

**The politics of facts:
Local environmental conflicts and expertise**

Luigi Pellizzoni

Department of Political and Social Sciences, University of Trieste

Piazza Europa 1, 34127 Trieste, Italy

Tel. +39-040-5583730; Fax +39-040-5587829

Email: luigi.pellizzoni@dispes.units.it

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Abstract

The relationship between expertise and politics has traditionally been described in terms of science speaking truth to power. Science strengthens government effectiveness and depersonalizes power, linking legitimacy to the credibility of observation. The environment is a case in point: what we know about it is largely associated with science. Today, however, expertise is both increasingly sought and thrown onto the terrain of conflict. The politicization of expertise breaks with the alleged alternative between democratic and technocratic policy-making. The concept of expertise and its politicization in the context of contentious politics is elaborated. Three case studies show that expertise affects the discursive opportunity structure of controversies, that the ‘politics of facts’ intermingles in subtle ways with the politics of interests and values, and that there is no linear sequence between politicization and depoliticization.

Keywords: Expertise; science and technology; environment; local conflicts; politicization

Introduction

The relationship between expertise and politics is a classic theme, dating back to Plato. Modern thinkers have often remarked the affinity between democracy and science, with special reference to the latter's link with liberalism. For Popper and Merton the norms of sciences and the values of liberalism are closely connected. For Dewey 'the operation of cooperative intelligence as displayed in science [is] a working model for the union of freedom and authority which is applicable to political as well as other spheres' (1939, p. 360). On this view, science strengthens the effectiveness of government and depersonalizes power, linking legitimacy to the credibility of observation (Ezrahi 1990). The exchange of reasons grounded on objective evidence enables a fair comparison of claims and gives decisions a robust foundation (Fischer 2009). In short, science 'speaks truth to power' (Wildavsky 1979) and the 'politics of facts' constitutes the backbone of much of current policy-making – hence also a widespread concern for the possibility of a technocratic hollowing out of democracy.

The environment seems a case in point: what we know, or believe we know, about it is largely associated with science. Today, however, things look troubled. Climate change, gene technologies, waste disposal, electromagnetic fields, energy provision, transport infrastructures: on these and other issues scientific expertise is sucked into the dynamics of contentious politics, as a resource 'increasingly sought for policy making and for social choice, but [...] also increasingly contested' (European Commission 2001, p. 6). Facts gain political salience in a different sense from the traditional understanding. Rather than an excessive technicization of politics the issue seems now the opposite: the politicization of science.

Local controversies offer a peculiar field of inquiry in this respect. On one side the openly and often strongly conflictual context of protests against infrastructures, industrial facilities, technology application, resource extraction and the related costs-benefits distribution differs from the elective terrain of expertise in the policy process – interest advocacy and advice to and within the public administration. On the other, the institutional and corporate use of expertise to pre-empt or calm down mobilizations clashes with the activists' own appeal to expert arguments.

Here I first reflect on the available insight about expertise, its connection with politics and its role in environmental conflicts. The emerging picture is more entangled than as it is portrayed elsewhere. This prompts me to elaborate on the concept of politicization. Three case studies provide evidence that expertise affects the political status of controversies in a number of ways, to make sense of which a tentative typology is proposed.

What is expertise?

Expertise may appear to be an intuitive concept, yet its history is long and complex (Bechmann and Hronszky 2003). At least three basic features can be singled out, outlining a peculiar nexus between knowledge, discourse and interaction.

Competence is one. Expertise means specialized knowledge, yet not as owned but as applied. More than cognition, expertise means skill, operational competence (European Commission 2001; Turner 2003; Goldman 2006). Expertise is ‘social and performative, [involving] familiarity with the formal aspects of knowledge along with the capacity to act and respond to circumstances’ (Evans and Collins 2008, p. 610). Expertise is a practice, since it seeks to combine understanding and doing, to arrange ‘people, artefacts, and things’ (Schatzki 2001, p. 6). Know how prevails over know why – yet it is a reflexive know how, capable of producing reports and accounts, that is narratives¹. Expertise does not solely build on science. The latter however has increasingly affected other areas, such as the administrative and the judicial (Jasanoff 1990; 1995). Expertise, moreover, is not only a matter of formal certifications. ‘When the implementation of a course of action depends not simply on an understanding of general process (for instance, radioactive decay), but also on the initial conditions under which those processes function, expertise becomes a difficult matter to decide, since it is ambiguous as to whether it is those who understand the general processes or those who know the initial conditions who should have greater claim’ (Weale 2001, p.415). Yet while certified expertise is deemed credible until contrary evidence is brought to bear, ‘lay-local knowledge’ – that is popular, contextual, informal expertise – suffers from the stigma of partiality or unreliability that can be overcome only by providing proofs of public relevance, showing that it is certified expertise that is incomplete or fallacious (Irwin 1995; Fischer 2000).

The second feature is *transgressiveness*. ‘When acting as experts, scientists do not respond to questions that they have chosen. [They] have to synthesize all available knowledge and of necessity transgress the boundaries of their discipline as well as the constraints of their own limits of knowledge’ (Nowotny 2003, p. 152). They offer advice based on ‘a less than perfect understanding of issues that lie within nobody’s precise disciplinary competence’ (Jasanoff 2005a, p. 211). Expert narratives, moreover, ‘have to be sensitive to a wide range of demands

¹ Narratives are ways to give meaning to the world by logically connecting actors, institutions, events, discursive and material aspects of society (Franzosi 1998). They tell us ‘about a state of affairs, an intervening event or action, and the resulting consequences’ (Fischer 2009, p. 197).

and expectations and relate to the heterogeneous experience of mixed audiences' (Nowotny 2003, p. 152). Being contextual, expert insight connects technical and practical rationality, cognitive and moral judgement, means and ends, even though the latter often remain unthematized, as out of question, shared by definition (Wynne 2003). Transgressiveness is therefore at the same time a strength and a weakness: expertise helps deal with social problems rather than esoteric scientific questions, yet expert statements can be contested from both factual and principled viewpoints.

The third aspect is *asymmetry*. Expertise is knowledge 'testified to be efficacious and in which this testimony is widely accepted by the relevant audience' (Turner 2003, p. 25). There is expertise when it is deemed possible to trace a border line, a distinction that divides and bonds at the same time, a principal-agent relationship. Power effects result as a consequence. Experts are credible, authoritative, charismatic: they influence opinions through trust investments more than arguments, obtain obedience without providing proper justifications, prompt others to accept their worldviews (Illich 1979; Warren 1996). A recognized expertise establishes a truth regime which, if it is to be put forth, even dissenting opinions have to accept. Expertise produces dependency. Questioning experts, thus, means questioning their trustworthiness and representativeness (Thorpe 2008). At the same time expert advice is bound to its mandate. When the latter is implicit or generic, as with classic scientific research, this may be hardly noticeable, yet things work differently when expertise is caught in contentious politics. As I will show later, in some circumstances the asymmetric relationship between political principal and expert agent may be inverted.

Expertise and politicization

Collingridge and Reeve (1986) observed that the recourse of policy-makers to science grows with the complexity of problems. This however does not help to resolve conflicts because expertise takes a partisan stance, becoming functional to supporting each different position. This is consistent with the previous characterization of expertise. Science applied to policy is subject to constraints: questions stem from political needs rather than research issues, resulting in knowledge that is ill-structured, transversal to disciplines and for this reason easily contestable.

Today things seem even more troubled. Differentiation of knowledge means proliferation of expertise (Sarewitz 2004). Expert advice has increasingly become a commodity sold and bought (Maasen and Weingart 2005). The intrinsic hypothetical status of scientific claims clashes with the policy-makers' quest for certainty; competition over conclusive facts leads to 'the front lines

of research – where findings are still controversial, assertions are uncertain and open to attack, where disputes are still threatening’ (Weingart 2003, p. 78). The more one turns to science, the more one gets entrapped in scientific debates. Science becomes overabundant, resulting in controversial decisions that cannot be legitimated. The search for certainty produces uncertainty (Mansfield and Haas 2006). Expertise is therefore increasingly politicized (Pielke 2007).

The phenomenon is clearly detectable in environmental controversies. Research broadly points in two directions: on one side, the emergence of ‘lay-local knowledge’ and of deliberative forums, where specialists and non-specialists jointly address contentious issues (Brown 1997; Fischer 2000; Callon *et al.* 2001); on the other, the rise of a counter-expertise grounded on certified competences and scientific discourses. Reacting to the dreaded NIMBY stigma, activists have often claimed to practise ‘scientific environmentalism’ (Yearley 2005), building their initiatives on robust scientific arguments and balancing opposition with proposals of alternative solutions. This trend has strengthened in recent years. Concern about technoscience-related problems has grown, also as a consequence of the neoliberal cutting down of the regulatory and monitoring role of the state (Hess *et al.* 2008). Moreover, the cleavage between grassroots protest and the advocacy and brokerage inclination of organized environmentalism has deepened. Local mobilizations often escape the control of environmental (or party) organizations, building on loosely structured citizen groups. Discourse is one of the few aspects where such groups have agency. They need to gain allies in the arena of public opinion, showing that protecting a resource, a place or a community means defending general interests or widely shared values (Trom 1999; Della Porta and Piazza 2007; Rootes 2007). The ability to produce credible counter-expertise is thus a valuable asset, especially when expert authority is called on to dismiss contestations (Cable *et al.* 2008). Scientific methods and languages are increasingly applied and sympathetic certified expertise is used to convey ‘lay-local’ insight to the public sphere (McCormick 2007).

The ‘discursive opportunity structure’ (Koopmans and Olzak 2004) – practices and institutions, rules and instruments of sense-making, ‘justificatory regimes’² – therefore gains salience within the broader context of political opportunities. If expertise authoritatively links cognitive and normative aspects of an issue, then it is likely to affect the publicly perceived sensibleness and pertinence of claims and the credibility of claims-makers. Expert-sourced truth

² The well-known argument of Boltanski and Thévenot (1991) is that cognitive and moral claims in the public sphere may appeal to different notions of worth. For the environment such worth may refer, for example, to history and local traditions, aesthetic values, space and resource availability, nature friendliness, citizen rights (Thévenot *et al.* 2000).

regimes may decisively contribute to the issue-framing³. Yet such regimes can be contested. For Perry *et al.* (2007), conflicts involving expertise follow three typical phases. The starting point is the attempt to erase contrasts thanks to scientific theories or data. Yet all the stakeholders try to do the same, and, because there are plenty of contradictory scientific evidence and perspectives, such a result is therefore precluded. One tries then to deconstruct adversary arguments and expertise; this leads however to a devaluation of scientific authority. Finally, appeals to common good, fair compromise or direct experience lead to an agreement. Science may then come back as a rhetorical device, justifying choice by means of an ‘objective truth’ eventually found.

Perhaps, however, there is more to the picture than meets the eye. The theoretical opposition between ‘democratic’ and ‘technocratic’ policy-making is depicted as the contrast between two paths. For the former, democratic institutions deal with facts with help from expert advice according to the problem configuration, as dictated by the values and interests at stake. For the latter, it is the factual framework, as established by the experts, that dictates how values and interests are to be dealt with. These ideal types offer a benchmark against which real things can be measured. Expertise, for example, may be said to be ‘politicized’ in the sense that, in the institutional backstage of policy-making, it can be captured by corporate, NGO or political interests. Yet the politicization of expertise in contentious politics seems different. Bringing the partisanship of expertise to the public forefront, the latter breaks with the alleged alternative between democracy and technocracy, triggering a kind of staged short circuit between the normative and the factual (cf. Figure 1).

³ Take, for example, the recent receptiveness to nuclear power in Italy, to which public opinion and environmental organizations were traditionally quite adverse. According to research conducted by the Observa Institute, between 2003 and 2009 people favourable to nuclear power increased from 22% to 42% (cf. http://www.observa.it/public/docs/Italiani%20e%20nucleare_Tabella.pdf). Such change is hardly explicable without considering the influence of media-amplified expert narratives of climate change, geopolitics and costs of energy provision (Galeotti 2009). This by no means prevents public opinion from being affected by highly resonant events, like the Fukushima disaster (survey data of April 2011 indicate 75% of Italians against nuclear plants: cf. http://www.ansa.it/web/notizie/canali/energiaambiente/nucleare/2011/04/27/visualizza_new.html_896898859.html). Yet even a cursory look at the ongoing debate shows that the renewed salience of accident hazards has not replaced but intertwines with the aforementioned elements of the current truth regime concerning nuclear power.

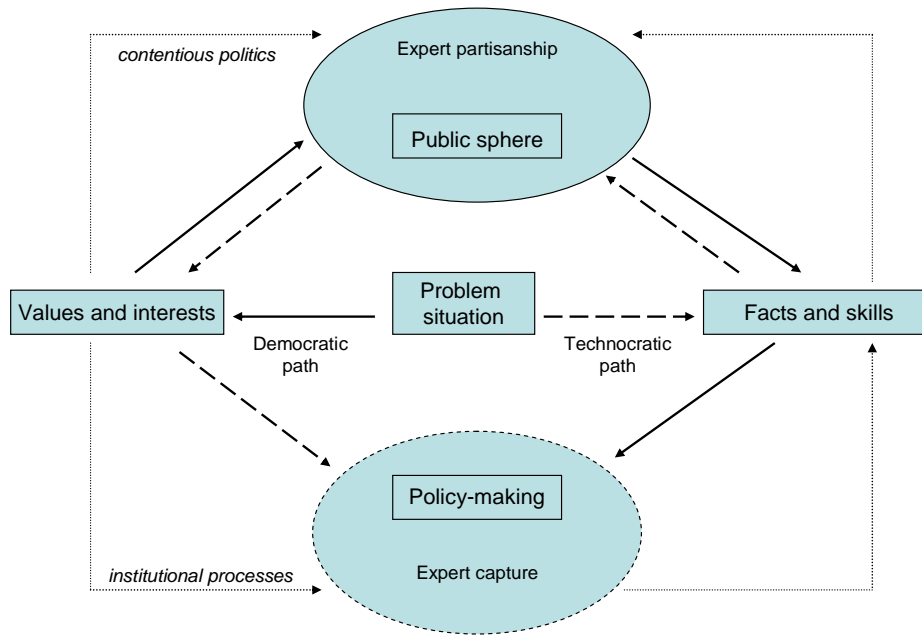


Figure 1. Policy-making and politicization of expertise

However, why and how this happens is far from clear. Politicization is a remarkable but by no means uniform trend, nor is there a clear relationship between technical content and level of politicization of an issue. Scholars remark that there are a number of intervening variables, such as the existence of effective and accepted procedures for selecting among values in dispute, the presence of groups that monopolize the public discourse over a question and the epistemic elements of the political culture (Sarewitz 2004; Jasanoff 2005b). Yet the list is patchy and the ranking problematic.

Moreover, the very notion of politicization needs specification, being usable, as shown above, with different meanings – and with different normative understandings. For example, for those who separate neatly between scientific problem assessment and political problem management (e.g. European Commission 2000; Forrester and Hanekamp 2006), politicization is a pathology of expertise. For those who regard ‘the ways in which we know and represent the world (both nature and society) [as] inseparable from the ways we choose to live in it’ (Jasanoff 2004, p. 2), or think that ‘scientific knowledge embodies implicit models or assumptions about the social world’ (Irwin and Wynne 1996, p. 2), what is pathological is the pretence to depoliticize expertise (or better, the attempt to hide its political aspects). To be useful, an operational definition of politicization is therefore needed. A possible solution is the following.

According to Colin Hay, at a first level ‘issues are politicized when they become the subject of deliberation, decision making and human agency... disavowing [their] prior assignment... to the realm of fate or necessity’ (Hay 2007, p. 81). In this sense science has historically acted as a politicizing factor. At a second level politicization takes place when issues ‘become subject to public processes of deliberation, where previously such deliberation was confined to the private sphere’. In this regard, environmental movements played a major role, bringing to the forefront pollution, food risks, biodiversity loss and many other questions. At a further level, politicization occurs when an issue enters the sphere of government: for example, industrial emissions are regulated. Depoliticization follows the inverse path: an issue is transferred from government or public body competences to quasi-public institutions (such as an independent authority) or market-based private entities (think of public-private covenants or corporate codes of conduct). From the public level one turns to a private level when discussion and decision are transferred to the domestic sphere. This happens, for example, when environmental degradation is presented ‘in such a way that responsibility is seen to lie neither with the government nor with business, but with the consumer, [becoming] purely a matter of consumer choice’ (Hay 2007, p. 85). Finally, questions may shift from the realm of choice (politics) to the realm of necessity or fate (non-politics). In this sense, reserving an issue to specialist circles means privatizing it, while appealing to objective, incontrovertible data or technical requirements means transferring it to the realm of necessity.

In a very similar fashion Chantal Mouffe (2005) understands politicization as conflicting representations of the world, distinctions between ‘us’ and ‘them’, identification by means of differentiation from adversary identities. Then depoliticization means that valuable distinctions are ostensibly erased, not only by appealing to the unambiguousness of facts, but also by transferring political discussions to a moral register, translating the difference of interests and values into a clash of good and evil. From this viewpoint, expertise enjoys a twofold source of power. If experts integrate cognitive and normative authority, questioning the evidence they provide can be stigmatized as both unreasonable and morally reprehensible.

According to this operational definition, therefore, politicization means neither factiousness as opposed to reasoned discussion nor replacement of facts with principles or interests, but simply the opening, broadening or restoring of a public space of discussion. An issue (or part of it) is politicized to the extent that it is released from necessity and duty: different positions can be confronted in the public arena. It is depoliticized to the extent that it is confined in the realm of the private, the necessary, the due. The exclusivity of expertise and its appeals to facts, data, parameters, standards correspond to a depoliticizing force: discursive black boxes are built and

legitimized; the space of discussion shrinks. Yet boxes can be opened; what had been cast out can be brought into question; expertise can become integral to contentious politics.

Three case studies

To sum up, we have a characterization of expertise as a practice where specialized competences entailing role asymmetries are transgressively applied to policy issues. And we have opposed forces that affect the discursive opportunity structure of conflicts: the depoliticizing quality intrinsic to expert advice and the politicizing drift entailed in its increasing diffusion and contestability. The task is to look closer at this dynamic. What are the conditions and means by which expert advice acts in a politicizing or depoliticizing way? Do conflicts involving expertise always follow the pattern of depoliticization and politicization outlined above?

In general, research on local conflicts seeks to build a comprehensive picture: resource mobilization, network building, protest styles, political opportunities and so on. The case studies presented here focused instead on expertise. The point was not to establish whether the latter played some role (this was a starting point) or whether it was determinant for the outcomes of the conflicts (weighing factors against each other often entails debatable counterfactual reasoning), but rather to get a better understanding of the features and evolution of such role.

All three cases come from Italy. The first, rather well-known at international level (Della Porta and Piazza 2007, is the controversy over the high speed, or high capacity, Turin-Lyon railway (the so-called TAV). The second concerns an offshore methane regasifier in front of Porto Viro (a village on the Adriatic sea in the province of Rovigo, about 70 km below Venice). The third concerns the project for an incinerator in Trento. Previous discussion suggests that we should focus on a few elements and processes, singling out the expertise produced by the parties in conflict, extracting the narratives involved in the controversies and assessing the impact of expertise on the political status of the latter⁴.

⁴ Supported by the Italian Ministry of University and Research, the studies drew on analysis of press and documents produced by institutional, corporate and oppositional actors, and on in-depth interviews with key informants. Detailed accounts, including two more case studies, can be found in Pellizzoni (2011).

The TAV

The Turin-Lyon high speed project concerns a new railway passing through the Susa Valley, near the Italy-France border. The original project included a 50 km tunnel under the mountains dividing the two countries, but various layout alternatives have been proposed in response to protests. The relevance of the project has been sanctioned both at EU (priority project classification) and national level (inclusion among the ‘major public works’ regulated by a special law⁵). The conflict began around 1990, with the constitution of no-TAV committees composed by citizens, local municipalities, the Mountain Community (a public body dealing with the development of the area) and academics from Turin Polytechnic (most of whom are highly specialized in relevant topics and with personal links with the Valley). Opponents were nationally supported by Greens, left parties and no-global groups. Media coverage grew quickly and stayed high most of the time. Different questions were raised over the years: initially the problem of noise produced by high speed trains in a rather narrow valley, which is moreover geologically unstable; then transport and storage of excavation materials, which include radon, uranium and above all asbestos; finally the sensibleness of the project from an economic and transport viewpoint. There are contrasting analyses and forecasts in this respect: the TAV feasibility study hypothesises a fourfold growth in (mostly commodity) traffic, while a report commissioned by the Mountain Community found that the existing railway is not going to be overloaded, and even a study funded by the TAV Italy-France Government Commission arrived at a similar conclusion.

The conflict reached a climax in 2005, when the police attacked a group of activists that were blocking the opening of the geological explorations yard. Popular reaction was huge (70,000 demonstrators, or three-quarters of the Valley population) and three days later the area was regained. To calm things down, the government set up a discussion table for national and local authorities and a ‘Technical Observatory’ where experts from both the pro-TAV and no-TAV fronts were to reassess the issue (existing line capacity, transport development, layout alternatives and related problems). Though citizen committees refused to legitimate it, the Observatory worked for eighteen months, reaching an agreement on an action plan in 2008. The no-TAV side, however, regards the latter as incremental (first improve the existing facilities, then, upon demonstration of actual need, build the new railway according to a revised layout), while for the pro-TAV side the sound approach is a parallel implementation of decisions. The

⁵ The law 443/2001, so-called ‘Legge obiettivo’ (literally ‘Target law’), enforced by the Berlusconi government, introduces significant procedural simplifications, considerably weakening the powers of local authorities.

issue is still open: new geological explorations began in late 2009, the Observatory in January 2010 approved a new route for the high speed line, and demonstrations have revived.

In synthesis, five phases can be singled out:

- 1989-94: pro-TAV and no-TAV fronts formation;
- 1994-99: project elaboration (forecast and feasibility studies);
- 2000-04: project proceeds, together with criticisms and protests;
- 2005-06: conflict explodes; set up of political and technical tables;
- 2007-08: technical table works out a mediation.

These phases correspond to a narrative evolution of the conflict, that can be stylized as follows:

- Europe, Italy and local areas need new, modern railway connections vs. TAV is a burden with no reward for locals;
- The NIMBY syndrome has to be clamped down vs. noise and geological instability are serious, neglected problems;
- The chosen route does not raise any problem vs. the spread of asbestos, uranium and radon entails major hazards;
- TAV is justified by major expected increase in traffic vs. traffic is not bound to grow, thus TAV is unnecessary and improving the old line is enough;
- TAV is necessary in any case for promoting economic development vs. a different development model is needed at local, national and European level.

The pro-TAV coalition produced expertise in engineering, geology, transports and economics, yet the information made publicly available was scarce and sometimes contradictory (as with traffic scenarios).. The no-TAV coalition was able from the outset to express certified expertise in the same fields, thanks to the involvement of Turin Polytechnic academics and other technical institutions, producing and distributing a number of documents. Technical languages and contents from certified expertise were therefore prominent in the protest. Local knowledge played some role, yet it was largely channelled by certified expertise. Lay citizens were mostly engaged in spreading information and keeping up media attention.

The pro-TAV coalition initially sought to depoliticize the issue not by technicizing it but by politicizing it to the extreme, with appeals (backed by regulatory interventions) to local, national and international ‘imperatives’ that allegedly made any further discussion pointless. National and European political and regulatory standpoints relegated technical documents to backstage. Technicalities, instead, crucially helped opponents to politicize the issue. The pro-TAV front subsequently put technicization on stage (feasibility study, traffic forecasts, layout alternatives). Opponents followed their antagonists onto the same terrain, sticking with technical objections yet at the same time broadening the scope of contestation, bringing into question the rationale of

the project in terms of transport policies and development models. The intervention of the police represented a comeback of traditional politicization. The subsequent Observatory experience was interesting for its subtle features. Backing from the authorities' table and an inclusive composition gave political legitimacy to the depoliticizing function entailed in its declared technical character. The Observatory became in this way a sort of sheltered space where discussions on technical aspects helped to codify and systematize different positions on an open array of scenarios (including the zero option). In other words, technical discourses worked as a watered or cooled down translation of the conflict, making possible a reassessment of the whole agenda.

The regasifier

Discussions and projects for methane regasifiers gained momentum in Italy in the 1990s. Depicted as a way to diversify a procurement largely dependent on pipelines from Russia and Algeria, the sheer number of envisaged plants raised questions about whether the actual interests were national or commercial. Supported by local politicians and interest groups, the idea of locating a regasifier in the Rovigo province was formalized in 1999 through a Territorial Pact⁶. This amounted to an open door for Edison, an Italian energy company for whom the sea in front of Porto Viro represented an ideal site for a regasifier based on an innovative offshore technology. Local forces saw the regasifier as a flywheel for the economy and a means for converting an oil-burning power station to a less polluting fuel (and possibly reducing citizens' electricity bills). Yet the picture soon started to change: the owners of the electricity generating plant turned out to be uninterested; the regasifier doubled its size, from 4 to 8 billion cubic meters per year; the pipeline, instead of going straight to the mainland, first headed north to Cavarzere, in Venice province, and then south connecting to a major hub near Bologna (apparently for technical reasons, most likely to benefit from EU funds for marginal areas). Also the project ownership changed at some point: Edison joined Exxon Mobil and Qatar Petroleum, giving birth to a new company, Adriatic LNG, of which it retained only a 10% stake.

Initially the oppositional front was composed only by a committee and the local branches of the Lega Nord and Rifondazione Comunista parties. Subsequently it broadened to include the Province of Rovigo, various municipalities and some environmental groups. No major popular mobilizations took place, however, and media coverage never reached the levels of the TAV

⁶ Territorial Pacts are covenants between public bodies, industrial sectors, unions and private actors. They concern local development plans for which government funds can be obtained.

issue (despite the project also being declared strategic by the EU and included in the ‘Target Law’). Opposition initially focused on accident hazards and negative effects on fishery and tourism, subsequently turning to the impact of pipeline laying on a delicate ecosystem (the Po river delta, which also hosts a park). The struggle then shifted to the Courts, with several applications from the oppositional coalition and an initiative of the public prosecutor itself addressing procedural infractions related to authorizations and environmental impact assessments. After a phase of legal moves and countermoves, all these applications were rejected. The government did, however, assign to the area ‘compensations’ of about 12 million Euros. In September 2008 the plant was inaugurated by prime minister Berlusconi in front of approving local and national authorities and a few remaining demonstrators.

In synthesis, three phases can be distinguished:

- 1996-99: local aims meet company interest; first voices of dissent.
- 2000-2005: project repeatedly changes according to industrial and commercial logics; opposition broadens yet it does not gain major popular support and media coverage.
- 2006-08: legal fights focus on procedural infractions and ecological impacts; applications are rejected and project is completed.

These phases correspond to a narrative evolution of the conflict:

- Development and environmental quality vs. hazards and negative effects on local economy;
- Strategic value of regasifiers for energy procurement and novel technology minimizing hazards and impacts vs. ecosystem fragility and betrayal of the original rationale of the initiative;
- Need to resist the NIMBY syndrome and speed up authorizations vs. neglect of formal and substantive requirements of authorization procedures.

Novelty represents a possible weakness of the project. The company maintains that the plant is totally safe, yet lack of empirical data means that only theoretical models of accidents are available. Opponents, however, raised the hazards issue only early in the conflict and never got to build a proper case against it, turning instead to relatively minor environmental and procedural matters, far less publicly resonant than the safety questions. By contrast with the TAV case, recourse to academics was very limited. The nearby universities of Venice and Padova could theoretically provide valuable expertise, but one has to consider the proprietary character of much of the plant technology. The public prosecutor and the oppositional coalition drew on some local professional advice on environmental impacts, while lay insight played almost no role. The national and local authorities’ focus was on environmental and bureaucratic aspects of authorizations.

Overall, the technical dimension of the project remained firmly in corporate hands. Its expertise covered not only technology but also the complex procedural and organizational assemblage of the plant (its parts come from all over the world). The company rather easily overcame minor obstacles related to a not-so-thoroughly explored site geology and to the convolutions of authorization procedures, while providing most of the information and tools for the environmental assessments and monitoring carried out by government and regional agencies. Development policies, relevant to the no-TAV arguments, were not salient in the protest, beyond some quibble about top-down, no-reward interventions in peripheral areas. The evolution of the project also made ‘national interests’ an increasingly feeble justification, yet the no-plant front was unwilling or unable to raise the energy policy issue.

The initial wide convergence of local, national and corporate actors on the manifold virtues of the project entailed a political climate that paradoxically produced a depoliticizing effect, testified by the emergence of a quite restricted opposition. A broader politicization of the issue was fuelled instead by the repeated changes to the project and the consequent perceived betrayal of its original rationale, yet the intricacies of the project technology and organizational assemblage represented a virtually impenetrable barrier. As a result, the technical form taken by the opposition was basically one of recourse to law. However, not being supported by robust popular demonstrations, legal cases eventually entailed depoliticization. Few citizens remained to contest the final alignment of local stakeholders with the government program.

The incinerator

Waste management is a traditional target of local mobilizations (Rootes 2007), of which anti-incineration campaigns comprise a remarkable portion. Both national incineration policies and the strength, forms and topics of opposition show significant cross-national variation⁷. However, the energy efficiency and health implications of technical solutions are prominent matters of contention (McCauley 2009; Rootes 2009a).

Plans for an incinerator treating all the waste produced in its territory were elaborated by Trento Province during the 1990s. A formal decision was taken in 2001. Its implementation seemed straightforward. A locally closed cycle of waste was depicted not only as technically efficient but also ethically correct, and an incinerator was presented as ecologically sounder than landfill, with lower risks of pollution and the possibility to produce energy. The project, to which experts coming from the engineering department of the local university substantially contributed,

⁷ Cf. Leonard *et al.* (2009), McCauley (2009), Rootes (2009b), Rootes and Leonard (2009).

provided for a plant with a capacity of 330,000 tons/year located within the city of Trento, in the area of an existing landfill, and capable also of burning 'eco-bales' (waste compacted according to a special technique), a certain amount of which was already stored there.

The original forecasts of waste production, however, started to be contradicted by new data indicating an increase in differentiated collection and a decrease in waste production. Moreover, citizen groups, right wing parties (the governing coalition was centre-left), nearby municipalities and environmentalists began to oppose the implementation of the project. A 'Committee for a correct waste management' was created and the alternative technology of bio-exsiccation⁸ combined with a downsized plant was proposed, consistent with the goal of reducing waste production, less expensive and more efficient separation of recyclable materials and production of energy from the remaining waste (for right wing groups a smaller incinerator also prevented the treatment of waste arising outside the province). This technology was, however, contested by a study by the university engineering department commissioned by the Province, which claimed that it would be more polluting and unsuitable for treating eco-bales. The study also insisted that the ideal site for the incinerator was the landfill. Yet percolations of leachate were subsequently detected and evidence emerged that there was not enough space for storing more eco-bales. In the meantime, the committee's proposal was endorsed by the Trento Municipality. The Province then decided to reduce the size of the plant (first to 240,000, then to 140,000 t/y). This however prompted the landfill repository management company to declare the downsized project as economically unviable. Eventually the Province accepted the bio-exsiccation proposal. Yet a new opposition committee appeared in 2004, partly composed of members of the former one and polemically self-named 'NIMBY'. It quickly succeeded in reframing the oppositional discourse in a more radical way, thereby realigning most of the public opinion and stakeholders (including several municipalities). Its standpoint was that incinerators of any type and size are inefficient and dangerous to health and the environment, strengthen the usual logic of waste production, and so do not solve problems. The solution, then, was not technological but social or moral: producing, distributing and consuming differently. The ultimate goal should be 'zero waste'. In 2006 the Province again reduced the size of the plant (100,000 t/y). No further developments have been recorded since.

The controversy can be articulated in three phases:

⁸ Bio-exsiccation is a process of repeated separation of residual undifferentiated waste. It reduces the amount of waste to be sent to incinerators. Undifferentiated waste is crushed and left on special grilles where it loses its water content. Then it is further separated: on one side, metals and glass (to be recycled), on the other compost and other noncombustible materials (to be sent to landfills); the remaining part is pressed into cubes and sent to incinerators.

- 1993-2001: first ideas about an incinerator; Province takes formal decision about ‘big’ plant.
- 2002-03: opposition emerges; project reformulation with bio-exsiccation and smaller plant.
- 2004-06: new oppositional narrative: ‘social’ alternatives to dangerous, inefficient technology; further shrinking of proposed size of the plant.

The corresponding narrative evolution is thus:

- the incinerator is the only efficient and ethically sound solution vs. a big plant clashes with public commitments to waste reduction and expansion of differentiated collection;
- Bio-exsiccation represents a viable alternative technology vs. it is technically unfit and more polluting;
- Bio-exsiccation and reduced size of plant represent a good solution vs. health and environmental protection entails a change in the ways of producing, distributing and consuming. The ‘bio-exsiccation and smaller plant’ argument is therefore held first by the opponents, and then by the proponents of the project.

Expertise in the pro-plant front mostly came, as said, from the local university, thanks to a long tradition of collaboration. As a consequence, the autonomy of these experts, though they belonged to an independent and authoritative institution, was openly questioned by the opponents. In-house expertise was provided by the landfill company, while the oppositional front was advised by various experts hired by the Trento Municipality and the committees. Lay-local knowledge did not play a prominent role: certified expertise defined the framework within which the opposing arguments contended. Throughout the story there is however a peculiar intertwining of cognitive and normative arguments. Proposal and opposition to the initial project and its subsequent revisions (smaller size, novel technology) mixed data and technical considerations with social and moral ones. The latter gained momentum in the last phase thanks to the new committee’s narrative, though technical arguments related to health and environmental impacts did not disappear. It is also worth noticing a progressive shift in the balance of the expertise involved from engineering and chemistry to medicine, signalling a growing refocusing of the contending narratives from technical efficiency toward health protection.

Discussion and conclusions

My starting point was that expertise plays a relevant role in environmental conflicts and that discursive opportunities are the main locus where such a role is exerted, with special reference to

the impact on the political status of controversies, that is the available scope for public discussion.

Consistent with previous research (Hess *et al.* 2008), interviews showed that most experts did not see themselves as political actors. Their self-perception (at least as declared) is of persons who, even when supporting oppositional movements, are not part of the political level of conflicts, to the solution of which they believe they contribute for precisely this reason. Analysis shows that this is hardly the case, yet the emerging picture is more entangled than that portrayed in other research.

The distinctive features of expertise surface in many ways. Transgressiveness is an engine of the evolution of the controversies: think of the thematic ‘scaling up’ and the Observatory work in the TAV story; of the corporate case for total safety of the regasifier; of the interweaving of technical and ethical arguments in the incinerator debate. Asymmetries play a major role as well: sometimes heavily (think again of the regasifier hazards issue), at other times in a more nuanced way. Certified competence is invariably regarded as an asset, also for channelling lay-local insights. The different roles played by academics are however remarkable. Fundamental in supporting the opposition to the TAV, academic expertise is central in backing and elaborating the incinerator project, while practically non-existent in the regasifier case. Contingent reasons (highly specialized competence and personal connections with the Susa Valley; corporate monopoly of knowledge of the regasifier technology; strong links between university and public administration) outweigh the institutional position in affecting the role of what, at least in Italy, is still the most credible expert establishment.

Keeping in mind the meaning given to the notion of politicization, expertise can be said to work in all three cases as both a depoliticizing and a politicizing device. In the TAV case, between 1989 and 2004, expertise helped to build a defensible opposition. Between 2004 and 2006 it deconstructed the narrative of the pro-TAV coalition, for which all policy matters were settled and only technical details remained to be addressed, leading to an impasse dramatically confirmed by the fight between police and activists. In the 2007-08 period the Observatory followed an inclusive strategy, with the distinction between political and technical levels becoming permeable and open to discussion, thanks precisely to its formally technical character. In the first phase of the regasifier story, expertise did not assume particular salience. Subsequently, corporate insight was crucial in ensuring a technical containment of the controversy, to which opponents replied by politicizing it through litigation, with ups and downs related to the clash of juridical and environmental expertises produced by the confronting sides. The end of the legal fights allowed a traditional political mediation. Expertise (im)balances between the contending parties, thus, considerably affected the political status of the issue

throughout its development. As regards the incinerator, expertise initially produced depoliticizing effects, followed by a mixture of politicizing (support of alternative solutions) and depoliticizing (progressive merging of positions on downshifted and redesigned plant) pressures, and eventually by a tight intertwining with, and support of, markedly politicizing arguments.

The foregoing discussion indicates two things. First, the traditional alternative between democratic and technocratic policy-making, or between political management and technical assessment, is not simply contradicted by the emergence of a politicized expertise, but is replaced by more nuanced articulations. The politics of facts intermingles in subtle ways with the politics of interests and values. Second, there is no linear sequence between politicization and depoliticization. We may try to grasp something of an entangled picture in the usual manner: by constructing typologies.

Table 1 – Expertise and issue politicization

effects on politicization

<i>discursive strategy</i>	increase	decrease
technics-centred	deconstruction of expertise (politics of contested facts)	appeal to objectivity of expertise (politics of unquestionable facts)
politics-centred	mediation of positions (traditional politics)	appeal to social imperatives (hyper-politicization)

As regards the first point (see Table 1), if sometimes the significance of the evidence brought by one’s counterparts is questioned in order to (re)open the discursive space, at other times an opposite path is taken, consisting in rejecting any need of factual justifications in favour of self-evident political or ethical motivations. Appeals to obvious win-win situations, patent social necessities, common interests, moral duties and unquestionable futures frame technical issues as negligible details, with expert agents playing an ancillary role vis-à-vis their political principals. This ‘hyper-politicization’ thus depoliticizes issues by dismissing at the same time proper normative and factual arguments. This strategy has been tried by both the pro-TAV and the pro-gasifier fronts, with more success in the second case thanks to the weaker status of counter-expertise, while in the incinerator controversy it is the oppositional front (namely, the ‘NIMBY’ committee) that adopts at some point a hyper-politicization approach. However, expertise remains always at arms length, as a cognitive-moral asset to which one may turn if the appeals to alleged imperatives and shared values are fiercely contested, if technical doubts and objections gain salience in the public sphere, or whenever it seems opportune to underpin principled claims

with ‘data’. In other words, hyper-politicization does not reject but benefits from a background of technical legitimacy. The same applies, as the regasifier case exemplifies, to traditional political mediation.

Table 2 – Expertise and phases of conflict

relational configuration

<i>effects on the policy process</i>	antagonism	cooperation
issue opening up	1 – break laceration on a technical level of the existing balance of forces within the policy process; attempt to affirm an alternative truth regime counter-expertise	3 – inclusion confrontation of positions at extended technical tables (more actors, more perspectives); the boundary between technical and political levels becomes more permeable, open to negotiations participatory expertise
issue closing down	2 – impasse counterposition of expertise: each party privileges its own way of selecting and connecting factual evidences and policy implications partisan expertise	4 – confinement confrontation of positions at restricted technical tables (fewer actors, fewer perspectives): attempt to keep technical and political levels neatly separated autonomous expertise

As for the second point, we can connect different phases of a conflict – let us call them break, impasse, confinement, inclusion – with different figures of expertise: counter-expertise and partisan, autonomous, participatory expertise (see Table 2). A first phase corresponds to the sudden rupture of the existing balance of power and legitimacy, taking place on a technical, rather than political, level. A second phase basically corresponds to the second step of the sequence identified by Perry *et al.* (2007): the attempt to deconstruct adversary expertise. A third phase focuses on the establishment of expertise as an autonomous order with respect to politics. Technics and governance blur: the possible (politics) fades into the necessary (non-politics). Finally, as with the TAV Observatory, a technical confrontation may provide a protected yet inclusive environment, allowing a relatively open debate.

It goes without saying that these phases do not apply to every case, nor do they necessarily follow the sequence above or have the same origin, outcome and intensity. In the TAV and incinerator cases, for example, break and impasse are more marked than in the regasifier one, where technical confinement is instead much sharper. Moreover inclusion here takes place at the

level of political mediation, whereas in Trento and in Susa Valley inclusion is expert-centred – deliberately sought in the latter case, pivotal to repeated realignments of the opposing coalitions in the former.

These typologies are of course tentative⁹. Nor can expertise be regarded as crucial or relevant in explaining all the differences between the cases. For example, the link between local and ‘global’ actors and themes of mobilization, that scholarship stresses as a feature of recent conflicts (Della Porta and Piazza 2007; Rootes 2007), is prominent only in the TAV controversy. The incinerator was an issue of comparatively minor relevance in the public sphere, yet this cannot be said for the regasifier. The theme of energy procurement has been debated for years at national level, albeit in fits and starts, and conflicts over similar (but on-shore) installations, for example in Brindisi, have gained much greater resonance. So there is much to investigate. I have already remarked, however, the counterfactual element inherent in the question: could things go differently? Why was the regasifier opposition unable to mobilise public opinion and contest the project as effectively as the no-TAV and no-incinerator fronts? Initial assent to the project? Lack of prominent figures and strategic capacities (for example about the use of the safety and energy policy arguments)? Cognitive barriers to counter-arguments? Greater public anxieties about energy security compared with transport or waste management (or, in other words, different weight of the NIMBY stigma according to the type and scale of the issue at stake)? A political culture entailing low capacity of activation vis-à-vis the strong mobilization heritage of the area involved in the TAV conflict, or the more affluent and civically effervescent community of Trento? These and other motives can and have been put forth. If anything, however, this strengthens the impression that expertise works, today more than ever, as a strategic resource that can be used in different contexts, by variously equipped actors, and with dissimilar results.

Expertise allows appeals to ‘independent’ perspectives and extensions of the themes of protest. It offers a peculiar terrain – largely borrowed from the scientific sphere for the mobilized actors, symbols, rules, languages – for providing proofs of what is public and general and arguing about their accommodation with the private and the local. Scholarship, we have seen, tends to polarize around two types of accounts for the way expert advice affects the interweaving of democratic and technocratic policy paths. For some, what counts most is the institutional set up and the political culture (Sarewitz 2004; Jasanoff 2005b). Others, like Perry *et al.* (2007), regard the matter as a strategic game, where contenders shift from one to the other pattern to rebut adversaries’ moves. Taking these as partially complementary readings and confronting them with the cases analysed, one might say that strategic choices are put under constraints – institutional, cultural but also contextual – that expert advice in its turn affects substantially.

⁹ They seem to work also with other case studies not described here.

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