Producing international expertise about technologies of democracy

Introduction

Democracy relies on instruments able to allocate public roles, make publics speak and define public problems. These devices, circulated and replicated, and more or less stabilized by expert knowledge, can be labeled as “technologies of democracy”\(^1\). As scientific instruments, they can be analyzed with STS tools that make explicit, for instant, their roles in experiments and demonstrations\(^2\). I am interested in this paper in the production of knowledge about technologies of democracy. This paper explores the making of international expertise about technologies of democracy in nanotechnology. It considers the work done at the Working Party on Nanotechnology (WPN) of the Organization for Economic Cooperation and Development (OECD), and focuses on a project devoted to “public engagement in nanotechnology”. The case of the expertise about technologies of democracy at OECD illustrates a process of stabilization through standardization and expertise production. By the same token, it provides elements to understand how an international organization produces “policy expertise” about nanotechnology, and offers an illustration of the construction of an international space, which shapes/is shaped by institutional and technical constraints.

\(^1\) Such a perspective owes a lot to studies interested in the politics of public engagement (Irwin, 2006; Lezaun and Sonerynd, 2007).
\(^2\) Laurent, 2011. I use this perspective in my forthcoming dissertation, of which the material used in this paper is a part (Technologies of Democracy. Problematizing nanotechnology in Europe and the United States, Mines ParisTech).
As nanotechnology’s publics received permanent attention from policy-makers, international cooperation was expected to extend to the making of expertise about ways to engage the public. Therefore, the example of OECD WPN illustrates a case of stabilization of technologies of democracy through expert knowledge. Against a passive vision of the expertise about politics, it analyzes the realities that the production of international expertise performs, that is, the democratic constructions it stabilizes, and the allocation of public roles it enacts. At a time where “public engagement” is heralded as a key concern for science policy-making\(^3\), such an analysis can offer an illustration of the active roles of experts in policy and democracy in the shaping of political orders\(^4\). This requires that the nature of expertise and the identity of the experts be explored. At OECD, scholars are invited to contribute and national delegations send policy-makers. Studying their involvement in the public engagement project of WPN will be a way to explore standardization processes on technologies of democracy and knowledge about them, and eventually analyze the construction of an international space of knowledge about democratic practices, and the political order it implies.

The production of expertise relies on mechanisms aiming to ensure objectivity. Quantification processes are ways to do so (Porter, 1996), as are organizational arrangements meant to construct boundaries between political decision-making and expertise production (Jasanoff, 1987). Some recent examples of the mobilization of international expertise are characterized by original constructions that re-define the science/policy boundaries\(^5\). In the case of nanotechnology at OECD, we will see that the science/policy boundary is extremely important to maintain, at two levels. First, the “expertise on policy” that OECD WPN is expected to provide in order to ensure international cooperation on nanotechnology is distinguished from the “expertise on risk” that another OECD body, the Working Party on Manufactured Nanomaterials (WPMN) focuses on. Second, OECD international expertise is not expected to interfere with national policy choices. In the case of OECD policy expertise, neutrality is the result of working processes involving negotiations among countries and mobilization of technical competencies, which this section will illustrate. It does not have to be taken at face value though. For the production of expertise problematizes nanotechnology and its relationships with “publics” in particular ways, which allocate roles and responsibility among publics and national or international expert bodies\(^6\). It does so not in the abstract, but through the instruments, like questionnaires and guidelines, on which it is based\(^7\).

The second boundary shows that the production of expertise at OECD WPN raises the problem of the separation between technologies of democracy and the production of

\(^3\) For an example about “upstream public engagement” see (Wilsdon and Willis, 2004). The prevalence of public engagement theme does not prevent ambivalences, as this paper will make clear.

\(^4\) Cf. (Callon, 1998) for similar analysis in the case of economics. Performativity of economics is to be understood less as the mechanic application of economic theories to the making of markets as the participation in the stabilization of economic orders. In this sense, the same approach is undertaken in this paper about the expertise on policy.

\(^5\) Climate policy is a telling example (Miller, 2001).

\(^6\) That the production of expertise constructs political orders is visible when one considers controversies about expertise making (Wynne, 1992).

\(^7\) Cf. (Lascoumes and Le Galès, 2001) on the instrumentation of public policy, and (Bruno et al, 2006) for an example about the use of benchmark in Europe and the political construction it enacts. One can argue that the mechanisms through which international policy expertise on nanotechnology is produced is itself a technology of democracy, well standardized and replicated on nanotechnology after having been deployed on other topics.
knowledge about them, and the topics on which they are supposed to be applied. Cases of replication of participation devices on nanotechnology (Laurent, 2009; Laurent, 2010) show that nanotechnology is a trial for these instruments, which then have to be adapted to the specificity of this domain. Therefore, the separation of expertise on technologies of democracy and expertise on nanotechnology should not be considered self-evident, but the outcome of processes that need to be described. In the case of the OECD WPN, it is the very dynamics of the production of international expertise that ends up separating devices meant to engage the public from the content of the public issues they are expected to answer.

In the following, I describe the process of expertise production at OECD WPN. After a short presentation of WPN, I describe the method used to gather information about public engagement in nanotechnology in member countries. I then turn to the production of guidelines expected to describe how to engage the public in nanotechnology. Eventually, I illustrate how boundaries are maintained, between “public engagement” and “nanotechnology”, and between “international expertise” and “national policy making”. The whole process will thus appear to render approaches that separate expertise on technologies of democracy from the making of nanotechnology easier to make their way in international arenas.

1. Producing international expertise about technologies of democracy at OECD WPN

After about a year of discussions of a U.S. proposal to the OECD Committee for Science and Technology Policy, in which the most active promoters of nanotechnology in the federal administration had been involved, a Working Party on Nanotechnology (WPN) was created in March 2007. The WPN “vision” stated that

> unlocking the potential (of nanotechnology) will require a responsible and co-ordinated approach to ensure that potential challenges are being addressed in parallel with the development and use of technology.

The WPN thus supports the “responsible development and use” of nanotechnology. WPN included from its beginning a concern for “public engagement”. It launched projects devoted to produce expertise on “public engagement in nanotechnology”, and thus became a site where expertise about technologies of democracy was to be crafted.

WPN organization follows that of all OECD working parties. The working party is run by a bureau composed of delegates of the most involved countries. Plenary meetings occur at regular intervals. They gather members of the OECD Secretariat, and delegates from member countries active in the working party. Countries may send one or several people to participate in the working party. In November 2008, the email list of the WPN delegates comprised about

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8 The head of the *National Nanotechnology Initiative* attended the CSTP meeting in Seoul in 2006 in which the proposal for a OECD work on nanotechnology policy was discussed.

9 I use quotation marks and italic to indicate quotes from OECD documents and discourse

10 WPN vision statement, available online.
a hundred names (mostly science policy administrative officials). WPN plenary meetings usually gather about 40 people from about 15 member countries.

Projects are presented and following steps agreed upon during plenary meetings. Each project is run by a steering group composed of a subset of the delegates involved in the working party, as well as members of the Secretariat. The Secretariat of the WPN was originally composed of Nathalie L.\textsuperscript{11} -who was sent as a by France as a contribution to the WPN, a senior staff member of WPN parent body, and, in later stages, two additional full time OECD policy analysts. Steering groups meet regularly by teleconferences or physically. Projects may mobilize external experts, especially through workshops hosted by steering group member countries\textsuperscript{12}.

In November 2008, the WPN projects were the following\textsuperscript{13}:

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project A</td>
<td>“Nanotechnology at a glance”</td>
</tr>
<tr>
<td>Project B</td>
<td>“Business Environment”</td>
</tr>
<tr>
<td>Project C</td>
<td>“International Cooperation”</td>
</tr>
<tr>
<td>Project D</td>
<td>“Outreach and Public Engagement”</td>
</tr>
<tr>
<td>Project E</td>
<td>“Policy Dialogue”</td>
</tr>
</tbody>
</table>

I will refer to Project D and its followers as the “public engagement project”. As a regular OECD project, the Public Engagement Project first gathered information from member countries through questionnaires, then identified “best practices” and produced a set of guidelines, called “Points for Consideration when Planning Public Engagement in Nanotechnology”, which were then tested in different countries. Looking at the evolution of the project and the production of expertise it implied will illustrate the ways through which consensual international order is produced, at what costs, for what kind of “international publics”, and for what nanotechnology.

2. Producing questionnaires – leaving room for multiple public engagements

An initial ladder model of “public engagement”

\textsuperscript{11} I anonymized the characters of this paper who work at OECD. Nathalie is a fictional name.

\textsuperscript{12} That I was closely involved with OECD WPN was a way to access the details of its work. I was invited as an external expert to participate in a workshop on public engagement in nanotechnology. When Nathalie left the WPN in December 2008, I was, as a French civil servant, offered her position. I worked one day a week for the WPN Secretariat in January 2009 for six months. The position interested me both as fieldwork and as an opportunity to explore with practitioners the potential articulations of public engagement in nanotechnology. It allowed a direct access to the work of the WPN and rendered ethnographical work possible. It also contributed to render visible some constraints that might have otherwise been left un-noticed.

\textsuperscript{13} They were later reorganized, but the new structure is of little interest for the understanding at this stage of the paper.
After the first WPN plenary meeting in May 2007, a steering group for the newly created Public Engagement Project was formed, in which Australia, Belgium, Canada, Denmark, France, Portugal, the Netherlands, the United Kingdom, the United States and the European Commission agreed to participate. The first step of the new Project D was to gather information: sending questionnaires to country delegates was rapidly agreed upon (this is an usual procedure at OECD). At that time, Nathalie had joined the WPN and was put in charge of Project D. The writing of the questionnaire started in November 2007, and circulations of successive versions among members of the steering group and the Secretariat took more than five months. Far from a neutral tool, the questionnaire was crucial to define public engagement. As such, it was an international negotiation issue.

The questionnaire attempted to draw a line between “communication”, and “public engagement”. The first part of the questionnaire addressed “communication campaign”, “audience”, “teacher training”, while the second proposed a definition of “public engagement”, which, albeit not explicit, appeared through questions such as the following, quoted from the first version of the questionnaire:

| c- Can you describe the main outcomes of public engagement in nanotechnology in your country? Have the outcomes been used in the planning of science and technology policies in the field? In which ways have they been useful? |

In this initial formulation, public engagement was thus understood as a process that provided “outcomes” that were to be used in the crafting of “science and technology policies”. Subsequent versions of the questionnaires added a scale on which the “effectiveness” was measured according to the level of “influence” on policy-making.

<table>
<thead>
<tr>
<th>5.2 On a scale of 1-10 rate how effectively these public engagement activities have influenced policies related to nanotechnology?</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Legislation, policies and/or guidelines developed</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

The original questionnaire thus proposed a model of public engagement, in which each mechanism can be assessed according to its position on a scale going from one-way communication of known information to public participation in regulation making. As it mirrors Arnstein’s “ladder of citizen engagement”, I will refer to it as the “ladder model of public engagement”. This model is directional: going “up the ladder” means increasing citizens’ influence on policy-making, and is thus understood as a better way to organize democratic life.

The original question about the use of the outcomes was then refined by the U.K. delegation (which by that time, had become leader of the steering group) and asked, in the last

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14 submitted to the members of the steering group in September 2007
15 As a law scholar, Nathalie was “concerned about the integration of the outcomes of these processes into the making of regulation” (interview with Nathalie).
16 Arnstein, 1969
version of the questionnaire, more direct questions about the “implementation” of the “results from your public engagement”. Question 5 was originally a yes/no question (“have the results from public engagement initiatives been implemented in policies related to nanotechnology?”), and became, in the final questionnaire, an open one that supposed that there should have been some sort of implementation in any case (see illustration below)

5- Describe how the results from public engagement initiatives in your country have been implemented in policies related to nanotechnology?

5.1- Please cite examples of the implementation of these initiatives:

**Beyond the ladder model**

The exchanges among the member of the steering group forced to reconsider the ladder model. The original question about the use of the outcomes of “public engagement was gradually complexified. It was divided into two, in the final questionnaire:

3. -Describe the main goals of these nanotechnology public engagement initiatives in your country?

4. -Describe the major outcomes and/or key recommendations that emerged from these nanotechnology public engagement initiatives in your country?

At that point the “goals” of the public engagement initiatives were considered uncertain enough to ask a question about them: the influence on policy-making was not the sole and unique goal any more. As a consequence, the “results” mentioned in question 5 were not that clear any more. If they were meant, in the original questionnaire written by Nathalie, to refer to recommendations possibly written by panel members after a consensus conferences or a citizens’ jury, the “results” as considered in the final question 5, could encompass a much wider meaning – concerning, for instance, lessons learnt about the engagement process itself- after questions 3 and 4 had introduced possibilities for important variety among goals.

The initial questionnaire asked for a description of the public engagement activities undertaken by each country. Members of the steering group felt a need to provide more guidance for delegates to fill out the questionnaire. A table was added to help them answer the questionnaire. The initial table was the following:

<table>
<thead>
<tr>
<th>Name of the initiative</th>
<th>Hosting institution</th>
<th>Form of the initiative</th>
<th>Main stakeholders involved</th>
</tr>
</thead>
</table>

It was subsequently refined (final version below)
The original table asked for the list of the “main stakeholders involved”, which was intended to cover all the actors participating in the engagement process. The addition of a column about “audience”, and the examples “children, students, general public…”, considered that the “public” who, in the ladder model, was expected to contribute to policymaking, was but one among many possible “publics”. For instance, “children”, sorted out according to their “age range”, constituted another public, whose engagement would certainly be different from that of the participating citizen of the ladder model. Hence, the greater attention put to details allowed not to limit the questionnaire to the framing of the ladder model.

**Questionnaire results: Not too strict a framework for “public engagement”**

18 countries replied to the questionnaire. Examples of answers to question 3 (main goals), 4 (outcomes, recommendations) and 5 (implementation of results) of the questionnaire help illustrate how the wording allowed for a variety of interpretations.

<table>
<thead>
<tr>
<th>Question 3 (main goals)</th>
<th>Germany</th>
<th>Korea</th>
<th>U.K.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not answered</td>
<td>to help general public enhance their understanding of nanotechnology and support for national activities initiated by government</td>
<td>To explore and develop various modes of upstream engagement in order to find out how these might assist in the beneficial development of nanotechnologies policy.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 4 (key recommendations)</th>
<th>Germany</th>
<th>Korea</th>
<th>U.K.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If informed and if interested, citizens are well aware of the chances of nanotechnological approaches (…). But they also do want to be informed about the possible risk (…).</td>
<td>There is positive attitudes on nanotechnology R&amp;D and business activities, however awareness on EHS issues started to appear (…)</td>
<td>There are concerns about the lack of knowledge about the human health and environmental risks (…). (…) There is strong support for fundamental science to arrive at answers to these questions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 5 (scale)</th>
<th>7</th>
<th>5</th>
<th>Not answered</th>
</tr>
</thead>
</table>

**Question 5 (implementation)**

<table>
<thead>
<tr>
<th>Germany</th>
<th>Korea</th>
<th>U.K.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(...) The BMBF launched the nanoTruck - a mobile information campaign on nanotechnology.</td>
<td>continued increase in public investment on nanotechnology</td>
<td>This remains a challenge for UK policymakers, since processes to date have yielded little in the way of new incisive results which might affect or alter policy.</td>
</tr>
</tbody>
</table>

Korea reported 10 engagement activities, among which “science ambassadors”, “science fair”, “exhibits”, that sought to “enhance the support” of “different audiences”, including “kids” and “students”. The U.K reported the activities done under the “upstream

<table>
<thead>
<tr>
<th>Scope of the initiative (national, regional, local, in a school, etc…)</th>
<th>Name of the initiative</th>
<th>Hosting institution</th>
<th>Form of the initiative (including the number of people involved)</th>
<th>Main stakeholders involved (as experts or directly involved in the delivery)</th>
<th>Target audience(s) (students, general public, women/men, children, indicate age range, etc…)</th>
</tr>
</thead>
</table>

17 The questionnaire was sent to “policy-makers” who were mostly WPN delegates. Consequently, some of those who answered had participated in the crafting of the questionnaire, as members of the Public Engagement Project steering group.

18 Environmental, Health and Safety
public engagement”19 banner (including a citizen jury – like mechanism called NanoJury), the objectives of which being that they eventually had “impact on policy” – for still disappointing results according to the U.K. delegate who filled the questionnaire (and could not answer the quantitative question on the impact on policy making). Germany reported “very effective activities” in so far as “people were interested”. As a consequence, the main “implementation of public engagement results” consisted in yet another information diffusion device (“Nanotruck”). Retrospectively, one can see that these three examples problematized “public engagement” in different ways. While the UK delegate, in pushing for “upstream public engagement” was close to Nathalie’s ladder model, the Korean delegate saw “public engagement” as a set of activities aiming to make sure there was “continuous increase in public investment” by fostering the enthusiasm of the national population. The German delegate framed “public engagement” as an access to information issue, thereby facing difficulties when people “do not care”.

It is clear from the example of the questionnaire that information gathering process is not just a simple task of collecting information about an unproblematic reality: the questionnaire had to leave enough room in the definition of “public engagement” for all members of the steering groups, and, more generally, of the WPN to participate in the questionnaire study, and thus be recognized as active players in the field of public engagement in nanotechnology. This implied re-opening framing that problematized public engagement in too strict a manner: the initial definition provided by the ladder model had thus to be expanded beyond the requirement of this very model. Hence the value of the various questions of the final questionnaire: they were so crafted that they could be applied to different understandings of what public engagement in nanotechnology could be, be it a public perception study, a science fair or a process of consultation with NGOs.

2. Solidifying guidelines

Gathering information was only the first step of the project. In a later process, “best practices” were supposed to be identified in order to produce guidelines about how best to engage the public in nanotechnology. During the April 2008 WPN plenary meeting, a definition of public engagement based on four characteristics was chosen, inspired by the work of British social scientists working on “public engagement in nanotechnology”20:

- Deliberative - emphasising mutual learning and dialogue;
- Inclusive - involving a wide range of citizens and groups whose views would not otherwise have a direct bearing on policy deliberation;
- Substantive - with topics selected that are appropriate to exchange; and
- Consequential - making a material difference to the governance of nanotechnologies.

The definition was then used as an overall framework for the whole Public Engagement Project. The original definition was explained to apply to “public engagement, including

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19 Upstream public engagement had been advanced in the U.K. as a central concern for the public management of emerging technologies (Wisdom and Willis, 2004).
20 Rob Doubleday, a British social scientist provided the definition
communication and outreach” in the subsequent documents and reports. Indeed, the distinction between “communication” and “public engagement” that the questionnaire has introduced was not re-stated after its results had been collected, and the guidelines to be written were supposed to deal only with “public engagement”. The definition was expected to cover all the mechanisms that the Public Engagement Project dealt with.

Delft Workshop

The crafting of the guidelines occurred during a project workshop that was organized in October 2008 in Delft, The Netherlands. Hence it is useful to describe in some details what happened during this workshop. Indeed, the workshop was expected to provide expert input to be added to the analysis of country experiences based on the results of the questionnaire. The workshop was organized as follows. The first day was a public event during which speakers (including myself) sent by different member countries gave talks about the status of public engagement in nanotechnology in their countries. It was followed by a one-day closed OECD workshop, in which people sent by their respective national delegations participated. The objective of the second day was to reflect on the initial results from the questionnaire study, and the outcomes of the previous day, in order to start working on the report of the public engagement project and elaborate preliminary guidelines (“broad principles for public engagement processes”), that would then be refined by the Secretariat and the steering group members to become the Points for Consideration.

Presentations made during the first day reflected the diversity of the country experiences as reported through the questionnaire. Two examples will illustrate this diversity. Arie Rip proposed to consider “reflexive governance” as a suitable framework for public engagement, and the possibility for civil society to act as watchdog, through, for instance, its implication in the making of “codes of conduct”. The American speaker, a member of the federal office coordinating the activities of the U.S. National Nanotechnology Initiative, of the U.S. delegation to the WPN and of the steering group for the Public Engagement Project, explained that “people are not rational” and behave according to the particular “frames” and “filters” through which they see the world – an unproblematic reality in her account. For her it was necessary to “train the trainers” in order to study public perceptions, identify the “frames” of particular “audiences”, and tailor the discourse accordingly.

For all their differences, the various perspectives could be said to fit in the project. In particular, it was possible to apply the definition of public engagement as “deliberative”, “inclusive”, “substantial” and “consequential” for all of them. For instance, public perception studies were to be made through “dialogues” involving “a wide range of participants” in discussion about “appropriate topics”. Such work was expected to inform “communication and dialogue strategies”. Hence the public perception understanding of public engagement in nanotechnology can be said to be “deliberative, inclusive, substantive and consequential” as

21 I was invited to speak as an expert sent by the French délégation, and could thus observe the entire meeting.
22 Some of them were the country delegates to the WPN, others (such as myself) were not.
23 A topic Rip, as a STS scholar, as studied in his scholarly work (e.g. Rip, 2006)
24 This is the position of communication scholars like Dietram Scheufele and David Berube, both personally known to the American delegate and cited throughout her presentation (see e.g. Scheufele, 2005)
the WPN definition contended. This is of course a different understanding of public engagement than that of Rip, or that of the ladder model described below. Yet WPN definition could be used to encompass this variety.\(^{25}\)

The presentations of the first day were synthesized at the beginning of the second by Nathalie and Jocelyn, the two Secretariat members that participated in the meeting. The discussion that followed immediately led to “enlarge the list of objectives”. This was “a real need” according to one delegate, and he mentioned “building networks” as an objective to be added. The list could not end there: “we need to add capacity” was restated several times, and remained a mysterious statement until the capacity-fan delegate explained that “public engagement often help people developing scientific capacity”. At that point Nathalie felt compelled to ask whether everyone still agreed with the definition of public engagement as deliberative, inclusive, substantive, and consequential. Being reassured by all the delegates’ strong support for this definition, she then showed on the screen the new list of objectives:

- information exchanges
- policy making
- exploring specific issues
- developing scientific capacity
- networking

Then what about “evaluating and monitoring”? Wasn’t it necessary to add something on this, which, over the course of the discussion, referred alternatively to “getting feedbacks from the public” and “knowing what public attitudes are”? It was indeed, and Nathalie added a line on her list. The discussion then followed with examinations of the different components of the questions to be asked, based on potential “points to consider”, suggested by Nathalie:

- audience
- size
- type of process
- preparatory material
- series of information activities
- deliberation/consultation beforehand
- organizers
- government
- NGOs
- scientists, natural and human scientists
- business
- outcomes
- type of outcomes (e.g. recommendations)
- use of these outcomes
- communication of these outcomes
- feedbacks and evaluation

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\(^{25}\) Whether the use of this definition is consistent with Doubleday’s own “upstream engagement” propositions (Gavelin et al., 2007) is another issue. Remind also that small adjustments to the definition were made (e.g. adding “including communication and outreach”) in order to ensure that it could be used by the project.
“Context” was added to the list, and the different items were discussed. For instance, questions about “audience” was expected include considerations about “age, sex, receptive or not receptive character”...

A description like this cannot pretend to be exhaustive. Yet it does give a sense of how OECD expertise on public engagement in nanotechnology was produced, that is, through a process of informal collection of bits of expert advice from the first day workshop, information gathered from questionnaires, personal experience of country delegates, and interventions from the Secretariat.

**Points for Consideration**

The workshop report restated the elements exchanged during the discussion among delegates, and thereby stabilized a set of guidelines, named “points for consideration”, which were supposed to be used “when planning public engagement in nanotechnology”. The December 2008 report of the project provided a first version of these guidelines, divided into 7 points for consideration. They were the following: “identify the context”, “be clear about your objective(s)”, “plan the process”, “select the activity”, “identify the organizers”, “know your goals / recognize success” and “learn and adapt”. Below is an example (point n°2 “Be clear about your objective”) taken from the Points for consideration document proposed at the November 2008 plenary meeting, in which readers will recognize the content of the discussion at Delft:

<table>
<thead>
<tr>
<th>Objective</th>
<th>Examples of questions</th>
</tr>
</thead>
</table>
| Communication about nanotechnology, its application and impacts | **Is your aim:**  
Information exchange,  
exchange of experiences / good practices around nanotechnology and current developments,  
understanding opinions,  
exploring a specific aspect of nanotechnology,  
other?                                      |
| Monitoring or evaluation                      | **Are you engaging in:**  
Monitoring of public attitudes to nanotechnology;  
evaluation of an awareness-raising campaign;  
counting audience figures (e.g. TV),  
other?                                      |
| Exploration of a specific issue               | **Is your need for:**  
Debate on a scientific issue or application of nanotechnology to a sector or issue (e.g. nanomedicine, nano and energy, nano and food),  
other?                                      |
| Developing capacities                         | **Are you seeking to develop:**  
Capacities in science and innovation, networking capacity? Other? | |
| Achieving a specific goal                     | **Is your target:**  
Achieving a specific level of knowledge amongst the target group, benefiting from local knowledge exchange,  
developing or implementing a new practice,  
gathering views on a proposal or initiative e.g. gathering public input for policy-making? |
| Others                                         |                                                           |
At this point the Points for Consideration were mostly solidified, yet discussions still occurred among members of the steering groups to make sure that public engagement as it emerged from the Points for Consideration could indeed encompass the variety of national experiences. For instance, a teleconference in March 2009 concluded that

“the definition of public engagement emphasizes two-way processes, but the beginning of the point for consideration document is more focused on informational, one-way processes. The document should be used for different types of public engagement activity.”

To restore the balance, examples were added at the end of the Points for Consideration document to show how the guidelines could work. To an example provided by Australia about a process called “Forum” made of series of public meetings on nanotechnology issues was added a case study about science shops. The Irish delegate added it as

“This methodology has more of a ‘bottom up’ approach, where publics actively ask questions (…), (and) want to be more involved in the processes of knowledge production.”

Both cases were used as examples at the end of the Points for Consideration to show how the boxes could be filed. The Points were thus proved to “work” since they could accommodate various experiences and still apply the common definition of public engagement to them.

**Constructing international expertise on public engagement**

As the Public Engagement Project evolved, the WPN needed to accommodate the perspectives of its different member countries. So the simple models that were proposed to make sense of public engagement - the ladder model (in the questionnaire), or the separation between information, exploration, involvement (during the Delft workshop) - needed to be complexified. The process of knowledge generation about public engagement in nanotechnology thus needed to make sure all activities potentially connecting “nanotechnology” and “the public” would be taken into account. This was done through a complex process during which the Secretariat members frame the possibilities for the intervention of national delegates (by, for instance, providing a quantitative description of the “impacts on policy making”, or initial “points to consider” to be used as a starting point for the discussion among delegates), national experiences that might appear contradictory are brought together through a questionnaire or in the process of guidelines writings, and details and refinements are proposed in order for all potential definitions of public engagement in

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26 It was by this time that I replaced Nathalie at the Secretariat. I experienced directly the solidification of the Points. As I wanted to change some of them, or add new ones, I was quickly reminded by my colleagues that the Points had been agreed upon by all members of the steering group after the Delft meeting, and then approved by all delegates during the November 2008 plenary meeting: the Points could not be modified.

27 Email sent by the Irish delegate

28 Empty tables were provided at the end of the Points for consideration document, which were supposed to be completed by policy makers according to the questions proposed for each of the Points.
nanotechnology to fit in. The process required careful crafting and active involvement of all steering group members, in order to allow multiple ways to problematize “public engagement” within the project, while maintaining its identity. The WPN definition was interesting for that matter since it allowed both to maintain a common identity for the project and the variations of the understanding of it across member countries. Yet there were also demarcations that needed to be maintained in order to produce an expertise that would hold value as that of the international organization.

3. Stabilizing demarcations – Producing objective international expertise

Demarcating between technical and political expertise

The Points for Consideration were meant to be addressed to policy-makers involved in the planning of public engagement in nanotechnology rather than any other random public issue. The specificity of nanotechnology had been a concern at the early stage of WPN: that “public perceptions have been lagging behind” in nanotechnology was one of the reasons for which the work on “public engagement” was so important. The questionnaire was sent to national actors involved in public engagement in nanotechnology, yet did not ask questions about nanotechnology issues. The Points for Considerations mentioned nanotechnology twice, in the “context” point, when it asked

“how is nanotechnology impacting on your society (if at all)?, Is nanotechnology being widely discussed in your country?”

These questions did not interrogate the content of nanotechnology public issues. The little consideration for nanotechnology technical issues was not incidental. There is indeed another Working Party specialized on nanotechnology, the Working Party on Manufactured Nanomaterials (WPMN). The separation of work between the two was to be carefully maintained, and this transpired in the everyday work practice of WPN. I describe below an example (among many) of a situation in which boundary-work had to be performed by the WPN Secretariat, and the principles of international expertise re-stated.

At the November 2008 plenary meeting, Austria proposed to host a roundtable that would aim to identify “governance frameworks” for nanotechnology. The link with the Public Engagement Project was clear for Clement G., the member of the Austrian delegation who proposed to organize the roundtable. A member of the Technology Assessment Institute in Vienna, he had been participating in a project called “NanoTrust” that seeks to establish consistent “risk governance” of nanotechnology through a variety of devices, including “platform of dialogues with NGOs”, and “dossiers” that provided information on topics such as “nano in food” or “nano in health”.

29 Excerpt from the preparatory document of a meeting held in Amsterdam in February 2007.
For some members of the national delegations, such initiative appeared as an opportunity to reflect on “new governance models”. The French delegation, for instance, repeatedly insisted on the need to push for the integration of publics’ perspectives in nanotechnology policy-making. Nathalie’s ladder model, for that matter, had been very well received by the head of the French delegation, for whom the “actual integration of public engagement into nanotechnology policy-making” mattered the most. Other initiatives taken in France for the “collective governance of nanotechnology’s risks” also followed the direction of the “new governance”. Without getting into the details of these mechanisms\textsuperscript{30}, one can notice that the French delegation was very much in favor of initiatives that connected the expertise about public engagement and the expertise about risks.

The organization of the roundtable was to be done by the Technology Assessment Institute and the WPN. Clement defined the focus of the roundtable as “policy-making in uncertainty”\textsuperscript{31}. The draft agenda proposed “parallel sessions” on “policy instruments for dealing with nanotechnology risks”, namely “codes of conduct”, “voluntary measures for the industry” and “participatory models and inclusion of lay people in regulatory processes”. The example of a specific nanoparticle (“possibly nano-silver”) was to be considered to illustrate ways to envision “risk governance in context of uncertainty”.

The agenda was not satisfactory for the WPN, because of the repartition of work between WPN and the Working Party on Manufactured Nanomaterials (WPMN). Hence a distinction that members of the Secretariat were concerned about, and that the risk governance roundtable was on the verge to ignore: “WPMN does risks, and we do policy”. Indeed, a senior staff member commented on the draft agenda quoted above and criticized it: it considered “risks and not benefits” and mixed up “science and policy”. He explained during an internal meeting:

\textit{“The mandate is clear: WPN does policy. We develop policy and benchmarks that ensure the responsible development of nanotechnology. WPMN does technical work. It asks whether the regulatory system is functioning for nanotechnology.”}

Therefore, any hint that nanotechnology risks would be looked at during the risk governance roundtable would be suspicious. It would threaten to shake the institutional repartition of work, and bring the Secretariat on the verge of going beyond its mandate. What was to be done then?

\textit{“You can’t do a meeting with nanotech risks. What you can do is governance. What are we trying to do ? What are the governance tools ?”}

Hence the solution: as “policy instruments in uncertainty” threatened to cross the line between technical examinations of risks and work on policy options, “governance” would be an appropriate framework. As a consequence, the WPN roundtable was eventually organized as a workshop on “communicating knowledge – communicating uncertainty”\textsuperscript{32}, which

\textsuperscript{30} See Laurent, 2010 and my forthcoming dissertation.

\textsuperscript{31} The quotes in this paragraph are excerpts from a draft version of the roundtable agenda.

\textsuperscript{32} Quotes in this paragraph are excerpts from the final version of the roundtable agenda.
examined “the path from risk assessment to risk management” in the first parallel session. “Participatory processes” and “voluntary measures” were still topics for discussion in two other sessions, yet at the condition that “it (was) not nanotech risks that were talked about”. As a consequence, neither the “participatory processes” nor the “voluntary measures” to be examined would potentially intervene in the definition of nanotechnology risks.

This episode thus allows me to serve as a breaching experiment, rendering visible what was otherwise so inscribed in everyday work practice that it does not have to be made explicit. This was probably the most explicit statement of the importance of the boundary between WPN and WPMN, between expertise on risks and expertise on policy. There were other situations where the boundary had to be made explicit, through a similar “breaching process”. Thus, a member of the French delegation proposed during a WPMN plenary meeting to inquire into “the possibility of a governance framework for nanomaterials risk prevention” and consider the “integration of stakeholders”. The proposal did not receive any approval. Indeed, it appeared to be “policy expertise”, and, as such, fell “within the area of expertise of the WPN” as it was later said by the Secretariat. French actors multiplied the propositions within WPN and WPMN that threatened to displace the science/policy boundary on which the work of the international organization was based: they were constantly rejected by the secretariat. For maintaining the demarcation between technical and political expertise is necessary for nanotechnology to be dealt with by the OECD within the framework of “responsible innovation”: “risks” are dealt with by the WPMN, “policy” by the WPN. Eventually, nanotechnology expertise at OECD needs to be demarcated as “technical” and “policy” to ensure that the organization can indeed produce it. Attempts to blur this demarcation by delegates (such as the WPN Austrian delegate, or the French WPMN one) thus imply additional work to make sure that it is maintained, and that delegates and staff members behave properly.

Attempts to link “public engagement” with the examination of nanotechnology’s potential risks prevent from separating policy expertise from technical examination. They were thus eliminated in favor of approaches that did ensure the separation of expertise on technologies of democracy from expertise on nanotechnology. This, however, was a contingent choice and the result of the purification work of the international organization.

Demarcating between (political) expertise and normative judgment

The science/policy demarcation is not the only boundary WPN needs to enforce, for the OECD expertise also needs to demarcate its international expertise from the national initiatives and choices. The risk governance roundtable incident had another dimension for that matter, since the original focus proved to imply that regulation was necessary. And that was problematic since

“It’s not our job to regulate EHS or to stop bad guys getting access to the technology or don’t do EHS issues.”

33 This echoes well known boundaries stabilized by expert institutions (Jasanoff, 1987)
34 Quote of the senior staff member
Hence, distinguishing between “policy expertise” and “normative statement” was a key concern. While the former was indeed the core of the WPN activity, the latter was clearly beyond the scope of its mandate.

In the Public Engagement Project, it was important “not to be judgmental” about what the country delegates might propose – even if their contributions might have contradicted the overall definitions agreed upon by members of the steering group (e.g. in the questionnaires, or, later, the definition of public engagement as “inclusive, deliberative, substantial and consequential”). Stabilizing the boundary between WPN “policy expertise” and “normative statements” made it difficult to deal with the issue of the evaluation of public engagement activities. The evaluation to be done was that of the Points for Consideration, i.e. the methodology, and not that of the engagement mechanisms themselves. Keeping the evaluation of public engagement at bay was a way to consider, as it was repeatedly said in meetings and written in reports, that “there is no right answer”,35 that “a lot depends on national context”, that “cultural contexts do matter”. Thus, the expertise of the WPN could not pretend to propose definite statements about how to do public engagement in nanotechnology. The WPN was to be “objective” in that it should not favor one (national) definition of public engagement over another one36. The “objectivity” at stake here is that of the international organization: it is not supposed to adopt one national viewpoint rather than others, and, as a consequence, abstains from judging national situations – which could pass as attempts to interfere with countries’ sovereignty. Thus, the production of the international objectivity goes hand in hand with the mechanisms, described in the previous sections, of the aggregation of national problematizations of nanotechnology and public engagement. It also contributes to frame them: for instance, abstaining from judging national situation renders the ladder model difficult to articulate, since this model implies an evaluation of public engagement mechanisms.

This did not prevent the evaluation issue of regularly popping up in discussions among delegates, email sent, reports written. Yet each time the issue of evaluation surfaced, the Secretariat was attentive to make it clear that it was “not the main point of WPN work”. In providing these precisions, the Secretariat made use of a “template” (see example below) meant to evaluate the “usefulness of the Points for Consideration”, and not, “the engagement methodologies themselves”. In fact, as a member of the WPN Secretariat explained to me, “we don’t care if particular mechanisms work or not, we want to check if the methodology (i.e. the Points for Consideration) is useful”, in order to refine them if needed.

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35 Quotes in this paragraph are mainly from people at the WPN Secretariat.
36 One could make the same argument for the WPMN, in which country delegates were keen “not to say that particular legislations are better than others” (quotes from a WPMN plenary meeting).
The “template” was constructed as a device aimed to ensure that the demarcation between policy expertise and “normative statements” be maintained. It shifted the objective of the Public Engagement Project from an initial “how best to engage the public?” to a more complex “what are the questions to ask in order to plan a mechanism that aims to engage the public, whatever that mechanism might be?”. The last expression is the product of my own effort to render explicit the position of the Public Engagement Project at its testing stage. This was not a position that delegates understood clearly, yet whereas the Secretariat never attempted to discriminate among ways to do “public engagement”, it did react to perturbations introduced by delegates to make sure the demarcations of WPN expertise were maintained. Therefore, the Secretariat could ensure that WPN expertise would not interfere with national policy-making – which it would have had it chosen to use the ladder model as an evaluation device of national public engagement initiatives.

**Political construction performed by international expertise**

The Points for Consideration was sent to all delegations for them to apply them on local exercises. They had to report on existing experience using the tables present for each of the Points. The he person in charge of a website called *Nano & Me* and addressed to concerned consumers filled in the tables for the U.K. delegation. The Irish delegates used a previously held series of public meeting at a university. Some of those who used the Points in the early stages of the process remarked that “they really made (them) think about the process”, and others said that they “were useful in raising relevant issues”: that the Points for Consideration were useful could be then written in the minutes of one of the teleconferences, and later restated during the WPN plenary meeting. In a later stage, the Points were to be tested in a number of voluntary countries. The final list of engagement activities on which the Points were to be applied comprised a French national public debate, the UK Nano & Me website, a series of Australian “public engagement activities” (e.g. “booths at public shows, discussions with scientists at community club meetings, online forums and engaging scientists with the public in scenario planning”), and six South African activities (such as “career profiling”, “nanotechnology exhibits” and “science cafés”, all aimed to “cultivate and stimulate interest in nanotechnology”).

The construction of “international public engagement” was thus to be made separate from the work about risks and technical issues. The mobilization of the “international public” was to be that of a collection of various national publics. The necessary ambiguity about it had as counterpart: the impossibility to talk about nano substances and their risks, the
construction of a separate “problem of the public”, without examining other problems. The international public was thus more than the mere addition of national publics gathered together by virtue of ambiguous enough definitions: certain problematizations of nanotechnology and the public could be more or less easily heard. Indeed, conceiving the role of “public engagement” as based on the study of public perception according to different “frames” of interpretation – which was the position the U.S. delegation proposed within WPN – could fit easily with the boundaries the work of WPN was based upon: it separated “nanotechnology” from the perception by various “publics”, and thus a technical expertise from a political expertise. It could be presented as an at-a-distance expertise, which would not evaluate national political choices but would do nothing but “describing” what the opinions were in the various countries, according to various criteria. By contrast, the French insistence on “reflexive governance”, of the inclusion of publics in the vary making of risk regulation fitted less easily. The first reduced nanotechnology to a problem of representation at a distance. The second could not be heard and was not articulated in other ways that Nathalie’s ladder model, and, later, through isolated propositions made by members of the French delegation: the constraints of the international organization and the boundaries it needs to enact constantly favor types of technologies of democracy based on the representation of unproblematic nanotechnology, and stable social groups, and tend to eliminate others.

Consequently, it is less the “influence” of the expert body that is worth examining than the very process of expertise production. For the internal organization and the constraints of international negotiation determine the type of expertise that can be produced, and, consequently, the problematization of nanotechnology and its publics. The constraints of the production of international expertise thus favored the technologies of democracy that were based on the separation between the devices and the topics on which they were expected to be applied. Problematizing nanotechnology in terms of the evaluation and management of public perceptions of uncontested technical realities was thus the most stable outcome of the process of expertise production at the OECD WPN. The international expertise on technologies of democracy was not the addition of national expertise but problematize nanotechnology in specific ways. It thereby produced a new geographical construction, a new “technological zone” (Barry, 2006), in which the stabilization of the international order prevented to connect public engagement with the actual making of nanotechnology.
References

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