

Selma Tilikete

Chapter 5

How does climate change expertise shape the form of a climate assembly? (and vice versa)

Abstract: Different types of randomly-selected citizen participation in environmental decision-making are taking place under the banner of ‘climate assemblies’. This chapter illustrates how the political function of an assembly (external dimension) is shaped by the conception of climate change produced by the interactions between citizens and experts within the process (internal dimension). The research that underpins this chapter is based on an ethnographic study of the practices of expertise in four climate assemblies at different levels of governance (Wallonia Citizens’ Panel, French Convention Citoyenne pour le Climat, European’s Panel on Climate Change and Health, and the Global Assembly). Using the concept of co-production (Jasanoff 2004), the main contribution of this chapter is to analyse how different ways of conceptualising climate change and engaging with expertise can influence how citizens’ assemblies relate to political institutions. Three types of political functions in climate assemblies are identified: citizens as public policy users; citizens as constituent assembly members; and citizens as legislators. Each entails a specific relationship between the way climate change is approached (place of emotions, contested debates, profiles of experts, etc.) and the different roles that climate assemblies can play in representative democracies.

Keywords: climate assemblies, expertise, Science and Technology Studies, coproduction, political ecology

1 Introduction

When climate assemblies deliberate about climate change, are they deliberating about the same issue?¹ Researchers have analysed the diversity of climate assemblies in terms of internal design (Courant 2020) or integration into climate governance (Boswell et al. 2023). Less have focused on the diversity of climate change conceptions developed in climate assemblies. However, these may differ widely, resulting in very different climate policy proposals and political functions for climate assemblies.

Based on the observation of four climate assemblies at different governance levels: the Walloon Citizens’ Panel for the Climate (2021), the French Citizens Convention for Climate (2019–2020), the European Citizens’ Panel on Climate change, Environment and Health (2021–2022) and the Global Assembly on the Climate and Ecological Crisis

¹ I would like to thank Stephen Elstub and Dorota Stasiak for their valuable comments on earlier drafts of this chapter.

(2021), this chapter categorises climate assemblies according to their relationships to expertise. Our assumption is that the political function of an assembly – its external dimension – is shaped by internal dimensions, specifically the conception of climate change produced by the interactions between citizens and expertise within the process. In other words, the relationship to expertise in climate assemblies produces and reveals the potential political roles of randomly-selected citizens (cf. Escobar 2017). Three different types are identified. The first gives to randomly-selected citizens a public-policy user function in a context where climate policies can lead to restrictive and, sometimes, unpopular measures. The second has more affinities with a constituent assembly. The ongoing global disaster pushes to transform the most fundamental frames of political decision-making and randomly selected people can make proposals to change the constitutions in a symbolic way. The third relates climate change to ideological and politically profound debates, and the functions of randomly-selected citizens are better able to be combined with other forms of political action, particularly non-institutional ones. Each of the three types – carried by different types of actors – involves a specific interrelation between the way climate change is approached (e.g. place of emotions, debates, and profiles of experts) and how it can find a place in political systems.

To develop this, the analysis crosses the literature on participation in political science with the literature on expertise in science and technology studies (STS). The concept of “co-production” as formalised by Sheila Jasanoff and others in the book *States of Knowledge* (2004), is particularly useful. Because it combines the way social hierarchies and knowledge are produced, diffused, and used, co-production offers a method to forge close links between inputs from political science and from STS, in order to better understand social transformation.

After a short literature review in section 2, we introduce the concept of co-production and its empirical implications in section 3. In sections 4 and 5, we present the cases and the method. Section 6 is devoted to the presentation of the typology.

2 Literature review

In the 1990s, a critical reflection on expertise began to be formalised, particularly from STS British researchers (Wynne 1989; Jasanoff 1987; Irwin and Wynne 2004;). This critique emerged in a broader period of questioning science as a pure and autonomous field of production (Knorr-Cetina and Mulkay 1983; Collins 1992). These researchers made visible the exclusion of citizens from political decisions based on technocratic values (Wynne 1989; Callon 1998;), and the social construction of experts’ legitimacy (Jasanoff 1998). At the same time, scientific work has accompanied and even encouraged political experiments and institutional reforms aimed at broadening public participation in political decision-making, particularly with regard to health and environmental risks (Callon 1998; Callon, Lascoumes, and Barthe 2001; Sclove 2003).

At the turn of the millennium, research into expertise took two turns. On the one hand, the theoretical critique of expertise was lessened in favour of a confrontation with the conditions under which the opening of expertise could be limited – the “problem of extension” (Collins and Evans 2009). What this sociology of expertise has in common with political science on deliberative or participative processes is that they both propose principles, and normative procedures, for the intervention of expertise in deliberative systems, advocating the recognition of a diversity of relevant knowledge for policymaking (Sintomer 2008; Nez 2011), the need for expertise pluralism (Stirling 2008) or contradictory debate (Manin 2021). On the other hand, the enthusiasm of the early days was soon overtaken by a more critical view of the institutional arrangements for public participation in policymaking. These studies show that the transformation capacity of ‘experts’ and ‘laypeople’ relationships by mini-publics is very limited (Levidow 2007; Topçu 2013). It depends on the issues at stake, how these are framed, and the balance of power between concerned actors (Irwin 2001).

Studies of expertise in climate assemblies found that the initial choices of expertise given to assembly members are crucial in shaping the subsequent behaviour and choices of the assembly (Muradova et al. 2020; Thompson et al. 2021). One of the particularities of climate change as a subject for deliberation is its “wicked” character. This requires paying particular attention to climate change conceptions in assemblies. Involving assembly members as early as possible in the choice of expert witnesses and information is cited as a key practice in the process (Elstub et al. 2021), as well as varying the ways in which climate knowledge is communicated (Frøslee Ibsen 2023). While many studies have a procedural perspective on expertise provision in climate assemblies, and look for practical improvements, others have a more discursive point of view. At a global scale, deliberations on climate change have been studied through environmental discourse analysis, applied to global climate assembly experiments (Curato et al. 2023). The idea is either to advocate the importance of spaces for deliberation between these different discourses on the environment (Dryzek 2012), or to defend minority voices in the face of the dominance of certain discourses on the environment at an international level (Bäckstrand and Lövbrand 2007; 2019).

It is in this latter perspective that this chapter fits in, but by supplementing the discursive approach with a consideration of the materiality of expertise provided and used. Expertise is considered in a very broad sense. First, the term ‘expertise’ is used instead of ‘expert witnesses’ (even if they will have a great role in this analysis) to take into account the knowledge used by citizens that did not come from specific experts e.g. documents, books, media articles, audiovisual materials, citizens’ testimonies. Second, expertise is not considered as the monopoly of socially legitimate expert witnesses. Expertise used to construct assembly proposals is analysed regardless of the source.

3 Co-production

The concept of co-production answers two pitfalls of expertise. The first one is the idea in early STS (Callon and Latour 2012) that social structures determine the production of knowledge. This does not mean that knowledge is false, but the concept of co-production tries to go beyond this basic notion. Secondly, that “nature” explains the way we structure our societies. From Jasanoff’s perspective, both are co-produced simultaneously:

In broad areas of both present and past human activity, we gain explanatory power by thinking of natural and social orders as being produced together: (...) Briefly stated, co-production is shorthand for the proposition that the ways in which we know and represent the world (both nature and society) are inseparable from the ways in which we choose to live in it. (Jasanoff 2004, 2)

This chapter proposes to see climate assemblies as spaces of co-production. They bring together different actors who do not have the same conception of what is, and what should be, public participation in climate policies. Because climate assemblies are not yet clearly integrated in political systems, the debates are particularly salient in and around them, and their future remains (relatively) open. In that sense, they represent suitable spaces to understand how an approach to the “nature” of climate change involves a certain form of political assembly, and vice versa.

The concept of co-production encourages us to conduct empirical research. The interactions between citizens and expertise observed within climate assemblies are shaped by social structures and inequalities that pre-exist and considerably reduce the room for manoeuvre of those who are not in a dominant position. To understand that better, and integrate larger social structures in the analysis, the research proceeded at different scales.

Three levels of analysis were used for each climate assembly, making links between their internal and external dimensions: the precise elaboration of climate policies by assembly members; the more general design of the climate assembly; the place and reception of the assembly in the relevant spaces of society.

4 Overview of four climate assembly cases

This study comprises different levels of governance at which climate change is discussed: regional, national, European, and global. The case selection was based on the idea of varying the main characteristics of climate assemblies as much as possible. The objective is not to compare them strictly but to historicise each case and the crossing of ideas, actors, and practices between them (Werner and Zimmermann 2003).

The analysis is based on a qualitative survey of the relations to expertise in four climate assemblies, whose main characteristics are summarised in Table 5. 1.

Table 5.1: Main characteristics of four climate assembly cases

	French Citizens' Convention for Climate (2019–2020)	Walloon Citizens' Panel for the Climate (2021)	European Citizens' Panel on Climate change, Environment and Health (2021–2022)	Global Assembly on the Climate and Ecological Crisis (2021)
Context and initiator	Initiated by the French president in a very turbulent political and social context (Yellow Vests movement).	Initiated by the Walloon administration, after the appointment of the ecologist Philippe Henry as vice-president of the Walloon government.	Initiated by the three European institutions in the frame of the “European Green Deal”.	Initiated by international NGOs and foundations ² .
Number of assembly members	150	50	200	100
Place	Paris, online	Online, Liège, Charleroi, Namur	Strasbourg, online, Warsaw	Online
Mandate	To “define the structural measures to achieve a reduction in greenhouse gas emissions of at least 40% by 2030 compared to 1990, in a spirit of social justice” (Philippe 2019). The president promised to pass them on “unfiltered” to parliament, referendum, or direct regulatory application.	To update the “Air Climate Energy Plan” with inputs from public participation.	To construct concrete ideas about the future of the European institutions, and about the European policies on different themes including climate change. During and after, the citizens' assemblies proposals have been discussed through Conference Plenary including a few assembly members and different representatives of the European institutions.	To answer the question “How can humanity address the climate and ecological crisis in a fair and effective way?” and feed the deliberations of COP26.
Format of the recommendations	A report of 147 measures (Convention citoyenne pour le climat 2021), most of them very precise.	A report of 168 recommendations (Panel citoyen Wallonie 2022), most of them very general.	A general report of 49 proposals (six on “Climate change and the environment”).	<i>A People's Declaration for the Sustainable Future of Planet Earth</i> including a Preamble and seven principles.
Main features of expertise	- A great number of expert witnesses interventions in plenary	- Process of “reverse expertise”: development of ideas and	- Process of “reverse expertise”: program based on the assem-	- A mix between different practices (Curato et al. 2023).

2 See: <https://globalassembly.org/about-2> (accessed 20.09.24).

Table 5.1 (Continued)

	French Citizens' Convention for Climate (2019–2020)	Walloon Citizens' Panel for the Climate (2021)	European Citizens' Panel on Climate change, Environment and Health (2021–2022)	Global Assembly on the Climate and Ecological Crisis (2021)
	ries and thematic groups in a “top-down” manner (Giraudet et al. 2022). - A “support group” consisting of fourteen experts – most of whom had an engineering or economics background – to help with the production of proposals.	proposals without expert witnesses input (except a pre-written technical “kit” on climate change). - Only three expert witnesses interventions almost at the end of the process.	bly members’ knowledge and questions. - The few expert witnesses are mostly members of the European institutions.	- A collective reading of an “information booklet” written by the Knowledge and Wisdom Committee. - A dozen expert witnesses presenting on specific subjects through video recordings. - Some sessions devoted to the presentation of climate change experiences by assembly members themselves.
Impacts on climate policies	Only a few of them were implemented through the climate and resilience law (LOI N° 2021–1104 2021) or other legal texts (*Plan de relance³ 2020; LOI N° 2020–105 2020).	The “Air Climate Energy Plan 2030” written by the public administrations that launched the panel, includes most of the recommendations (Gouvernement Wallon 2023).	Proposals are still being followed up by the relevant institutions.	In the middle of the process, a few members presented the first version of their Declaration at COP26. No follow-up by specific institutions.

5 Method

The analysis of these cases is based on direct observation, interviews, and content analysis of documents and press coverage. The data gathering process was not identical for each case. It was constrained by the dynamics of the research groups, the practical aspects of the CAs, and access to the cases. Nevertheless, the amount and quality of data collected for each case enabled comparative analysis.

³ See: <https://www.economie.gouv.fr/plan-de-relance>.

Table 5.2: Overview of data collection

	Interviews	Direct observation
French Citizens' Convention for Climate	- conducted by members of the research team⁴ and by myself - citizens 19, expert witnesses 4, organisers 5, facilitation team 2, members of the government 1	- group "Produire et Travailler" - plenary sessions
Walloon Citizens' Panel for the Climate	- conducted by members of the research team⁵ and by myself - citizens 6, expert witnesses 2, organisers 3, facilitation team 2, NGO member 1	- working groups - plenary sessions - organiser committee meetings
European Citizens' Panel on Climate change, Environment and Health	- conducted by myself - citizens 2, expert witness 1, organisers 4, facilitation team 1	- working groups - plenary sessions
Global Assembly on the Climate and Ecological Crisis	- transcriptions made by the research team⁶ - citizens 14, expert witnesses 2, organisers 13, community hosts 9, facilitation team 3	- working groups - plenary sessions

Documents produced by the organisers, and online media articles in English and French, were analysed. The minutes of meetings of the Knowledge and Wisdom committee were also accessible for the Global Assembly case.

The focus of the analysis was on practices and discourses on expertise, according to each level of analysis identified in section 4. During fieldwork, we noticed that different relationships to expertise were visible, and produced various approaches to climate change and to the political functions of randomly-selected citizens. We then used the concept of co-production to understand this process and applied it to the four cases to construct the typology.

⁴ I thank Bénédicte Apouey, Nathalie Blanc, Simon Baeckelandt, Dimitri Courant, Maxime Gaborit, Laurence Granchamp, Hélène Guillemot, Laurent Jeanpierre, Jean-François Laslier and Bernard Reber for common interviews or for sharing their interview transcripts with the team.

⁵ I thank Maxime Gaborit, Elisa Minsart and Thé Nam Nguyen for common interviews or for sharing their interview transcripts.

⁶ I thank Nicole Curato, Azucena Morán, Melisa Ross, Lucas Veloso and Hannah Werner for leading and sharing the interviews in the deliberative experience research cluster.

6 Typology

This section presents a typology of the potential political functions of climate assemblies. This typology is based on the observation of strong affinities between a) the ways climate change is approached by the assembly b) the citizens' function in the elaboration of the proposals c) the possible integration of climate assemblies in political institutions. Three "forms" of climate assemblies are distinguished. Each form does not correspond to one assembly observed, as most of them mixed different forms in a varied equilibrium. The typology synthesises the variety of situations observed and aims to invite reflection on the various political ecology projects at play in current climate assemblies. The following sections describe the three types and Table 5.3 summarises them.

6.1 Citizens as climate policy users: deliberating on potentially restrictive measures

At the fourth session of the Citizens Convention for Climate (CCC) in Paris, in November 2019, the *Housing* group is refining one of its main proposals. The discussion centres on three questions raised by the expert witnesses: should the renovation of housing be partial or comprehensive? Should renovation be compulsory or an incentive? What amounts of aid should be available, and what thresholds should apply? As they move into the details of this climate policy, economic and legal knowledge play an important role in the discussions. Sébastien Treyer, director of the Iddri think tank⁷, is a constant presence in the group's work: he frames the questions given to the members, answers their queries, and points out any omissions. The renovation methods chosen in the final proposal are more ambitious than those generally discussed between experts and politicians in traditional political arenas⁸. Afterwards, the government will revisit these terms and conditions to reduce their scope. In the Climate and Resilience Law, for instance, the renovation of buildings will no longer be compulsory, but rather an incentive⁹.

In Namur (Belgium), the fifty assembly members are divided in small groups across a big room. Each group is working on a part of the proposals already elaborated by the different thematic groups. No expert witness or facilitator leads the discussions. The aim of this sequence is to "pass the proposals through a funnel". The funnel being designed according to criteria of impact on the reduction of greenhouse gas emissions and social acceptability. They sit in a semi-circle in front of a three-entry table. For

⁷ See: <https://www.iddri.org/fr/iddri-en-bref> (accessed 20.09.24)

⁸ I thank Louis-Gaëtan Giraudet for sharing this analysis.

⁹ At the "response to government response" session in February 2021, the assembly gave the government a score of 3.3/10 for how it took this proposal into consideration.

each proposal, they have to position themselves individually (using a post-it note), indicating where to place the measure (from 1 to 3 on the impact scale, from 1 to 3 on the acceptability scale).

Unlike the CCC, the Walloon panel saw no expert witness. Its organisation was underpinned by a certain suspicion about external expertise, which could constrain the citizens' considerations and imagination. The organisers highlighted the "day-to-day expertise" of assembly members, which would enable them to take a completely different look, "out of the box", at Walloon climate policies. At the same time, the assembly is meant to contribute to the most technical part of climate policymaking. The objective of the administrative and expert bodies is, above all, to better judge the social acceptability of the measures they propose – and to potentially come up with ideas that the administration had not thought of. The categorisation by citizens of their proposals is therefore an essential aspect of the final report.

According to our analysis, these two scenes share a co-productive process that gives shape to a certain conception of climate change and citizen participation in its governance: citizens are transformed into climate policy users deliberating on potentially restrictive measures.

Economic and engineering knowledge dominate approaches to climate action – with an important role given to private/public think tanks or senior officials in the framing of the issues at stake (through technical documents distributed at the beginning of the Walloon Panel, and through the choice of "support group" expert profiles in the CCC). The difference is that the division of roles between citizens and experts was chronological in the Walloon Panel (the panel was followed by the work of the experts) as opposed to the French CCC (in this case, the assembly had to produce a legally precise report). In both cases, the proposals are elaborated according to the most polluting sectors of human activity. Climate change is seen as a quantified problem of greenhouse gas emission rates to be reduced. One of the consequences of this frame is that the deliberation remains focused on climate change, and the articulation between climate change and other environmental problems is not considered. The tools used to frame the climate problem are mostly economic: taxes, subsidies, market mechanisms, in order to introduce the climate variable in the economic system. In some cases, as in the French example quoted, the proposals of the assembly go beyond the terms and conditions discussed in expert and political arenas, but they can also stay very close to them. Another characteristic of this form of co-production is that the randomly selected assembly works in a space quite "protected" from outside influences. The idea that the assembly should deliberate in a confined and "non-biased" space is relatively present among its organisers, following in that sense a deliberativist vision of the mini-public (Blondiaux and Manin 2021).

This first type of climate assembly is promoted mainly by public expert agencies, environmental ministers' private offices, governments, and liberal think tanks. The idea behind this type of assembly is summarised by Stéphane Cooks, the president of the AWAC, the Walloon expertise agency which organised the Walloon Citizens'

Panel and was then in charge of incorporating its proposals into the Air Climate Energy Plan.

What we're asking is to change the world as a whole in a fairly record time, which is twenty, thirty years... What we're asking the population to do is something that has never been done before, in a system where mistrust has never been as high as it is now... So, I think we need to involve the public as much as possible in these processes. So that they are aware of what is at stake, so that they are involved in the measures, and so that they understand where we want to take them. (...) However, I think that citizens in general... are always faced with new constraints: "They're going to stop me driving" ...¹⁰

Because tackling climate change involves potentially unpopular policies, involving citizens as soon as possible in the decision-making process is crucial. It allows experts, administrations, or governments to measure the acceptability of the (restrictive) solutions they promote. The main objectives are not in deliberation: citizens deliberate on the implementation conditions or choose between several options. In France, François de Rugy, the former minister of the ecological transition, judged that the CCC "missed" its mandate as soon as assembly members chose not to deliberate on the carbon tax because of its sensitive dimension (the Yellow Vests movement was still ongoing)¹¹. According to him, the function of the assembly was clearly to pass a carbon tax law through a process that would be more legitimated by the population.

This co-productive form of assembly opens specific possibilities for their future. It has affinities with regular political processes, backed by clearly identified institutions to which they provide advisory opinions. This is the case for the follow-up to the European Citizens' Panels within the European Union. The European Commission has already reused this process on different subjects three times between 2022 and 2023, and wishes to make the use of citizens' assemblies a permanent feature of the European policymaking process¹².

A proposal to make the assembly's reports more binding in the policymaking process has also emerged in France after the CCC. Several authors, including Thierry Pech, the co-president of the CCC, director of the influential think tank Terra Nova¹³, suggested allowing the government and the parliament to refuse a proposition of the assembly, but with the obligation to substitute a measure with equivalent effects (Saujot et al. 2020; Pech 2021, 87;). This political vision is typically produced at the same time as the climate problem: a problem involving measurable solutions that could be substitutable without losing their sense. This conception of the function of the assembly

¹⁰ Interview with Stéphane Cook, president of the AWAC, via videoconference, 03/10/2022.

¹¹ Interview with François de Rugy, former minister for the ecological transition and solidarity, via videoconference, 14/12/2022.

¹² Information given by Gaëtane Ricard-Nihoul, member of the European Commission, during an interview via videoconference, 11/07/23. See: https://citizens.ec.europa.eu/index_en (accessed 20.09.24)

¹³ See: <https://tnova.fr/> (accessed 20.09.24)

– focused on the quantified impacts of the proposals – could not work with the type of assembly that will be described in the two other categories.

6.2 Citizens as constituent assembly members: deliberating within the “planetary limits”

While the first form of assembly seems to dominate the climate assemblies observed, other types also emerged. First, because the assembly members themselves usually questioned and transgressed the mandate and the frame of the deliberation. In the French case, the members chose to elaborate proposals tackling the sixth extinction of species, even if it was seen as “out of mandate” by many. Second, the role of certain environmental associations, foundations and think tanks was important in the promotion of climate assemblies in Europe, and oriented their implementation in slightly different directions. This was particularly the case in France, because the collective *Gilets Citoyens* who negotiated with the government formed half of the governance team of the CCC, as well as in the Global Assembly, because it was organised and founded by international associations and foundations.

In the Global Assembly, the way the Declaration was written clashes with the elaboration processes described earlier. During the first sessions of the Global Assembly, the members discovered collectively the different chapters of the “information booklet” written by the Knowledge and Wisdom Committee, particularly centred around South/North inequalities, the role of colonialism in the environmental crisis, but also the IPCC and IPBES results and scenarios. After each moment of reading, the first question of the facilitator was about how they *felt* in front of the information. The members were encouraged to speak about environmental problems through their emotions. Local experiences, knowledge and beliefs were also welcome.

In the CCC, a proposal to criminalise ecocide was elaborated within the assembly, even if it did not cut greenhouse gas emissions directly. The proposal was first introduced in the assembly by the activist and legal expert Valérie Cabanes, who wrote an essay on this subject (Cabanes 2016). It was then carried on by an assembly member, particularly touched by this idea. He solicited the help of legal experts from within the process (from the “support group” but also a randomly selected legal expert) and out (he chose to get back in touch with Valérie Cabanes). After hours of work outside the process, he came back in the CCC with a USB key containing a formulation of the proposal. His discourse was received with an intense emotion by the other members, shown by a standing ovation.

In those moments, the assembly members of the GA and the CCC are not seen and do not see themselves as focussed on the “day-to-day”, but on the “long-term”. Those scenes of co-production shape a second form of climate assemblies. They are thought as avoiding the most important short-term biases of liberal democracies: the imperatives of polling, electoral rhythms, and the historical foundations of modern democracies (Rosanvallon 2014). The idea behind this type of relationship to expertise is that

due to the emergency and the seriousness of the environmental crisis –which are presented and reformulated by the assembly members with a catastrophist¹⁴ tone– the frames of political policymaking must be rethought. Citizens work with different kinds of material (e.g. testimonies, figures, and emotions) in and outside the process, and are often helped by legal experts, particularly those specialised in environmental and constitutional law.

The “nine planetary limits” scientific model (Rockström et al. 2009) is one of the main frameworks for understanding climate change. This vision is often supported by environmental NGOs and those defending democratic ideals, involved directly or indirectly in climate assemblies. It links the inability of contemporary societies to cope with the climate emergency to a democratic crisis. Climate change is also primarily a global problem. A member of Missions Publiques, an agency specialised in citizen participation, explains that one of his colleagues who moderated the CCC proposed to use satellite images of the earth to remind the assembly of the subject of the discussions.

Jean¹⁵ proposed that between each discussion session, we should take four minutes to look silently at the earth as it rotates. Why should we do that? Because that’s what we’re talking about. We’re not talking about increasing the bicycle allowance from 120 to 160 in the new law on what’s-his-name, paragraph 2, article 50, but about... planet earth and that’s what we’re doing. The governance committee systematically refused, saying it was esoteric.¹⁶

The climate problem is considered in all its emotional and ethical charge. The way climate change is conceived pushes for a constituent function: it can help create a strong symbolic moment for the community concerned. The objective is less to build concrete solutions to tackle GHG emissions, than to bring the community together around a common challenge and/or amend foundational texts to take into account the ongoing environmental disaster.

6.3 Citizens as legislators: deliberating in the battlefield of climate change

This third form of co-production was observed only in one climate assembly, and at the margins. It was in the French CCC which, because of its important political crisis context, was flexible enough to allow for different kinds of co-production to emerge.

During the elaboration of the proposal to reduce working hours with no change in pay, disagreements and conflicts were clearly expressed. This proposal is the only one which was introduced in the assembly by a member, and not mentioned by any speak-

¹⁴ The use of this adjective isn’t pejorative (Semal 2019).

¹⁵ The name has been modified.

¹⁶ Interview with a professional facilitator, member of Missions Publiques, via videoconference, 15/08/2023.

ers. The proposal provoked a lot of debate in the working group and in the plenary. For some, it was simply out of mandate: it had nothing to do with the climate problem. “We are not in a political meeting”, said one of the opposing members¹⁷ – referring to the fact that this proposal is historically very left-wing in France. The few members who worked on this proposal used knowledge coming from social movements (Yellow Vests), associations (ATTAC) and unions (CGT). It was the only one that was rejected at the final vote by the assembly. A few other proposals like this one were elaborated within the CCC, such as the proposal to change the CETA treaty and another to tax the dividends of the largest companies to finance the ecological transition.

This form of co-production favours a conception of climate change as a problem of limits that involves collective discussions on the productive activities of a society and on the obligation/incentive options. It also opens a reconsideration of capitalism and discussions on de- and post-growth. The controversies they give rise to are linked to conflicts of political ideology, because the proposals have already been articulated by some parties or movements as a politically-motivated response to climate change. By developing these kinds of measures, the assembly members strive for “valuation”, in the sense given to this term by Dewey (2011; Prairat 2014): ‘valuing’ an end and ‘appreciating’ the means to achieve that end. In summary, climate change is seen as a battlefield (Keucheyan 2014), a space of ideological and social conflict that needs to be re-articulated with existing political oppositions, or thought in their novelty.

The expert witnesses have a less consistent role in this form of co-production than in the other two. The initial information can be used by the citizens in their elaboration, mainly the characteristics of emergency and the extent of climate change. In order to elaborate those proposals, assembly members read different types of material (newspapers; scientific articles mentioning experiments in other countries, *etc.*), exchanged views about their social positions and values (on work especially), and met different actors outside the assembly (experts they chose, social movements, *etc.*). It is difficult to observe a specific kind of science used in the elaboration of the proposals.

This form of assembly is much more unpredictable than the first two. It could not happen without a particular political and social context where the traditional instances of policymaking are strongly challenged. This form of assembly doesn’t reinforce the legitimization of the existing institutions, but destabilises them and forces them to carry out more or less extensive reforms. In the CCC, the Yellow Vest context forced the assembly to take into account social actors beyond the mini-public and to incorporate political and contextual elements into their deliberations (Gaborit 2022). The “success” of this form of assembly cannot be prepared through procedural arrangements, because it is profoundly shaped by the spatial and time-related context in which it unfolded. In this sense, there is little point in exporting it as a design, even if it can influence other forms of assembly and is influenced by others.

¹⁷ Observation notes on the CCC.

Thus, this type of assembly works more smoothly with social movements, protest assemblies and other forms of non-institutionalised participation (Gaborit, Jeanpierre, and Rozencwajg 2022). The relative flexible relationship to expertise plays an important role in this openness. It moves away from the idea that good environmental decisions should be the result of deliberation based solely on people's practical knowledge, or of work closely monitored by experts in the ecological transition, or that a "slap in the face" by an alarming presentation of the climate situation is necessary for the assembly to be up to the challenge. These different spaces of expertise exist within the assembly, but are shaped and distorted, opening up other forms of mobilisation of expertise that are more porous to the outside world and initiated by the assembly members themselves.

Table 5.3: Summary of the typology¹⁸

	Citizens as climate policy users: deliberating on potentially restrictive measures	Citizens as constituent assembly members: deliberating within the planetary limits	Citizens as legislators: deliberating in the battlefield of climate change
Main characteristics about expertise	- economic and engineering knowledge dominate - constant expert support or promotion of the "day-to-day" expertise of assembly members - fluidity in the production of proposals - promoted by public expert agencies, environmental ministers' private offices, governments, liberal think tanks	- legal knowledge dominates - catastrophist tone based on IPCC report readings - emotions and ethical questions expressed and used in the production of proposals - promoted by environmental NGOs, participatory democracy NGOs	- no specific kind of knowledge dominates - use of knowledge and ideas coming from social movements, associations, unions, parties - openness, constant back and forth between use of expertise inside and outside the process - disagreements and conflicts clearly expressed (between social groups, political visions)
Approach to climate change	- climate change seen as a quantified problem of greenhouse gas emission rates - no link with other environmental problems - mostly economic solutions (taxes, subsidies, market mechanisms)	- climate change seen as a global problem framed in the planetary limits model - insistence on the emergency aspect of climate change - mostly institutional forms / legal texts amendments solutions	- climate change seen as a space of ideological and social conflict that needs to be re-articulated with existing political oppositions, or thought in their novelty - a problem of limits that opens reconsideration of

¹⁸ Each column summarises and simplifies a kind of interaction with expertise observed in climate assemblies. The first line corresponds to the observed elements characteristic of a certain relationship to expertise. The next three lines correspond to what these "ingredients" co-produce.

Table 5.3 (Continued)

	Citizens as climate policy users: deliberating on potentially restrictive measures	Citizens as constituent assembly members: deliberating within the planetary limits	Citizens as legislators: deliberating in the battlefield of climate change
			capitalism and discussions on de- and post-growth
Randomly selected citizens function	- deliberating on the implementation conditions (detailed report), or choosing between several technical options (large recommendations) - showing levels of acceptability for different kinds of proposals	- rewriting founding political texts to take into account the unprecedented and serious nature of the environmental situation - representing the long-term (and even the more-than-humans) - bring the community together	- 'valuing' an end and 'appreciating' the means to achieve that end - decide between major economic options, rearticulate traditional political conflicts with the environmental crisis - develop positions on issues specific to political ecology
Possible integrations of climate assemblies in political institutions	- affinities with regular political processes, backed by clearly identified institutions to which they provide advisory opinions - proposal made to go beyond an advisory role: governments can refuse a measure but have to "compensate" its impact with another measure	- ad hoc, could help create a strong symbolic moment for the community concerned - constituent function, linked to a larger process of amending constitutional texts	- unpredictable, linked to social and political crisis - open to other kinds of political participation and assemblies

7 Conclusion

The typology presented in this chapter tries to answer the question: how does expertise on climate change shape the form of a citizens' assembly, and vice versa? The answer reveals several possible futures for climate assemblies. The typology departs from the description of particular scenes observed in different climate assemblies, that symbolise and reveal distinct relationships to expertise. Based on the concept of co-production, we believe that these relationships to expertise co-produce a definition of the environment –and more specifically of climate change– and of the political function of an assembly drawn by lot.

The first type –where citizens act as climate policy users deliberating on potentially restrictive measures– has been predominant in the CCC, the Walloon Citizens' Panel

and the European Citizens' Panel. The second type shapes the citizens function as constituent assembly members deliberating within the "planetary limits". It has been mostly observed in the Global Assembly, and partially in the CCC. The last one – where citizens take the function of legislators deliberating in the battlefield of climate change, was only observed at the margins of the CCC.

This typology helps us make some observations. First, it shows the extent to which neither the exact function of the citizens (and other actors) participating in climate policymaking, nor the definition of the climate problem, remains univocal and fixed between climate assemblies (Boswell, Dean, and Smith 2023) or even inside a single assembly. Second, it shows that the form of expertise in climate assemblies not only shapes assembly member's attitudes and proposals in the final report, but also the larger function of the assembly in the political system. This perspective goes beyond existing studies about expertise in mini-publics (Muradova et al. 2020; Drury et al. 2021; Thompson et al. 2021) by illuminating this internal aspect to climate assemblies' external dimensions. The typology also suggests a trend that makes the first form of co-production the most dominant in setting up assemblies. The quantified and consensual approach to the climate problem, combined with the procedural difficulties of dealing with conflicts within the processes, favours this form. Further studies could investigate whether the trend is towards a homogenisation, or rather a pluralisation, of the relationships to expertise in climate assemblies.

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