merely a normative one, about whether or not the foetus is a person, but concerns also ‘plain’ facts, such as the moment at which pregnancy actually begins.

give them different interpretations, so that each party seeks to confute the empirical evidence adduced by the others. There is no consensus either on the relevant knowledge or on the principles at stake. Facts and values overlap. A controversy is intractable when it prevents the application of the usual strategies of conflict management based on controlling the information, the participants and the topics to be discussed (Hisschemoeller and Hoppe 1996).

PTA is at the same time a new way of doing science and democratically managing public matters. But what are the implications of radical uncertainty? This issue can be developed according to each of the three perspectives mentioned above (see Figure 1).

PTA and new science

That ‘business as usual in science will no longer suffice, that the world at the close of the 20th century is a fundamentally different world from the one in which the current scientific enterprise has developed’ (Gallopín et al. 2001), is no longer a claim of radical environmentalists or ‘dissenting’ scientists. It is the object of institutional statements. Consider the following: ‘Modern science has developed on the basis of an unspoken “contract” between science and the institutions taking responsibility for it (universities, industry, governments), on the one hand, and society and the public, on the other. New relationships are needed that fit the new mould of science, technology and society’ (European Commission 2000a: 5).

Such contract is now under discussion, partially because of the already hinted changing condition of scientific research. This can be described in terms of the spread of scientific knowledge production ‘from academia to many different institutions... [and its] increasing contextualisation, including its marketability’ (Nowotny 2000: 13-14). Or in terms of the decline of curiosity-driven research in favour of policy-related and product-driven research (Weingart 1999; Irwin et al. 1997; Funtowicz et al. 2000). Or, again, in terms of the growing influence of economic and political interests even on fundamental research.

The proliferation of expert committees, embodying the growing relevance of regulatory science, represents an attempt to ensure a better control of technological innovation. But public criticism, fuelled by an extensive record of failures, reticence and disregard of public concerns, addresses the untrustworthiness, lack of legitimacy and effectiveness of technical expertise. A political trilemma is thus gaining importance: how to ensure, at the same time, scientific accuracy, policy effectiveness and political legitimacy (Bressers and Rosenbaum 2000; Radaelli 2001).

The relationship between science and society is today paradoxical. Science and technology are charged with growing social expectations, but are greeted with equally growing scepticism or hostility. Countless accidents and the unveiling of unforeseen ‘side effects’ foster public scepticism over the alleged control of natural processes. At the same time, the intertwining of science, politics and business – sometimes even the scientists’ deliberate use of the media to bypass peer scrutiny and resolve internal conflicts (Bucchi 1998) – brings expert disagreement, in itself an essential part of the scientific enterprise, into the public sphere. The resulting perception is of ‘plasticity’ of scientific knowledge, its subordination to political and economic interests. The two fundamental commitments of the social contract of science – disinterestedness and objectivity – become questioned at the same time, not only by the public opinion but also by a growing number of scientists.

The necessity of a new social contract for science, based on a different view of how science works and how it relates with society, is linked also to the changing nature of scientific problems. The concept of ‘post-normal science’, proposed by Funtowicz and Ravetz (1993, 1999), grasps a point a growing number of scholars feels. Today science has to face

situations where the traditional experimental verification of hypotheses proves extremely difficult, or impossible. Current problems are often characterised by very high decision stakes and uncertainty. Both of them derive from the success of science in mastering nature, with the subsequent growing relevance of technology for society. Broadening the scope of the interference with natural processes implies broadening the domain of decision-related uncertainty⁵. In this sense, radical uncertainty is no longer the reign of scientific speculation: it is at the core of actual, pressing problems. Radical uncertainty often takes the shape of indeterminacy – relevant information is dispersed in an inextricable mass of data, the causal chains are open, etc. – or ignorance – we don't know what we don't know (Wynne 1992), and how relevant is it for deciding what to do. What is lacking is a single description and connection of the facts, a shared vision of the meanings of concepts and principles. Facts become soft, and values hard. It is increasingly difficult to distinguish between them. As a consequence – so the argument goes – the peer review process should be 'enlarged', encompassing those potentially affected by decisions and a broader range of 'facts' and insights than those usually considered: a truly scientific approach, today, should be not only transparent, systematic, peer-reviewed, accountable, independent, capable of learning, but also ready to broaden the framing of an issue, to recognise incommensurability, to acknowledge ignorance (Stirling 1999).

PTA expresses this need of a 'new science', the recognition that it is necessary to open the discussion on scientific research and technology development and implementation to a broader community. But enlarging the peer reviewing process, as an answer to radical uncertainty, means questioning the very possibility of distinguishing in the usual way between public and stakeholder PTA, between a confrontation of facts and values, or stakes in an issue. Regardless of the kind of subjects involved, the cognitive and normative components of their arguments cannot be completely separated. So they cannot but express a position.

This perspective makes easier to understand why stakeholders are expected to provide something more than mere interest representation. Radical uncertainty means that their insight into a problem can be invaluable. It means also that what *is* each one's own interest is not easy to ascertain (Radaelli 1999; Pellizzoni 2001a). It requires a definition of the issue at stake, which is not straightforward but may entail the joint contribution of all those involved.

This perspective makes also easier to understand the controversial position of experts in PTA. If expert insight into a matter is no longer seen as necessarily deeper and of higher value than that of non-experts, what remains of their role as key informants and advisers? If the agenda and the debate are 'framed in terms of the technocratic discourse of experts' (Davison et al. 1997: 340), much of the significance of PTA, as extended peer review, seems lost. The diversification of expert advice does not solve, but may even worsen the problem. Experts' conceptual and linguistic resources may overwhelm the lay participants' contribution (Pellizzoni 1999). On the other side, if the experts' role is of mere stakeholders (or stakeholders' advisers), what they say automatically becomes suspect and is more easily discarded. Thus, either a privileged access to knowledge or 'partisanship'. As regards the experts' role, PTA rests on a precarious equilibrium. There is always the risk of falling back to 'narrow' peer reviewing, an unbalanced relation between experts and lay participants, or, by means of an adversarial use of expertise within a logic of interest negotiation, making the experts' contribution pretty useless.

⁵ The same can be said for the attempt to control and regulate the social processes, which supported the development of welfare and, more recently, multicultural policies. The consequent increase in the social saliency of radical uncertainty is a major argument of the risk society and reflexive modernisation theses (Beck 1992; Beck et al. 1994).

PTA and deliberative democracy

From the viewpoint of political and social theory, PTA embodies the idea of deliberative democracy. The origins of this idea are manifold, and cannot be reconstructed here. Sources of inspiration can be traced back to Aristotle and Rousseau, the Republican tradition and, more recently, Dewey and Arendt. Interest for this approach to democracy gradually raised in the 1970s, pushed by ‘broad dissatisfaction with the debacles and anonymity of liberal government’ (Bohman and Rehg 1997: xii), up to a dramatic growth in the 1980s and 1990s, thanks to the writings of Cohen, Elster, Habermas, and several others.

The idea of deliberative democracy is that the public deliberation of citizens is at the core of legitimate law- and policy-making. It represents a challenge to the predominant account of democracy, shared by elitist, economic and pluralist theories, the stress of which is on the aggregation of preferences or bargaining among conflicting interests, or the restriction of the discussion to small groups. According to this perspective, each party appraises the arguments of the others in terms of exchange, and relates them to personal advantage. On the contrary, according to the deliberative perspective, the arguments of each party are compared, in consideration of the interests of everyone. The deliberative approach admits that political preferences conflict, that modern society is pluralist and cannot be viewed as a community with shared goals and principles. However, it also affirms that conflicts can be resolved by means of unconstrained discussion intended to achieve the common good. To be legitimate, decision-making should involve discussion of all the viewpoints, with none of them excluded *a priori*. A decision reached in this way – so the argument goes – gains also in terms of stability. Dialogue discourages strategic behaviour because all the involved people freely accept it after having publicly defended their preferences in non-selfish terms and because subsequent non-compliant behaviour would be punished by sanctions such as exclusion from further deliberations or *tit-for-tat* reprisals. Dialogue may also positively influence the effectiveness of decisions. A fair and unconstrained confrontation helps not only clarifying the different positions but also deepening a problem, broadening the related knowledge and insight. If opinions and preferences are not fixed, open deliberation may give rise to new or more articulated points of view (Miller 1992; Bohman 1996; Fearon 1998). This ‘cognitive virtue’ (Pellizzoni 2001b) may take major relevance in intractable controversies.

The participants’ equal stance in the debate is a cornerstone of deliberative democracy. Everyone’s viewpoints and concerns are in principle equally relevant, because everyone is provided with the same rights and intellectual ability. Moreover, the principle of equal stance represents a major point of overlap between the perspective of new science and that of deliberative democracy. An enlarged peer review is of course a form of public deliberation.

Thus, on the one side we have a plurality of legitimate viewpoints. On the other side – so the mainstream argument goes – this plurality does not hinder the possibility of reaching mutual understanding, and not a simple bargain, thanks to the exercise of reason. Habermas’s theory fully embodies this perspective, which is basically shared, among the others, by Rawls (Pellizzoni 2001b). According to him, consensus on the best argument can in principle be reached thanks to the fundamental unity of reason, as manifest in the invariant structure of language. Mutual understanding is the outcome of a process of abstraction or generalization. This allows to find, behind different positions, a common set of principles from which the solution to the problem at stake can be derived. Sometimes explicitly inspired by Habermas’s theory, some approaches to risk assessment try to do just that, by reconstructing the involved parties’ ‘value trees’ in order to find a set of shared criteria and priorities, from which specific objectives would be operationalised (e.g. von Winterfeldt 1992; Renn 1999). The already noticed stress of PTA models on consensual outcomes confirms how influential is this perspective, according to which, when no consensus can be reached on a common reason for a

choice, there remains only the possibility of practical compromises (Habermas 1996), that is, business-as-usual (no matter how procedurally fair and ‘discursive’) strategic bargaining.

Two main criticisms have been addressed to the mainstream approach to deliberative democracy. The first one focuses on the problem of inequality. Differences in power and other resources (money, knowledge, time etc.) cannot be easily overcome or dismissed. The other criticism focuses on the problem of radical uncertainty, which, in this context, typically takes the shape of incommensurability among different cognitive and axiological positions. Growing interest for the feasibility of deliberative democracy (Bohman 1998) entailed that scholars’ attention has been mainly devoted to the distance between the deliberative democratic ideal and the actual reality of political confrontation (e.g. Femia 1996), notably to inequality in the available resources. This can be observed also in the PTA field: proponents and practitioners usually devote many efforts to eradicate or reduce such kind of unbalances.

Implications of incommensurability have attracted much less interest. However, some of the most corrosive criticisms of deliberative democracy concern exactly this problem. Reason may be understood as a shared quality of humans, but this does not necessarily entail that the exercise of reason can be lead to unity. Intractable problems show that differences in worldviews, in problem and goal definitions, in factual assertions and value assumptions, are often so deep that a common ground cannot be found. Incommensurability is different from incompatibility (Bernstein 1983). Two statements are incompatible when they contradict each other. In order to say that they contradict each other, there must be a shared language or frame of reference. The same conditions apply when determining that one argument is better than the others. Incommensurability means that there is no shared language or conceptual framework. It is not possible to compare among different options, because this would entail a cardinal or ordinal measure, a common property or a comparative term (O’Neill 1993), which is lacking.

Thus, radical uncertainty addresses fundamental questions to the core of the mainstream approach to deliberation. In a nutshell, and with specific reference to Habermas’s theory: the impossibility to establish with mutually acceptable approximation what the outcomes of a choice will be prevents a justification in terms of its being in the interest of everyone affected. Agreement on the ‘best argument’, on a shared justification of a course of action cannot therefore be reached, even in the most favourable and equitable conditions (Pellizzoni 2001b).

Moreover, incommensurability seems often concealed under a problem of inequality of resources. ‘Equalising’ them may entail denying incommensurability: for example, by ‘translating’ discordant knowledge, concepts and expressions into the stronger (because more formalised, or pertaining to the most powerful actors) ones. Thus, the principle of equal stance is at odds with the acknowledgement of differences that cannot be settled. The quest for more equality may lead to a disregard for diversity, or vice versa. Incommensurability creates a tension between the two founding and justifying elements of deliberative democracy. On the one side, there is the opportunity of reducing differences, of ‘equalising’ social positions, in order to make their confrontation really dialogical and fruitful. On the other side, there is the opportunity of acknowledging and making the most, in term of richness of views and insights into the problems, of what distinguishes them. The above hinted precariousness of the experts’ role can be understood in terms of the broader tension between two different ways of conceiving diversity: as inequality (of commensurable entities), or as dissimilarity (of incommensurable ones)⁶.

⁶ The choice of terms is always delicate. It is particularly so in this case. For post-modernist thinking, ‘dissimilarity’ often means the last, and more radical, expression of the modern, universalist and individualist rationality, at the same time the continuation and the end of modernity. In the late- or post-modern condition, they say, inequality is no longer the central issue, but rather dissimilarity. The latter, differently from the former, ‘is not the result of the observer’s or the legislator’s insufficient neutrality: it belongs to the *ratio* as such, i.e. to

Feminist political thinking is particularly sensitive to this issue. Mouffe (1999), for example, draws on Wittgenstein to show that the absolutization of universal reason often hides hegemonic relations, and insists that the ‘consensualistic’ approach to public deliberation should be replaced by an ‘agonistic’ one – a confrontation between radically different (but reciprocally respectful) social positions and worldviews. As Walzer (1999) notes, there are two different ways to recognise the others: as rational individuals as us, or as members of groups whose beliefs and concerns mean for them what mean for us our beliefs and concerns. Bargaining may be more respectful of differences than deliberation, because the former takes for granted what the latter has great difficulties to acknowledge and manage (Sanders 1997). This is testified by the already stressed uneasiness of many PTA arrangements with dissent and minority views.

Moreover, attempts to outline a theory of democratic deliberation without assuming the unity of reason (e.g. Bohman 1996), have been mainly devoted to exploring the conditions (often found in a set of shared political values) for dialogue to begin and go on. However, incommensurability has relevant consequences on the very conception of what deliberative processes are concerned with. Incommensurability means that non-trivial claims are always related to socially situated positions. That objectivity is positional. This regards also trans-positional assessments, such as scientific attempts to produce a ‘view from nowhere’ (Nagel 1986). ‘The scientist’s ability to reason trans-positionally depends on what else she knows and on the type of reasoning she is able to use, and these, in a broad sense, are also positional features’ (Sen 1993: 131).

But, if views of the world are incommensurable, how a common ground can be established? Are intractable problems to be dealt with only in terms of strategic compromise? A difficulty for this conclusion has already been noticed: radical uncertainty implies that interest determination is not straightforward, and may depend on an issue-definition joint effort. Moreover, a way out of total relativism and incommunicability is offered by the trans-group, trans-cultural observation that there may be different valid assumptions and descriptions, but there are also false ones; that reality cannot be manipulated at will, because it resists our wrong interpretations, hampering the achievement of one’s goals (Scheler 1960; Putnam 1981). Differences in problem definitions do not mean that problems present themselves in any way whatever. Moreover, the possibility of trans-positional assessments is in principle open to every member of every group, who can critically confront his/her views with others. Again, trans-positional assessments are not necessarily abstractive (and vice-

the persuasion that all conflicts can be settled through the application of neutral rules. [...] Dissimilarity is the reduction of the Other to silence by means of the imposition of a language which “beforehand” leaves out of consideration “illegitimate”, “incompetent” viewpoints’. Inequality allows dialogue, because ‘it presupposes a centre in society, in respect to which citizens should define themselves’. Dissimilarity, on the contrary, means ‘to insulate oneself from the Other, to reduce his or her instances to something with which dialogue is impossible... [It produces] what Lyotard calls “le différend”, that is the discord, i.e. a conflict characterised by the heterogeneity of languages, so that the wrong of one side is meaningless in the language of the other side’ (Belohradski 1990: 428-429, 416). Recognition of incommensurability, thus, leads to new, more radical, forms of denial and exclusion, of discrimination and disregard, through tacit or explicit statements of irrelevance, incompleteness, erroneousness of what is not reducible to the self, as reflected in the alleged objectivity of the norm or of knowledge. Undoubtedly, this can be found everywhere in social life. It is indeed the usual configuration of the relations between experts and lay citizens. Lay local knowledge is normally discarded with a self-sufficiency gesture, or specialised languages simply find it ‘inadmissible’ (Pellizzoni 1999). The problem of fragmentation – of which I discuss below with reference to network governance – is not alien to the theme of incommensurability as denial of a possibility of confrontation. However, many empirical studies and newspaper headings show that this tends to have raising costs in terms of ineffectiveness, inefficiency and perverted effects of decisions. Radical uncertainty offers increasing evidence that, beyond any moral consideration, to silence the voice of the Other, to hush up the irreducibility of the world to one’s own image and models may have heavy practical consequences. Therefore, I keep the term dissimilarity to mark what can be described as an incommensurability that can no longer (or less and less) be silenced.

versa, as Sen notices in the above quotation, a generalization is but another position among the others). They may be 'local', contextual.

Then the matter becomes no longer to find a common reason, but to reach agreement on a practice; no longer to go upwards, to abstraction, but downwards, to concrete solutions for concrete and circumscribed situations described (even only approximately) as commonly problematic, and which cannot easily be defined in terms of each involved subject's own interests. The aim of deliberation becomes to confront contextual knowledge, different positional insights, looking at similarities, isomorphisms, common features among differently framed descriptions of portions of reality, in order to find a shared local solution to a problem. There may be an empirical level at which the incommensurability of cognitive frames and value systems is not total. A level at which local, contextual commensurability is possible. There may be, in this sense, no complete incomparability of options, and an imaginative dialogue may highlight at this level points of overlap between radically different positions.

Some implications of such view of public deliberation can be highlighted by turning to the third of the above sketched conceptual perspectives.

PTA and governance

As said, PTA can be considered part of a broader process of change of policy-making and regulatory activity. The idea of deliberation on practical solutions to locally defined issues seems actually consistent with that of network governance, currently enjoying remarkable success. When it appeared in the late Sixties, the meaning of 'governance' was equivalent to 'governing' or 'political steering'. It now indicates a change in the meaning of government: 'a new process of governing; or a changed condition of ordered rule; or the new method by which society is governed' (Rhodes 1996: 652-653). According to another definition, governance 'is a method/mechanism for dealing with a broad range of problems/conflicts in which actors regularly arrive at mutually satisfactory and binding decisions by negotiating with each other and cooperating in the implementation of these decisions' (Schmitter 2000: 2). It refers to formal and informal regimes based on the interaction and cooperation between public and private actors, or the self-regulation of the latter (Carlsson and Ramphal 1995; Mayntz 1999). If market and hierarchy prove increasingly inefficient as regulatory principles, governance turns to networks. Governance 'rests on horizontal forms of interaction between actors who have conflicting objectives, but who are sufficiently independent of each other so neither can impose a solution on the other and yet sufficiently interdependent so that both would lose if no solution were found' (Schmitter 2000: 2).

Thus, governance means at the same time the recognition of deep changes and an attempt to handle them. This is often connected, particularly as regards the EU, to the idea of 'democratic deficit'. This is described in terms of marginalization of the usual forms of political steering, of the emptying out of traditional means of participation, of institutional 'deficiencies in representation and representativeness, accountability, transparency, and legitimacy' (Eriksen and Fossum 2000: 5). The intertwining of politics, science and technology, the growing importance of organisations in policy-making and regulation, the impact of globalisation, represent major elements of the changing conditions. As a consequence, governance 'is increasingly diffused upward, downward and outward beyond Parliament and its government' (European Commission 2000b: 11). According to the White Paper devoted to this issue (European Commission 2001), beside effectiveness, coherence and accountability, principles of 'good governance' are the openness of institutions (in terms of

communication with the citizens and understandability of the language used) and a participation extended to the whole policy chain, from conception to implementation⁷.

In this context, uncertainty is understood mainly as complexity. Society has become too complex to be steered in a centralised, unified manner. No single subject, no matter how powerful and technically competent, is able to handle its dynamics in a traditional top-down style. Public actors cannot any longer assume 'the responsibility for developing and implementing an unattainable optimal solution to every problem'. The answer to complexity lies in downscaling and 'diffusing' the policy- and decision-making. Problems are to be framed and solutions developed and implemented 'in an ongoing process with stakeholder in context' (Lebessis and Paterson 1999: 34).

Some already described consequences of radical uncertainty take relevance also from the perspective of governance. Network governance means that actors with a stake in an issue try to address it by appealing to something beyond the authority of the state or market competition, by engaging in cooperative arrangements. The necessity of cooperation arises because of the inherent complexity of issues. Complexity makes everyone's interests increasingly difficult to define – and preferred solutions increasingly difficult to devise – without including to some extent the others' viewpoints, knowledge and insight, i.e. without turning from strategic to non-strategic interaction. But actors usually engage in interactive arrangements for strategic reasons, and are easily tempted to come back to strategy if the opportunity arises. So a tension develops here, between perception that a problem is 'common', in the sense that individual advantage cannot be obtained – nor often be defined – independently from collective reasoning (Pellizzoni and Osti 1999), and temptation to come back, as soon as possible, to forms of strategic interaction. As we have seen, stakeholder PTA is constantly exposed to this tension.

This tension is perceptible in many writings on 'participatory democracy', the latest catchword for fostering ideas about network governance. By reading the already cited Lebessis and Paterson (1999), it seems on the one side that participatory democracy simply means a new set of rules for playing the usual political game in a situation of increased complexity. On the other side, high complexity seems to require a different logic. A logic peeping out of numberless references to the need of a 'constructive inclusion' of the plurality of viewpoints, perceptions, interests and values in every phase of the policy process, from agenda-setting to policy formulation, implementation, evaluation and revision. Or in the relevance assigned to reflexivity and collective learning, and to the public actors' attention to the 'nature of the interaction' among stakeholders. Or, again, in the stress on 'lower level participation', on bottom-up, context-dependent problem-framing and solution-devising, as an answer to the ineffectiveness of top-down, generalising, abstracting approaches.

This stress on collective learning and context-sensitivity highlights two major points of overlap between the perspective of governance and, respectively, deliberative democracy (dialogue positively affects the quality of decisions) and new science (radical uncertainty requires consideration of the viewpoints of all the subjects involved in an issue). But there is also a second tension. It appears as a paradox of participatory democracy. The current, complained condition of democratic deficit is characterised by increased, and not declining, participation in public problem-solving and rule-making. Participation 'has never been so widespread and so far-reaching as today'. However, the new system of governance 'is largely one of organizations, by organizations and for organizations' (European Commission 2000b: 9). There is a growing relevance of civil society in decision-making processes, even if the participating subject is not so much the individual citizen as the group. The problem is rather that this diffusion of authority and decision-making is not a democratically self-regulating

⁷ Interestingly, these principles find a parallel with those resulting from empirical studies on communities exposed to different kinds of risks (De Marchi 2001).

process. As a consequence, the White Paper on governance and many other EU documents and academic papers stress that the institutions of parliamentary democracy should redefine their role, giving up most of their direct engagement in the different matters in favour of coordinating and monitoring the plurality of social arenas. Wide and fair participation of groups and interests should also be ensured, in order to counteract the inequality of resources and the predominance of the stronger, better organised actors. But if it is true that ‘non-governmental organizations (NGOs) are increasingly being considered as synonymous with “representatives” of civil society’ (Kohler-Koch 2000: 525), one may ask what kind of representation is this, and to what extent organisations are responsible and accountable to the larger public.

The problem of fragmentation

Thus, the question is not how much participation, but what kind of participation, by whom, to which purposes. We can reflect on this point by turning to the theory of ‘associative democracy’. This concept, closely tied to that of participatory democracy (Kohler-Koch 2000: 522), has been particularly developed by Hirst (1994, 1997) and Cohen and Rogers (1992, 1995). They believe that, if the idea of a centralised state as the expression of the will of the people by means of representative institutions has long been criticised at theoretical level (notably by the British pluralists of early 20th century: Maitland, Cole, Figgis, Laski), complexity makes it less and less empirically sustainable. Most of the authority of the state should thus be devolved to the sphere of associations. Functionally and territorially differentiated voluntary associations can provide many public goods and services now monopolised by the state, and they can do it in a more effective way, more sensitive to actual needs and preferences. Of course, it is stressed that people should be free to join and withdraw from associations and that rules are to be envisaged for assigning them public resources and controlling their inner democracy.

By confronting Hirst’s and Cohen and Rogers’ proposals, it is easy to spot a difference in the way the functioning of the associative network is conceived. Hirst assigns the state a much sober role than Cohen and Rogers do. The former has in mind much more self-regulative arrangements than the latter, for whom the state retains a stronger promotional role, by means of subsidies and sanctions. This depends on a different conception of associative democracy. For Hirst, its essential requisite is that each group or community should be provided with the possibility to build its own services (health, education etc.), according to its own values and preferences. Or, in other terms, survival of associations depends on their ability to ‘attract’ the individual citizens. Citizen conceived essentially as consumers, who ‘shop around’ to find those services which best fit their own tastes.

Cohen and Rogers are much more concerned with the complexity of many current policy problems, which cross conventional domains. The subsequent necessity of ‘*coordination* across those domains as well as cooperation from private actors within them’ (Cohen and Rogers 1995: 249, italics original) clashes with the fact that different stakeholders usually have distinct agendas, identities and interests. As a consequence, what is needed is ‘the construction of new arenas for public deliberation that lie outside conventional political arenas, and whose ambit is not exhausted by any particular interest solidarity at all’. In this way, ‘the bases of social solidarity may partially shift from “found” commonalities rooted *outside* the process of defining and addressing common concerns... to commonalities that are, and are understood to be, constructed *through* that process... Such solidarities... will be the bonds of people with common concerns... treating one another as equal partners in the resolution of those shared concerns’ (Cohen and Rogers 1995: 250-251, italics original).

In brief, Hirst does not bring into question the logic of modern politics. An ‘immunising’ logic (Bortolini 2000), in the sense that it is focused on the uniqueness of the individuals’ own identity, their mutual separation, their protection from the intrusion of ‘Otherness’. Associative democracy becomes the latest incarnation of the liberal ‘art of separation’. Cohen and Rogers, on the contrary, are convinced that in this way associative democracy cannot answer the current problems of governance. This contrast seems linked to a discordant view of uncertainty, as implied in individual and collective decision-making. Hirst’s approach is fully in line with a ‘rational choice’ uncertainty, which can be managed by means of associations, that is by downgrading and expanding the possibility of choice within a range of functionally equivalent solutions. Cohen and Rogers seem to take care of the implications of radical uncertainty, the necessity to discursively exceed the boundaries of ascribed or acquired belongings in order to take advantage of a variety of insights and perspectives, and reach more effective, reciprocally satisfying, problem-definitions and solutions. New deliberative arenas are contingent in the sense that each of them depends on the recognition that, although differently framed and described, there *is* a common problem. So these arenas are not linked to pre-existing political communities, but to an object of concern.

Associative democracy as a network of self-referential associations, or contingent deliberative arenas. The contrast between these two images effectively describes the second tension of participatory democracy, as it appears from the perspective of governance. But even Cohen and Rogers’ approach does not necessarily answer the problem. Participatory exercises are ways to connect what usually is kept separate, views, values and insights which would otherwise be reciprocally unattainable, according to the logic of hierarchical and/or strategic approaches. But this ‘bringing together’ is challenged by an opposite trend, towards separation and disconnection from what remains outside, beyond the deliberative setting as locally defined (in functional and/or territorial terms). If complexity has to be addressed by downscaling the scope of discussion, by going the opposite way of abstraction and generalisation, the price may be insulation from broader concerns. So, also by following Cohen and Rogers’ approach, participatory democracy runs the risk of fragmentation, which may result in the neglect of the problem of externalities, that is, in *more* complexity. A solution may be locally successful, but at the cost of worsening the situation outside the considered functional or territorial setting. A clean solution here produces dirt elsewhere. This is a broader question than the often stressed necessity of practical adaptations of participatory models (e.g. Europta 2000; Schmitter 2000), because it concerns the issue of how (by whom and with respect to whom and what) the success of participatory processes has to be evaluated.

This represents a major problem of technological controversies. Think of the issue of genetically modified food in Europe. It is so entangled also because its regulation has been approached from the outset in a rather rigid and unconnected way. Its original configuration, as a strictly technical matter to be reserved to specialists of few disciplines, is largely responsible of the belated consideration of some ‘side’ effects of GMOs, for example on biodiversity and agricultural practices, and the protests of initially silent stakeholders, from food industry to retailers, farmers and consumers (Levidow et al. 2000). And when consumer information was recognised as a critical point, it was treated as it were unconnected with the issue of whether and how public reflection on the agriculture policy could be enlarged and strengthened in its influence on choices (Pellizzoni 2001a). Similar conclusions on the role problem-definitions play in the development of policy issues can be drawn from analysis of the BSE crisis (Seguin 2000).

The relevance of fragmentation can be understood also from the viewpoint of the trade-off between legitimacy and effectiveness, enlargement of democratic participation and timeliness of decisions (Radaelli 2001). Downscaling and ‘spreading’ the policy process may be a means

of reducing this trade-off: at 'local' level, participation is likely to affect to a lesser extent the timeliness of decisions. But the result may be also a mess of unrelated, partially overlapping choices, with consequent lowered overall efficiency and effectiveness. The effects of fragmentation can be observed also from the viewpoint of the precautionary principle (O'Riordan and Cameron 1994; Stirling 1999), to the extent that fragmentation affects the reversibility of choices. A local option is likely to be more easily reversed, if necessary, than a generalised one. But different uncoordinated actions may produce unforeseen and irreversible effects.

Needless to say, fragmentation worsens the risk of manipulation of participatory processes on the part of those who succeed in controlling the agenda. The narrower this is, the more difficult it becomes for the participants not to take much for granted, assuming the proposed one as an obvious, self-evident problem-definition. The importance of the issue-framing in this respect is testified by empirical studies. For example, by analysing some consensus conferences on genetically modified food and the production of electric energy, Mirenowicz (2001) shows that the development of the discussion and the contents of the final report have been heavily influenced by the formulation of the problem. Focusing the debate on the pros and cons of a technology, on how enhancing the former and reducing the latter, produces different results from allowing consideration of alternative scenarios to such technology, i.e. from including in the discussion the 'zero' option.

But even if participants were able to substantially alter the initial issue-definition, discussion would inevitably remain tailored to the viewpoints of those involved *here and now*. This may have relevant effects on the legitimate and effective handling of a problem in a broader context and in the long run. Deliberative arrangements offer dialogical opportunities among individuals, groups and institutions. But this does not prevent insulation and distance between each partial public sphere, the different communities and solidarities created by shared concerns.

In other words, deliberative arenas can be disengaged from any commitment to open and confront themselves with others, failing to see or acknowledge the connections among different problem settings. However, if those who have the opportunity to define what *their* problem is and how it must be addressed are insensitive to its context, its linkages with different or broader topics, they run the risk of being unable to effectively address even their own issue. Think again of the GM food case. Consumer NGOs have almost exclusively focused on how to ensure the consumers' freedom of choice, how to obtain reliable and detailed information on food components. The spread of gene technologies was taken for granted as well as the separation between consumer information and citizen opportunity to influence the decisions on the agriculture policy. However, consumer information is still far from being concretised, and it is difficult to regard the delayed enforcement of the labelling regulations as simply due to technical difficulties. A weak citizen is unlikely to be a strongly protected consumer.

To sum up, the second tension of participatory democracy, as expression of the idea of network governance, is between inclusion and exclusion, intensification and fragmentation of participation, enhancement of the horizontal dimension of democracy and downplaying of its multidirectional and multilevel connections.

The problem of fragmentation is a serious one. Two different routes can be envisaged to address it. The first one, preferred by the White Paper on governance and many other reflections on the issue, has already been hinted. It consists of redefining the role of parliamentary institutions as 'meta-sovereign' bodies, provided with chartering, networking and monitoring competencies, and highly selective in their direct engagements. In other words, the problem of fragmentation could be overcome thanks to increasingly 'olympic' public bodies. Complexity could be dealt with by upgrading, abstracting and rarefying the

tasks of democratic institutions. But isn't this a more refined way to revamp the myth of the planned, engineered society? Hasn't that of holding an increasingly complex world by means of few thin strings already proven an illusion?

Rather than trying to drive the network from the top, the route may be of promoting its transformation from the bottom. That is, of fostering an associative life as open as possible to what lies beyond the functional or territorial borders of each group, organisation or 'local' network. Of taking care of deliberative arenas, making them more flexible, interconnected with different or broader concerns and publics. Of developing 'inclusive' participatory arrangements, that is, sensitive to the relevance of different or broader problem settings and to the externalities of local decisions. Admittedly, a difficult task, but not necessarily more fanciful than implementing the 'olympic' model. Inclusive associative networks can already be found, for example, at the level of the social and informal economy (Laville 1994; Latouche 1999). Moreover, support to such an endeavour may be provided by what seems a spreading awareness⁸ that narrow issue-definitions and fragmented approaches are inadequate to address radical uncertainty; that openness, flexibility and inclusiveness are required by the very nature of many intractable problems.

Conclusion

This article tried to explore some implications of radical uncertainty – as indeterminacy, ignorance, incommensurability, or complexity – for participatory democracy. More precisely, radical uncertainty calls for a reinterpretation of the divide between opinion- and position-oriented PTA. In face of many intractable problems, the aim of PTA cannot be to look for a public opinion, understood as a shared principled view (even in terms of the majority's view). Such an attempt assumes the possibility of neatly distinguishing facts and values, and of ranking options according to a shared and coherent axiological structure. When facts and values overlap, or are deeply controversial, the purpose of PTA should become to look for 'local' answers, based on each involved subject's (experts included) positional insight. The empirically observed relevance of the 'lay local knowledge' in many environmental and technological issues (e.g. Irwin 1995; Wynne 1996; Clark and Murdoch 1997) confirms that thinking of democratic participation to science and technology-related problem-solving in the traditional terms of matching scientific facts with public values often proves inadequate.

Thus, radical uncertainty entails to think of participatory arrangements in positional terms. This is likely to have relevant consequences. For example, rather than to the representation of the general public, selection of participants should be sensitive to the different 'interested publics' involved in an issue, which is different from looking at the 'stakeholders', understood as the expression of established, organised, interests. Crucial variables would be the specific cognitive and normative viewpoints of the subjects and groups involved in an issue, although not necessarily organised and thus not always easily identifiable.

A deliberation based on the confrontation of positional insights aiming at understandings on local practices seems the best opportunity for mutual understanding in conditions of radical uncertainty. But radical uncertainty also calls for a reinterpretation of the tension between non-strategic cooperation and strategic bargaining, as typical of participatory arrangements involving organized actors with a direct, well-defined stake in an issue. Apart from the closeness of the deliberative process to the decision-making, a crucial variable is the

⁸ Indications are provided both by major opinion surveys like the Eurobarometers - e.g. that on 'The Europeans and biotechnology' (52.1, 2000): see in particular the questions on the acceptability of genetically modified food and animal cloning – and by more focussed research (e.g. Pellizzoni and Ungaro 2000; Pellizzoni 2001a).

extent to which a situation is perceived as commonly problematic; the extent to which an issue-definition compatible with each one's viewpoint and the search for joint solutions are seen as suitable or necessary. An attitude which can be fostered by 'the repeated experience of cooperation itself' (Cohen and Rogers 1995: 251).

The idea of deliberation on practical solutions to 'locally' defined issues is consistent with that of network governance⁹. But from this perspective a major problem arises. Fragmentation can affect the effectiveness and legitimacy of participatory policies. Trying to handle fragmentation from the top, as many suggest, is unlikely to be successful, at least as regards intractable issues. Traditional attempts to control radical uncertainty by means of abstraction and generalisation have already proven unsuccessful. It is doubtful that an appeal to still more abstraction and generalisation could succeed in a context of growing social complexity.

Existing experiences and spreading recognition of the implications of radical uncertainty may offer support to a different endeavour. The endeavour of promoting the development of inclusive networks, that is, of fostering public spheres and deliberative settings which, although positioned at the level of 'local' and, often, contingent networks and commonalities, are open to include 'Otherness' – other subjects and groups, other contexts, other problem definitions, other concerns. This, I believe, represents a major challenge for the reform of democratic institutions.

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⁹ Jerry Ravetz (personal communication) observes that the appeal to national imperatives and centralised planning may reduce much of the scope of community-based deliberation, for example on the siting of hazardous facilities. This corroborates the feeling of a close connection between the idea of public deliberation defended here and that of network governance, which is obviously at odds with those traditional ways to address complexity.

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