

**Democracy in a Risk Society?  
Notes on risk and deliberation<sup>1</sup>**

Manuel Arias-Maldonado  
University of Malaga

*Although risks have always existed, they have never been so pervasive. Modernity has created a new class of risks, which threaten the very survival of society: nuclear, environmental, biotechnological risks, hence the characterisation of a “risk society”. But can these risks be tamed? Social sciences have long argued that there is no such thing as an objective risk: they are an outcome of a process of social construction. If they can be denaturalised, they can also be politicised. This paper will explore the suitability of deliberative procedures as the best way to democratise the definition, control and management of risks. It will do so by considering four advantages offered by deliberative democracy concerning risk politicisation. However, it will also warn against an excess of risk democratisation. It will propose instead a cautious approach to the latter, based on the recognition that there are other ways of influencing the social construction of risks.*

**Introduction**

Risk has never been so pervasive in public and private discourses. Whereas hazards have always existed, as they are inherent to human existence and to any social order, risks are the way in which modernity assimilates hazards by calculating the probability of a given –hazardous– outcome (cfr. Luhmann, 1993: 10-11). The perception, assessment and control of hazards have been decisively changed by the unfolding of modernity. The pre-modern dangers were seen in terms of fate, the modern ones in terms of risk. Risk is what is left after a technical approach to social organisation is applied: the probability that it does not work or works defectively.

In that regard, it can be said that the purpose of modernity is to eliminate ambivalence (Bauman, 1991: 7). Yet such suppression turns out to be utopian. Knowledge cannot deliver certainty, since knowledge is limited and temporary: more knowledge typically leads to a clearer awareness of uncertainty. Thus the dream of instrumental reason awakes to the reality of a world ruled by complexity, uncertainty and contingency. Risk and contingency may then be seen as the underside of what Beriaian has called “the imaginary foundation” of modernity: an unlimited expansion of the rational domain that produces unintended outcomes, which in turn make more and more difficult to achieve the control intended in the first place (Beriaian, 1996: 12-13). The social engineering and increasing technological sophistication associated to modernity are bound to generate new risks. Thus the understanding of our society as a society defined by an increasingly unmanageable risk.

Such is the well-known thesis by German sociologist Ulrich Beck, who claims that we live in a “risk society” (Beck, 1992, 1995, 2000, 2009). He describes a society confronted with the self-created possibility of its own destruction. Nuclear weapons, the ecological crisis and biotechnologies are the most salient causes for that menacing prospect. It is important to note, though, that these risks are not the outcome of an abnormal performance on society’s part, but a consequence of the *ordinary* evolution of modernity. Forget post-modernity: Western society enters into a process of *reflexive* modernisation which radicalises and universalises its outcomes, instead of dissolving itself into post-modernity (cfr. Giddens, 1990; Beck, 1992); industrial wealth production goes systematically hand in hand with risk production (cfr. Beck, 1992: 19). The dream of progress seems to turn into the nightmare of regression. Reflexivity means modern or industrial society’s self-confrontation with its own side-effects, which cannot be assimilated nor treated through the old institutions and practices. In other words, the very institutions that have created new risks cannot be expected to manage them.

---

<sup>1</sup> I would like to thank the anonymous referees who have revised this paper for their great effort and their helpful comments. If this paper has some virtues, they are to be thanked; the mistakes remain my own.

According to Beck, risk society is then the result of industrial society's dissolution: society sees and criticises itself as risk society (Beck, 1996).

We will not question whether such a portrait of contemporary society makes sense, although it is not at all clear that we can *define* society solely on the basis of a dangerous risk production. Could it not as well be portrayed as a society able to manage a considerable degree of complexity? Beck's is, then, a somewhat biased description –unless, of course, it is a prescription rather than a description. Be that as it may, risks certainly exist, independently of whether we take society as being in control of them or fundamentally threatened by them. The question is, can they be tamed? This paper will try to answer that question, exploring the usefulness of deliberation as a democratic tool for the politicisation of risk.

To such ends, I will first consider those features of risk which are most relevant to the purpose of its politicisation, i.e. those having to do with its social and constructed nature. As we shall see, both the material hazards that are the basis of risks and the social perception of risks themselves can be considered the product of a social construction. Now, if risks are not given, they can be politicised and, ideally, democratised. The third section of the paper will take into account the advantages that a deliberative decision-making system would have regarding risk democratisation. They have to do with legitimacy, with the epistemic quality of decisions and with the balance between lay and expert judgements. However, these advantages are not enough to simply suggest that risk management can –or should– be fully democratised. In fact, it is advisable that such democratisation is achieved through a combination of direct *and* indirect politicisation: citizens can also exert a great influence in the definition of risks engaging themselves in the civil arena and the market. This paper will conclude that deliberative procedures can help to democratise risk management, but at the same time will stress the limitations of such tools and the need to find complementary ways of doing so within the civil arena and the market.

### **The social nature of risks**

The development of risk studies within social sciences can be described as a gradual process leading to the *denaturalisation* and the *politicisation* of risk. Risk as an objective fact becomes risk as a process: science gives way to politics. From that standpoint, the logical end of such development is the established idea that risk is socially constructed. However, those risks whose probability and effects can reasonably be estimated from actuarial data are probably still 'naturalised', i.e. they are not considered as social constructions. Still, as François Ewald has pointed out, there is no risk in reality: anything *can* be a risk depending on how we analyse dangers and events (Ewald, 1991: 199). In other words: it depends on how –if at all– we construct them as risks.

Of course, that idea is the logical extension of a larger claim about the social construction of reality (Berger and Luckmann, 1991). We construct our knowledge of reality; this does not mean that reality itself is constructed by humans –although a large part of it is actually constructed, not through knowledge, but through material interventions in the world. But if reality is constructed, risks are constructed in this way too; our perceptions of both turn out to be constructed.

More specifically, the first constructivist risk theories were those trying to show how reactions to hazards are based on experiential factors. According to these pioneering studies, individual responses are dependent both on their perception of the hazard and their knowledge of the ability of society to deal with it (Burton and White, 1978). Starr's psychometric paradigm tried precisely to measure those perceptions (Starr, 1969; Slovic, 1987). These findings led to an approach based on the social construction of risk perception. If even experts and regulators may be biased or motivated by self-serving interests and values, their risk judgements –like anybody else's– cannot be regarded as *absolute*, so that the beliefs of lay people cannot be simply discounted in favour of expert opinions (cfr. Freudenburg, 1988; Mazur, 1985). There is no *objective* understanding of risk: perception of risk is socially constituted (Bayerische Ruck, 1993). That is not equal to say that such perception be irrational, rather that it responds to a given context (Jasanoff, 1993; Wynne, 1996). A whole range of studies came to look for the particular sources of risk perception. At the same time, communication processes and media have gained weight as a decisive influence on risk social construction (Lundgren and McMakin, 2009).

When perceptions of risk are denaturalised in this way, the politicisation of risk management is but the next logical step. In other words, if risk is not objectively given, rather it is socially constructed, so that our perception of it is socially grounded, then it is possible to *influence* it. By politicisation of

risk I mean the acknowledgement that risks are constructed phenomena, whose definition must be opened to social and political discussion. If such politicisation is institutionalised in a democratic way, so that risk definition and management are achieved via some kind of democratic procedure, we talk of the democratisation of risk. Politicisation and democratisation can also refer to the social processes through which those goals are demanded, mostly by social movements, NGOs and civic associations.

It is important to stress, however, that such social construction of risk goes beyond risk *perception*. It is one thing to perceive a given risk in a certain way; but another to generate some hazards and not others. For instance, we can perceive nuclear energy in different ways, but we can also decide *not* to produce nuclear energy. It is not only risk perception that can be 'denaturalised' and 'politicised', but also the actual production of hazards.

Henceforth, according to Beck, risk is to be politicised and, ideally, to be democratised. In that regard, these two main features of late-modern risks –their social construction and the subsequent possibility of attributing them to particular decisions or realms– are specially relevant if the prospects for their democratic control are to be considered. As for hazards that cannot be controlled, it is the responses to them that can be more democratically decided. On the one hand, new risks are based on causal interpretations: they exist only in terms of our knowledge of them. Risks can be modified, dramatised or minimised *within* that knowledge: they are "particularly open to social definition and construction" (Beck, 1992: 23). As scientific rationality has lost its monopoly on the definition of risks, there exists now a growing competence between different risks perceptions and assessments: if the government shows a report, the green organisation shows another one. Therefore, social definition of risks does not depend solely on scientific consistency anymore. It is a war of meanings and evaluations, whose theatre is the public arena. Different risk definitions compete with each other in order to prevail in the eyes of the public opinion. Nuclear energy and GM food are examples.

Both Beck and Giddens sustain a weak social constructivism, according to which risks cannot be understood out of the prevailing system of moral values and beliefs. Any understanding of risks is bound to the socio-cultural contexts from which that understanding emerges, so that risks are not objective nor static phenomena, since our understanding of them is constantly constructed and negotiated as part of the network of social interaction and the formation of meaning (Lupton, 1999a: 28; 1999b). Risks are not just *out there*, since they are the outcome of a variety processes taking place *in here*: society does not confront external (natural) risks, but itself creates new risks whose production and understanding can only be socially understood.

This means that special attention should be paid to the whole process of risk's social perception, construction and reception. Culture, for example, determines our risk assessments (cfr. Douglas, 1994). Thereby, risks are never pure risks but *perceived* risks, a perception that is the outcome of a social construction (cfr. Slovic, 2000). Events that materialise a risk interact with social, cultural and psychological processes, an interaction whose result can either increase or diminish public perceptions and behaviour (Kasperson *et al.*, 1998). But this does not amount to a denial of the real existence of hazards! We should not be so eager to state that there is no hazard in reality. On the contrary, there *are* hazards in reality, but society creates –and so constructs– most of them. The hazard of a nuclear catastrophe is real indeed. Social construction is not equal to imaginary construction.

On the other hand, risks created by society are ultimately the outcome of decisions. This leads to the problem of risk attribution: a decision is surely taken by someone. However, both Beck and Giddens claim that new risks are the outcome of an "organized irresponsibility", that is, the result of the *normal* functioning of our social institutions (Beck, 1995: 63-65). Structural conditions of modernity thus create a "manufactured uncertainty" under which we must manage to live (Giddens, 1994: 80). This sounds contradictory: if new risks are created by the autonomous dynamics of modernity, can we still attribute them to particular decisions? According to Beck, we are supposed to distinguish between modernisation as a global and autonomous process, leading to the creation of new risks, and some particular decisions wherefrom those risks arise. These decisions are taken without any public control. Yet it is not clear whether we must blame the impersonal forces of history or identifiable people operating in very specific settings.

Be that as it may, such an explanation leads Beck to what he calls "sub politics". Risks are created outside the political system, which henceforth ceases to be the centre of politics, understood as the *locus* of relevant decisions for the society at large. As the scientific and corporative realms become more and more important, he argues, they must be submitted to democratic control. This sphere –not formally political, but not apolitical anymore either– becomes the arena of the sub political (Beck, 1992: 186). Of course, such politicisation is a trademark of new social movements and new

models of citizenship: politics surpasses institutional setting and reaches the whole social life. When coming to risk, the idea is clear: if risks are socially constructed (in the sense that they stem from social practices and are perceived differently in different social settings and cultural frames), they can also be politicised. But what does that mean. How are they to be politicised?

The answer is neither unanimous nor easy. If risk definition depends on social processes, both new risks and their remedies are inherently uncertain. We are not sure about the nature of emerging risks, nor can we be sure that our solutions will work without creating new side-effects. If we deconstruct risks, in the sense that we no longer believe in any objective risk perception, there remains no clear solution –however illusory– to grasp. New risks semantics is dominated by ideas of invisibility, immanence, uncertainty and latency, strongly opposed to those discourses based on scientific proof, prediction, certainty and empirical data (Adam, 1998: 38). Even within the green movement there are different approaches to solve environmental problems (O'Neill, 1997: 96).

However, the bureaucracies of liberal democracies fail to recognise the nature of risk (Torgerson, 1999). They tend to deal with risks through inadequate decision-making processes. Above all, they mainly adopt a technical-administrative approach: risk is a statistic unity to be technically managed. According to the corresponding cognitive-scientific approach, risks pre-exist in nature, they are able to be identified through scientific measurement and calculation, and they can be controlled using this knowledge (Lupton, 1999a: 18). But risk cannot be simply confronted with *more* knowledge. As Niklas Luhmann puts it:

If there are no guaranteed risk-free decisions, one must abandon the hope that more research and more knowledge will permit a shift from risk to security. Practical experience tends to teach us the opposite: the more we know, the better we know what we do not know, and the more elaborate our risk awareness becomes. The more rationally we calculate and the more complex the calculations become, the more aspects come into view involving uncertainty about the future and thus risk (Luhmann, 1993: 28).

A decision-making system based on the superiority of expertise judgement is then to be questioned. The decision ought to be political rather than scientific –there is no such thing as a purely scientific one. A scientific-cognitive conception serves a depoliticised treatment of risk. Let us think of it in terms of environmental sustainability: a technocratic view of sustainability –which may well be considered in itself as a risk control policy– betrays the substance of a normative, not technical, principle (cfr. Arias-Maldonado, 2000; Torgerson, 1999; Dryzek, 1987, 1990, 2000). All risk decisions are ultimately normative. Their definition requires citizen participation and public debate, given its social quality and their influence on the overall shaping of society. It is not equally clear, though, that *all* risk decisions and definitions can be opened to civic participation.

The recognition of the social nature of risks entails a further recognition, namely, that there are no unique solutions, nor behaviours or decisions which are completely risk-free. Such uncertainty demands the democratisation of risk decision. In that regard, I argue –although not without some reservation– that deliberation is the most adequate political tool for achieving a plausible democratic risk control.

## **Risk and deliberation**

Both the increasing scope of late-modern risks and the subsequent need for submitting them to democratic control pose the question about the institutional devices and democratic procedures more appropriate to do so. I will argue that deliberative democracy is well suited for dealing with new risks. But I will leave aside the *general* reasons for promoting deliberative democracy, as well as the *green* reasons for doing the same (cfr. Arias-Maldonado, 2007, 2008). Instead the specific reasons for supporting deliberation *as applied to* risks are to be considered. In that regard, deliberative democracy can be fruitfully applied to the treatment of risks because the former's principles fit well in the latter's structure. In other words, deliberation can uniquely organise the social process of risk definition and management –provided that risks can themselves be managed, since some of them, for example an earthquake, are not so easily manageable or are not manageable at all.

However, I will not defend any specific model of deliberative or discursive democracy, nor will I make any detailed blueprint of its application to risk management. I take for granted that the general

features of deliberative procedures are well-known by now and their general advantages can be discussed with a certain degree of abstraction. The differences among deliberative models are not relevant to my purpose, namely, reflecting upon how a decision-making procedure based on deliberation rather than on aggregation may contribute to both risk politicisation and democratisation.

There are four advantages offered by deliberative democracy concerning risk politicisation. Firstly, it offers the possibility of orienting the process of risk construction through deliberation. Secondly, it allows a fairer allocation of responsibilities, and hence the adoption of more legitimate decisions. Thirdly, the epistemic qualities of deliberation promise better decisions on risk, because deliberative democracy makes possible the integration of expertise and lay knowledge in the democratic process. Deliberative democracy opens the possibility for *politicising* risk without neglecting its undeniable *technical* dimension. Such balance is of the utmost importance.

#### Towards a social construction of risk through deliberation

To begin with, politicising risk means opening its content to public definition. Deliberative communication and the exchange of different perspectives and experiences of risk are carried out in order to reach the most legitimate and inclusive agreement about its assessment. As I have pointed out, there is no risk perception without mediation. Risk perceptions are not truths, nor pure facts out of the influence of interpretation, context or power (Adam, 1998: 236). They are continuously negotiated and re-negotiated.

Therefore, the political management of risk cannot ignore the fact of its dependence on a process of social construction. As stated earlier, social construction of risks can be understood both as [i] the construction of hazards that result in the emergence of risks, and [ii] the construction of those very risks' social perception. Social construction has a double meaning: material and discursive. In such a context, deliberation can be oriented towards the material practices from which certain hazards emerge, as well as to democratically decide how to define and manage a given risk. In both cases, more open and reflective processes are required to include different, non-orthodox points of view (cfr. Jasanoff, 1999: 150).

If risk is *communicatively* constructed, i.e. it is constructed via the different definitions that circulate within society, both the quality and inclusiveness of the communication processes related to risks must be improved. Deliberation's open and inclusive character seems to fit well here. It does so because deliberation makes possible a diverse and ordered (i.e., goal-oriented) communication on risk. The varieties of contexts in which deliberation *may* take place –formally and informally– reinforce decentralisation of judgement and decision. These are required in the light of the multifarious nature of risk and risk perception. In other words, since risks have different effects on different social spheres, a flexible, adaptable decision-making system is needed. Deliberative procedures seem to be appropriate.

On the other hand, our judgement on risks ought to be *reflective*, that is, dynamic and open to review. Deliberation seems to offer the most promising way for the institutionalisation of reflexivity. Why? Social construction of risk does not take place out of the blue: risk is *revealed* in the very process of its construction (Adam and Van Loos, 2000: 2). Now, the very nature of risk's *unveiling* and *construction* corresponds to those decision-making processes essential to the deliberative democratic model, i.e. processes based upon a collective quest for the best decision via the free exposition of everybody's arguments, so that such a decision will gradually emerge as if it were actually unveiled. The question is: how is this process to be institutionalised? The answer is – or promises to be– deliberative institutions. These should help to recognise the political character of risk construction, as well as to democratise it.

In this context, to deliberate is to discuss risk perceptions and definitions, i.e. to discuss how risks should be defined and faced, as well as how to deal with them politically and technically. Hence the right of the citizen to be heard is not just deduced from an abstract democratic principle, but rather from an epistemological imperative: so long as nobody has an objective knowledge of risk, nor can claim an ultimate truth about it, a wider participation enriches the process of knowledge production about risks. Social risk perception is created through communication itself. Deliberation equals an epistemic solution to risk definition. Hence deliberative democracy –in emphasising communicative rationality and serving to facilitate an open and rational exchange among participants– seems to be well suited for the task of democratic risk management.

#### A more legitimate risk?

The problem of legitimacy provides an additional ground for the adoption of a deliberative approach to risk decision. We have noted earlier that the production of hazards leading to risks can be traced to very particular decisions and practices. Questions of who takes those decisions and whose practices they are, are directly related to the perceived legitimacy of a given risk. It is not the same to vote on GM food and to find it stored in the local grocery. Hence legitimacy depends largely upon the way in which risk is defined and managed. This should be recognised and translated into the decision-making process through which we choose to manage risk democratically.

Democratisation *through* deliberation appears to be helpful. If a deliberative frame is gradually implemented, citizens will stop seeing risk as *fortune*, being inclined instead to adopt an attitude based on the premise that it is possible to control it (De-Shalit, 2000: 169). This is not to say that *all* risks can be controlled, nor that *all* are easy to manage. But a greater inclusion of citizens would mean that new forms of uncertainty become socially *shared*. It would make easier a more genuine and greater participation in the social assessment of risk (Grove-White, 1998: 53). It is to be noticed, in that regard, how society's increasing complexity and functional differentiation –a process that lies at the origin of social risk production– multiplies the contingency of any social action: when everything is connected, how can the consequences of actions and decisions be foreseen or even traced? The greater the possibilities for action, the greater also the *interdependence* between different courses of action (Eder, 2000: 230). What does that this mean? Social responsibility extends to every sphere and democratic procedures should reflect that, although, all we shall see, it is not at all clear that deliberation is to decide upon everything.

In principle, a greater inclusion in the decision-making procedure –especially the inclusion of those directly affected by a given risk– this diminishes the delegitimizing effects of any flawed decision. When no clear solution is in view, the legitimacy provided by deliberation is especially valuable, for it is impossible to adopt a decision that satisfies everybody. Therefore legitimacy is favoured by the greater inclusion and cohesion that a deliberative model is meant to produce. From a democratic point of view, there are obvious differences between the mistake of an expert and the mistake of a body of citizens. Therefore, discourse can perhaps contribute to an actual reduction of risk, but its primary function in this context is to redistribute responsibility, by binding society members through relationships capable of reciprocal control (Eder, 2000: 242). The goal would then be to produce a more legitimate decision, rather than a more efficient one: legitimacy as a function of collective responsibility. Yet legitimacy and efficiency do not have to be incompatible.

In a similar vein, risk identification and definition cannot be left in the hands of those social agents who may privilege their private interests. This is, in fact, the main argument by Beck on democratising risks: the scientific and economic spheres must be opened to public debate and scrutiny, since their logic can frequently clash with the public good (Beck, 1998: 21). Deliberative institutions are in principle specially suited for that task, since any argument within them is to be based on public reason. They are also flexible enough to be applied to different social spheres. Deliberative democracy has thus a tendency to *moralise* preferences (Nino, 1996). A precondition for this is, of course, that the citizen truly adopts a *public* perspective, i.e., that he behaves as a citizen and not as an aggregator of preferences.

#### The epistemic quality of deliberation.

Defining and managing risks through deliberative devices can result not only in more legitimate decisions, but also in better decisions. In principle, that means more efficient and rational ones. Efficiency and rationality are important concerning risks, because the latter have often to do with technical matters, so that, in spite of their politicisation, decisions about them cannot simply be 'more democratic'. To achieve this, deliberative institutions should provide some advantages regarding other decision-making procedures. The nature of the procedure should be suited to the nature of its subject.

The main argument in favour of risk deliberation in this regard is that the subsequent decision on risk can be substantially improved by the *previous* debate between the participants. The open nature of debates within the deliberative procedure averts what could be called the rhetorical sedimentation of risk definitions, based on private or vested interests. In a deliberative context it is always possible to ask for explanations and to weigh them carefully; it is supposedly easier to unmask the ideological disguises of some risk discourses. Yet it is also true that deliberation on risk can increase the conflict

among participants, therefore obstructing decision-making. Temporal limitations and voting procedures are meant to put an end to the process.

On the other hand, decisions can be adapted or self-corrected in the light of new or supervened circumstances, information or arguments. That is something likely to occur when dealing with risks. The social learning process through which risks are identified and managed is facilitated by this sort of institutional structure (cfr. Eckersley, 2000: 122). The possibility of reviewing decisions is also required by the procedural nature of risks themselves: risks develop and change and are rarely settled, given their connection to the never-ending process of innovation and application of new science.

Finally, it is to be pointed out that judging a given risk as acceptable depends mainly on the way in which its *distribution* is perceived: The fairer the latter, the more acceptable the risk. Nobody wants to pay the bill alone. The open nature of deliberative procedures makes it easier to achieve that goal, since everyone involved is actually adopting a decision which is not supposed to be unfair (cfr. Mills and King, 2000: 142). And if everyone believes in the legitimacy of such decision-making process, the decision itself will be easier to implement.

However, it is important to recognise that deliberation does not necessarily lead to the *best possible* decision. After all, we cannot prove that an expert –an expert-king– would *not* achieve a better decision than the general public. But although the epistemic ability of deliberative democracy is limited, it is still notable. If we add that to the fact that within a deliberative frame nobody should feel excluded from the collective decision so adopted, nor downplayed by the rule of experts, the benefits of deliberative democracy in this regard are notable: we have both *enough* epistemic ability and *more than enough* legitimacy.

In other words, if we are to democratise risk, we cannot expect that the decisions arising from a deliberative procedure be as technically accurate as those coming from a body of experts. However, they are supposed to possess –via the dialogue between citizens and experts– enough epistemic quality, i.e. they are scientifically informed and democratically adopted. At the same time, they will be more legitimate, insofar as the procedure leading to them is more inclusive. This is sufficient ground to defend deliberation over aggregation as a basis for democracy (Estlund, 2008). The decisions are ‘better’ because they are more democratic (hence more legitimate and easier to implement) *without* losing scientific ground. To defend deliberation on epistemic grounds is then not the same as saying that deliberation produces the best possible decisions on risks, rather to accept a trade-off between legitimacy and epistemology: deliberative procedures in which citizens and experts dialogue produce the best possible decisions on risks that are both democratic and scientifically grounded.

### Risk, expertise and lay judgement

When dealing with risk and decision-making procedures, a key issue must be considered, namely, the compatibility of expertise and lay judgment. Although that is important in any social realm, from economics to art, it is simply inescapable if we are considering, say, environmental risks. The problem is misleadingly simple: how to fruitfully combine expert and lay judgement. The premise is that scientific rationality –or rationalities– must be confronted with other kind of rationalities, which may be also in part ‘scientific’. Hence the judgment of experts on complex and technical issues is to be complemented by the judgement of lay people. The latter lacks technical competence, or a competence not recognised as ‘scientific’, but contributes with different points of view and personal experiences regarding the risk at stake. However, that compatibility is easier proposed than achieved.

The relationship between citizenship, expertise and democratic decision is certainly hard to adjust, i.e. it is not easy to decide whose judgements must weight how much and against whom, in order to reach a final decision. To begin with, how can experts and citizen understand each other? Technical and lay discourses are often so different and work through such incompatible logics, that it is not clear how they can at all communicate without a complete denaturalisation of their content. If citizens must accept judgements made by scientists without being able to evaluate their foundations, is that compatible with individual autonomy and democratic polity? (cfr. O’Neill, 1993: 5). The legitimacy of a decision can be undermined in absence of citizen judgement, but leaving expertise aside may lead to inefficiency. We could say: the answer lies in striking the correct balance. Their compatibility will depend on those mediations and filters chosen to help participants to understand and to decide. The foundations of a scientific topic cannot be grasped by all lay citizens, but that very topic can be put nearer to him, so that a *sufficiently informed* decision is reached. Only deliberation procedures seem capable of performing that function.

However, expertise judgement should not be seen as infallible. The fact that scientific judgements are also grounded on a social and an ideological substratum has already been pointed out within the social sciences (Kuhn, 1970; Feyerabend, 1993). In fact, expertise knowledge is bound to different varieties of uncertainty too: a pragmatic uncertainty, derived from insufficient means for the complexity of the problems confronted; a theoretical uncertainty, appearing when there is not a strong intellectual frame unifying a given scientific field; and a structural uncertainty related to the complexity of the predictions at stake (Cramer, quoted by Irwin, 1995: 56-57). This is just an instance of the limitations of science and expertise; many others could be mentioned. In any case, both citizen and expert judgement are finally dependant on value judgements.

On the other hand, relationships between science and citizenry are not only hindered by the absence of adequate structures of mediation among them, but also because of a deeper incongruity between the needs of citizens and the institutional and cognitive structure of contemporary science (Irwin, 1995: 161). Thus the belief that some kind of participatory science “can be conceived as an instrument to dethrone science or to deprive scientific knowledge of its authority and legitimacy conferred by modern society” (Bäckstrand, 2004: 109). However, this seems to reduce two questions into just one: the belief that both citizen’s *needs* and scientific *goals* are pre-determined and cannot be modified. On the contrary, it can be argued that this gap may somehow be filled by the articulation of a deliberative institutional frame, wherein expertise judgement is incorporated and submitted to an essentially political deliberation on issues long excluded from any democratic control.

Deliberation, as well as the discursive context in which it takes place, can then contribute to the inclusion of expertise judgement into the decision-making process. Deliberative democracy may favour the emergence of a new relationship between citizens, experts and politicians, but above all of a new *culture* sustained by a reasonable scepticism on expertise judgement (Coote, 1998: 127). Nevertheless, we must be cautious. Contesting scientific judgement –a goal linked to the scientificisation of protest and the politicisation of science– does not mean that everybody can become an expert. It is only to make possible the controlling and reviewing of scientific arguments and the inclusion of lay arguments and approaches. Everyday experience of risk is recognised as a relevant insight, but should not replace expertise. The old dichotomy between scientific knowledge and participative democracy is thus redefined: a dialogue between citizenry, politicians and scientists on environmental risks is not as much an obstacle to decision-making grounded on knowledge, as a *means* to achieve it (Lidskog, 2000: 218).

Obviously, this challenges the traditional practices of citizenship, wherein a mainly passive citizen gives a mandate to a representative, without engaging itself in any active participation. Technical matters require an effort that only a minority of engaged citizens actually make. In fact, theories of citizenship have hardly paid attention to the problem of expertise judgement. But insofar as late-modern risks require new institutional frames and new decision-making procedures, they also seem to entail a re-definition of citizenship. More specifically, they demand a definition of citizenship no longer focused on the state, but on the citizen’s relationship with the community. If risk is to become a public discourse, citizens cannot ignore it: they must be committed to take part in their collective definition. Therefore, a citizen can even ask for a *duty* of participation, a duty that takes time and effort: they are to become active participants in a public discourse on risks and responsibilities, for it is within that discourse that solutions for risks can be found (Hiskes, 1998: 147). It demands the encouragement of public debate. Admittedly, this requires effort on the part of citizens; not quite like shopping on Saturdays.

However, on the other hand, the case for inclusiveness in collective decision-making procedures regarding risks can be founded not on an abstract duty, but on a tangible subject. That is, it can be deduced from the direct threat that a certain risk poses on some people. In such a case, they do not have a duty to participate, but the right to do so. According to Robyn Eckersley:

all those potentially affected by risks should have meaningful opportunity to participate or otherwise be represented in the making of the policies or decisions which generate such risks (Eckersley, 2000: 118).

Those affected constitute therefore some kind of *community of fate*, a community grounded on the shared exposition to a risk. Even though Eckersley is talking about under-represented groups –from the future generations to the natural world– her inclusive principle can be put in the service of the wider public, so that any citizen who wishes to participate in a risk definition debate can do so.

In sum, both expertise and citizen judgement contribute to the social construction of risk. But the relationship between those two ways of knowledge is usually poorly ordered. Deliberative democracy can address that shortcoming, above all regarding citizens' understanding of scientific issues. The reason is that deliberative procedures are grounded on the exchange of information among politicians, experts and citizens, so that it should be easier for the latter to understand the problems at stake, the scientific vocabulary used, the experts' attitudes and the potential solutions, in a way that foster their participation into deliberation (cfr. De-Shalit, 2000: 165). The procedure is designed to make it easier for the citizen to participate. Supposedly, at least.

Yet if we recognise the normative nature of risks and open them to public control, the danger arises that we hamper the implementation of *reasonable* risk policies. Why? Let us not forget that wealth and innovation are the other side of risk –and a side we would be foolish to neglect. This is to say that risk cannot be handled in an amateurish way: democratisation of risk cannot suppress its technical dimension. Things are not only to be discussed; they must work as well. Thus exaltation of lay knowledge and local experience should not be carried too far, because the undermining of science to which they might lead is by no means helpful. In fact, the greater rationality that deliberative procedures are to provide will vanish if a proper scientific understanding –of the problems discussed and their technical solutions– is absent. Therefore, we need a model of deliberation able to *balance* the weight of every kind of knowledge. It is not a matter of *dissolving* the differences among different discourses and rationalities, but rather of fostering a co-governance based on the reciprocal acceptance of their differences (cfr. Bang and Dyrberg, 2000: 147). That said, the institutional flexibility of deliberative democracy should make that balance possible: a balance between citizenry and expertise, between the plurality of the different understandings of risk and the need for a rational and legitimate decision on it.

### **The limits of risk democratisation**

Thus deliberative democracy appears to be the right democratic model for achieving the politicisation of risk. Its advantages are clear. It articulates the citizen's influence on the communication process through which risks are constructed, turning it into a political process. It leads to more legitimate, more inclusive and more efficient decisions on the definition and management of risks. And it makes possible an adequate balance between expert and lay judgement. Deliberation would then be *the* political shape of risk society. Or it should be.

Yet it could be otherwise; this ideal picture is not short of flaws. Most of them, though, have to do with a central misunderstanding of the nature of risk, namely, the idea that there are no limits to its politicisation. If we avoid such a mistake and are able to limit the application of deliberation to those spheres –and moments– in which it can be more useful regarding risks, these flaws could be corrected. This final section will briefly outline this topic.

Risks are the other side of material progress. But we could also say: material progress is the other side of risk. And material progress is valuable, despite the fact that moral progress advances more slowly and can even be hindered by that very material progress. Yet it is not so slow, either: torture is almost universally rejected on moral grounds but it can be still practiced. However, I would not like to be trapped in the quicksand of an example, but simply to state that we should not embrace a sinister portrait of modernisation just because it produces new risks. Of course it produces them; as well as it produces benefits. Of course, to someone who adheres to a radical rejection of modernity, my argument is radically flawed; to them, nothing but a systemic change would be acceptable. But let us take for granted, for the sake of my argument, that modernisation is not to be cursed, since it provides benefits as well as hazards. What we need then is a more carefully considered modernisation process. In fact, if we try to *control* modernisation, we will actually end up *stopping* it, since it is not a process open to close planning, due to its complexity and scale.

That means that risks are not so easily reducible to particular decisions. Modernisation and development are the outcome of countless decisions that produce together an autonomous process of innovation and change. These function in a similar vein as markets, insofar as they allow the coordination and maximisation of dispersed and local knowledge in society (cfr. Hayek, 2006). It is not the same as lack of controls either: there are regulations, courts, environmental standards. But the point is that we cannot simply submit this enormous, self-replicating, complex entity to political control through the deployment of a few citizen assemblies. It does not work that way. The whole foundations

of our wealth would crumble. If we wish to make a revolution, that is fine. However, if we want to keep the advantages of advanced societies while making them more democratic, a bit of realism is advisable.

What does that mean? It means that risks cannot be *fully* democratised. We cannot fully politicise every source of risk-creation and risk-management without leading society to a dead-end. Besides, many risks do not respect national borders, and a global assembly of citizens is hard to envisage. Thus it is better to concentrate on those *spheres* and *moments* of risk-creation and risk-management where the application of deliberative principles and procedures make sense.

However, such a limitation on *direct* risk politicisation leaves plenty of room for *indirect* risk democratisation. This is an important point. Debating and deciding within institutional structures is not the only way in which citizens can give shape to reality. Their decisions in the market and in the household, as well as their personal behaviour and their informal conversations, equally contribute to that shaping. Indirect risk democratisation must be understood as *influence* rather than as *decision*. In other words: our decisions influence the daily negotiation of reality, although they do not directly decide how reality ought to be.

Poetry? Wishful thinking? Not quite. Let us think of social movements, whose operation in the last decades has focused in the communicative realm of society. They try to change the dominant social frames, spreading alternative codes and practices, hence fostering cultural change (cfr. Melucci, 1996; Snow, 2004: 384). When a degree of cultural change has taken place, individual preferences change too, and the economic system responds to it. Their contestation of risk definition also takes place in the public sphere, from where it reaches citizens, politicians and corporations. Their success in stopping the commercialisation of GM food in Europe shows how that influence can also be transformative.

As for citizens, their influence can adopt many forms. Naturally, they vote and hold opinions, but, above all, they lead their lives in a certain way. We could say that they are *passive* bearers of the lifestyles proposed by something called 'the system'. But that would be equivalent to ignoring the essentially *dynamic* quality of society, as well as the *active* role citizens play when they make the countless decisions a normal life requires. Ecological consumption is one instance. It entails the application of environmental criteria when choosing goods and services in the market. Instead of buying polluting products, choose a clean one. If thousands of citizens do the same, polluters will change their ways or will disappear from the market. This is hardly surprising, since the market is an information system (cfr. Spence and Stokes, 2009). It can therefore be a source of transformation, if citizens translate their green wishes into green deeds. Some even believe that green consumers can be seen as the force carrying sustainability through the market (cfr. Seyfang, 2005; Jackson, 2006). Consumer instead of citizen? That is a simplification. According to empirical research, when a citizen purchases greener goods he is acting as a citizen as well as a consumer; they are not necessarily incompatible dimensions (cfr. Berglund and Matti, 2006).

Direct democratisation is therefore not the only tool available to citizens, *if* they wish to exert some degree of control and influence on the construction and management of risks. They should wish to exert that control, or at least that influence, for several reasons. On the one hand, citizens should be able to define the social circumstances from which threats to their lives could eventually arise. On the other hand, most importantly, a pluralistic society should not rely only on scientists in order to define what counts as risks, because theirs is only a particular view among many, notwithstanding the fact that it is, of course, a qualified view grounded on technical expertise. Scientists are not to be the sole interpreters of risk.

However, citizens could as well not be interested; they could choose not to participate at all. This amounts to suggesting that we must be cautious with deliberation: too little makes no difference, but too much can make, well, the *wrong* difference. Therefore it is advisable to restrict *prima facie* the institutionalisation of deliberative procedures. Representatives of those directly affected by a given risk must have a say in deliberative arenas created to such effect –although this general principle can prove difficult to implement. Representatives from the government and the corporations involved, as well as experts, NGOs and social movements, should participate too. Most important is that, whichever the size of this arena, its decisions are binding. If they work –if citizens are interested, if risks are effectively managed in this way– then deliberation can gradually be extended to other arenas and issues.

## References

Adam, Barbara (1998), *Timescapes of Modernity. The Environment and Invisible Hazards*, London: Routledge.

Adam, Barbara and Van Loon, Jost (2000), "Introduction: Repositioning Risk; the Challenge for Social Theory", in B. Adam, U. Beck and J. Van Loon (eds.), *The Risk Society and Beyond. Critical Issues for Social Theory*, London: Sage, 1-32.

Arias Maldonado, Manuel (2008), *Sueño y mentira del ecologismo. Naturaleza, sociedad, democracia*, Madrid; Siglo XXI.

Arias Maldonado, Manuel (2007), *An Imaginary Solution? The Green Defence of Deliberative Democracy, Environmental Values*, vol. 16, 2, 233-52.

Arias-Maldonado, Manuel (2000), "The Democratization of Sustainability", *Environmental Politics*, vol. 9, nº 4, Winter, 43-58.

Bäckstrand, Karin (2004), "Precaution, scientization or deliberation? Prospects for greening and democratizing science", in Y. Levy y M. Wissenburg (eds.), *Liberal Democracy and Environmentalism. The end of environmentalism?*, London: Routledge, 100-12.

Bang, Henrik Paul and Dryberg, Torben Bech (2000), "Governance, self-representation and democratic imagination", in M. Saward (ed.), *Democratic Innovation. Deliberation, representation and association*, London: Routledge, 146-57.

Bauman, Zygmunt (1991), *Modernity and Ambivalence*, Cambridge: Polity.

Bayerische Rück, ed. (1993), *Risk is a Construct. Perceptions of Risk Perception*, Munich: Knesebeck.

Beck, Ulrich (2009), *World at Risk*, London: Polity.

Beck, Ulrich (2000), "Risk Society Revisited: Theory, Politics and Research Programs", in B. Adam, U. Beck and J. Van Loon (eds.), *The Risk Society and Beyond. Critical Issues for Social Theory*, London: Sage, 211-29.

Beck, Ulrich (1998), "Politics of Risk Society", in J. Franklin (ed.), *The Politics of Risk Society*, Cambridge: Polity, 9-22.

Beck, Ulrich (1996), "Risk Society and the Provident State", in S. Lash, B. Szerszynski y B. Wynne (eds.), *Risk, Environment and Modernity. Towards a New Ecology*, London: Sage, 27-43.

Beck, Ulrich (1995), *Ecological Politics in an Age of Risk*. Cambridge: Polity.

Beck, Ulrich (1992), *Risk Society. Towards a New Modernity*, London: Sage.

Berger, Peter, Thomas Luckmann (1991), *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*, London: Penguin.

Berglund, Christer, Simon Matti (2006), "Citizen and Consumer: the Dual Role of Individuals in Environmental Policy", *Environmental Politics*, vol. 15, 4, 550-71.

Beriain, Josetxo (1996), "El doble 'sentido' de las consecuencias perversas de la modernidad", in J. Beriain (ed.), *Las consecuencias perversas de la modernidad*, Barcelona: Anthropos, 12-13.

Burton, Robert Kates and Gilbert F. White (1978), *The Environment as Hazard*, New York: OUP.

COOTE, Anna (1998), "Risk and Public Policy: Towards a High-Trust Democracy", in J. Franklin (ed.), *The Politics of Risk Society*, Cambridge: Polity, 124-32.

De-Shalit, Avner (2000), *The Environment: Between Theory and Practice*, Oxford: Oxford University Press.

Douglas, Mary (1994), *Risk and Blame. Essays in Cultural Theory*, London: Routledge.

Dryzek, John (2000), *Deliberative Democracy and Beyond. Liberals, Critics, Contestations*, Oxford: Oxford University Press.

- Dryzek, John (1990), *Discursive Democracy*, Cambridge: Cambridge University Press.
- Dryzek, John (1987), *Rational Ecology. Environment and Political Economy*, Cambridge: Cambridge University Press.
- Eckersley, Robyn (2000), "Deliberative democracy, ecological representation and risk: towards a democracy of the affected", in M. Saward (ed.), *Democratic Innovation. Deliberation, representation and association*, London: Routledge, 117-32.
- Eder, Klaus (2000), "Taming Risks through Dialogues: the Rationality and Functionality of Discursive Institutions in Risk Society", in M. Cohen (ed.), *Risk in the Modern Age. Social Theory, Science and Environmental Decision-Making*, London: Macmillan, 225-50.
- Estlund, David M. (2008), *Democratic Authority. A Philosophical Framework*, Princeton and Oxford: Princeton University Press.
- Ewald, François (1991), "Insurance and Risk", in G. Burchell, C. Gordon and P. Miller (eds.), *The Foucault Effect: Studies in Governmentality*, Hemel Hempstead: Harvester Wheatsheaf.
- Feyerabend, Paul K. (1993), *Against Method: Outline of an Anarchistic Theory of Knowledge*, Londres: Verso.
- Freudenburg, F. R. (1988), "Perceived risk, real risk: Social science and the art of probabilistic risk assessment", *Science*, vol. 242, 44-49.
- Giddens, Anthony (1994), *Beyond left and right: the future of radical politics*, Stanford: Stanford University Press.
- Giddens, Anthony (1990), *The consequences of modernity*, Stanford: Stanford University Press.
- Grove-White, Robin (1998), "Risk Society, Politics and BSE", in J. Franklin (ed.), *The Politics of Risk Society*, Cambridge: Polity, 50-53.
- Hayek, Friedrich (2006), *The Constitution of Liberty*, London: Routledge.
- Hiskes, Richard P. (1998), *Democracy, Risk and Community. Technological Hazards and the Evolution of Liberalism*, New York: Oxford University Press.
- Irwin, Alan (1995), *Citizen Science. A study of people, expertise and sustainable development*, London: Routledge.
- Jackson, Tim, ed. (2006), *The Earthscan Reader in Sustainable Consumption*, London: Earthscan.
- Jasanoff, Sheila (1999), "The Songlines of Risk", in *Environmental Values*, vol. 8, n° 2, pp. 135-52.
- Jasanoff, Sheila (1993), "Bridging the two cultures of risk analysis", en *Risk Analysis*, vol. 13, 2, 123-29.
- Kasperson, Roger E., Ortwin Renn, Paul Slovic, Halina Brown (1998), "The Social Amplification of Risk: A Conceptual Framework", in R. Löfstedt and L. Frewer (eds.), *Risk and Modern Society*, London: Earthscan, 149-62.
- Kuhn, Thomas (1970), *The Structure of Scientific Revolutions*: Chicago University Press.
- Lidskog, Rolf (2000), "Scientific Evidence or Lay People's Experience? On Risk and Trust with Regard to Modern Environmental Threats", in M. Cohen (ed.), *Risk in the Modern Age. Social Theory, Science and Environmental Decision-Making*, London: Macmillan, 196-224.
- Luhmann, Niklas (1993), *Risk: A Sociological Theory*, New York: Aldine de Gruyter.
- Lundgren, Regina and Andrea McMakin, ed. (2009), *Risk Communication: A Handbook for Communicating Environmental, Safety and Health Risks*, London: Wiley-IEEE.
- Lupton, Deborah (1999a), *Risk*, London: Routledge.
- Lupton, Deborah (1999b), "Introduction: risk and sociocultural theory", in D. Lupton (ed.), *Risk and sociocultural theory: new directions and perspectives*, Cambridge: Cambridge University Press, 1-11.

Mazur, A. Z. (1985), "Bias in risk-benefit analysis", *Technology Society*, vol. 7, 25-30.

Melucci, Alberto (1996), *Challenging Codes. Collective action in the information age*, Cambridge: Cambridge University Press.

Mills, Mike, Fraser King (2000), "Ecological constitutionalism and the limits of deliberation and representation", en M. Saward (ed.), *Democratic Innovation. Deliberation, representation and association*, Londres: Routledge, 133-45.

O'Neill, John (1997), "Value pluralism, incommensurability and institutions", in J. Foster (ed.), *Valuing Nature? Ethics, economics and the environment*, London: Routledge, 75-88.

O'Neill, John (1993), *Ecology, Policy and Politics*, London: Routledge.

Seyfang, Gill (2005), "Shopping for Sustainability: Can Sustainable Consumption Promote Ecological Citizenship?", *Environmental Politics*, vol. 14, 2, 290-306.

Slovic, Paul (2000), *The Perception of Risk*, London: Earthscan.

Slovic, Paul (1987), "Perception of Risk", en *Science*, vol. 236, 280-85.

Snow, David A. (2004), "Framing Processes, Ideology, and Discursive Fields", in Snow *et al.* ed., *The Blackwell Companion to Social Movements*, Oxford: Blackwell, 380-412.

Spence, Per (2009), *Money & Soul. The psychology of money and the transformation of capitalism*, Devon: Green Books.

Starr, C. (1969), "Social benefit versus technological risk", *Science*, vol. 165, 1232-38.

Torgerson (1999), "The Promise of Green Politics: Environmentalism and the Public Sphere", Duke: Duke University Press.

Wynne, Brian (1996), "May the sheep safely graze?" in S. Lash, B. Szerszynski y B. Wynne (eds.), *Risk, Environment and Modernity: Toward a New Ecology*, London: Sage, 44-83.