



Universiteit
Leiden
The Netherlands

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Krick, E.; Holst, C.; Christensen, J.; Howlett, M.; Mukherjee, I.

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18. The governance of policy advice: between scientization and a participatory turn

Eva Krick, Cathrine Holst and Johan Christensen

INTRODUCTION

This study traces two sweeping claims about shifts in modern governance practices – the claim of a ‘scientization’ and of a ‘participatory turn’ in policy-making.¹ These two claims are often repeated in studies of democracy, governance and politics, but rarely empirically assessed over time. What is more, they seem to draw into different directions and it is unclear as to how far they are compatible.

Scientization refers to the growing reliance on scientific expertise to back up political claims and draw up viable policy solutions, and it is believed to respond to the growing complexity of policy-making (see Christensen and Holst 2017; Kitcher 2011; Lentsch/Weingart 2011). The claim of a *participatory turn* refers to increasing openness and public involvement into policy-making as an answer to the legitimacy crisis of the representative model of democracy (see e.g. Fischer 2009; Hood 2006; Jasanoff 2003).

In this study, we assess these two claims by focusing on a key policy advice institution through which the input of external actors is channeled into political systems: ad hoc advisory committees that are set up by governments, produce policy proposals in the form of final reports and assemble experts as well as civil society actors. These institutions are relatively flexible and have the double function of generating trustworthy policy expertise and integrating societal viewpoints. The shifts towards scientization and more public participation can thus be expected to manifest themselves here.

We analyze whether there is evidence of the two claims in these key governance institutions, and to what extent these shifts are compatible with each other. We use the example of Norwegian advisory committees (*Norges offentlige utredninger* – NOU), which produce ‘Official Norwegian Reports’, a series with high status and a long tradition in Norwegian policy-making. We track changes over time by studying NOUs that have deliberated on similar issues but were set up at different times – and we do so by comparing two different policy areas: climate policy, and gender equality and family policy. In each policy area, we examine, on the one hand, changes over time in the reliance on scientific experts and expertise within advisory committees and, on the other hand, changes in the participation of citizens and the openness of the committee process.

PRESSURES TOWARDS SCIENTIZATION AND A PARTICIPATORY TURN IN MODERN GOVERNANCE

Pressures to ‘scientize’ public policy-making have been traced back to modern governance’s growing dependence on specialized and, in particular, science-based knowledge (Christensen and Holst 2017; Kitcher 2011; Lentsch and Weingart 2011). The last decades have seen the

emergence of ‘knowledge societies’, characterized by a sharp and steady increase of access to information, scientific knowledge and levels of education and attainment around the world (Bornmann and Mutz 2015; Meyer et al. 1997; OECD 2017), as well as increasing numbers of knowledge-producing institutions and ‘depoliticized’ expert bodies (Curtin 2007; Vibert 2007). Despite contestation of the authority and accountability of experts and disappointment about the sciences’ failures to provide certainties, there is a widely held belief in modern societies that a sound knowledge basis and recourse to scientific insights help to ensure the quality of public policies. As Meyer et al. (1997, 152) observe, states ‘make valiant efforts to live up to the model of rational actorhood’ and build policies on expert knowledge to retain credibility and legitimacy, to justify choices and to find viable and trustworthy solutions. Being perceived as uninformed, irrational and not ‘evidence-based’ can become a strain on public institutions’ reputations (Carpenter 2010). The ‘ceremonial worth of expertise’ (Meyer and Rowan 1977) not only pertains to state actors: In many policy fields, activists build their initiatives on robust scientific arguments to back up their demands (Yearly 2005).

While the relevance of expertise and a general rationality mandate for public policy-making may not be a new theme (Douglas 2009), some recent shifts have intensified these demands and particular importance is accorded to science as modern society’s main provider of reliable knowledge. For one thing, the management of contemporary high-pace technological change and the regulation of risks associated with it make scientific expert knowledge ever more indispensable (Christensen and Holst 2017). For another, the ongoing expansion of state functions, the subsequently growing complexity of policy-making and a concurrent tendency to minimize state administration have extended the demand for external policy advice. This, together with the relatively recent emergence of a science-based policy advice market (Lentsch and Weingart 2011), is likely to have accelerated scientization tendencies during the last two decades. We can assume that these shifts have contributed to changes in ideas about what constitutes ‘good governance’ and pushed governance towards scientization. We therefore expect scientization to be reflected in the set-up and operations of policy advisory bodies. More specifically, we examine whether the relevance of researchers and of science-based claims in public advisory committees has increased during the last decades.

A second major trend, which partly responds to scientization trends and partly to intensified criticism raised against representative democracy, is the pressure to ‘open up’ policy-making to the public and to tap new sources of legitimacy. Political recognition of and commitments to a participatory turn have been codified in several key political agreements and proposals of the last two decades (European Commission 2001, 2016; OECD 2016; UN 1998). A common framing of these calls for more public participation has been to present the involvement of the less powerful, the non-professionals, the non-elites, of less established grass-roots groups, ‘the public’ at large and the ‘ordinary’, ‘lay’ people – as an antidote to technocratic, expert- and elite-led governance. Building on the direct model of democracy, emphasis is put on more immediate, issue-specific and deliberative forms of participation within ‘mini publics’ such as consensus conferences and online debate forums or through referenda (Fischer 2009; Fung 2006; Gora, Holst and Warat 2018). In addition to citizens’ direct involvement in policy development, public access to information is considered a prerequisite for meaningful involvement and the doctrine of transparency has arguably attained ‘quasi-religious significance’ (Hood 2006, 3) in contemporary debates about legitimacy and good governance.

Although the highest-flying hopes connected to ‘citizen participation’ can often not be fulfilled (Fung 2006; Krick 2021), increased access to information and more direct public

involvement hold some normative potential: public participation is bound to increase public awareness of political issues and offers opportunities for those with little power to be heard, develop political self-efficacy and learn from the processes. In addition, broader public involvement can add to the accountability of public policy-making because those involved will have co-responsibility for the political solutions that were developed.

With concepts such as ‘mode-2-knowledge production’ or the ‘co-production of knowledge’, the sociology of knowledge and science has also pointed to possible *epistemic* merits of opening up policy development (see Jasanoff 2003; Nowotny 2001). The idea is that experts and policy-makers can learn about citizens’ views and concerns by involving the public more broadly; from this perspective, the inclusion of ‘local knowledge’ or ‘experts by experience’ can also enrich the policy process with further viewpoints (Krick 2022; Krick and Holst 2018) and generate ‘socially robust’ or even more ‘rational’ solutions to collective problems (Nowotny et al. 2001; Wynne 1992).

RESEARCH DESIGN

We trace the trends of scientization and extended public participation within the Norwegian system of ad hoc public advisory committees, known as NOUs. These are central governance instruments and providers of policy expertise in the Norwegian political system. NOUs are usually publicly visible and it can therefore be costly for governments to ignore their advice. Their high status is reflected by the common practice of building on NOU reports in subsequent law proposals and official statements. NOU committees are furthermore hybrid advisory institutions (Krick 2015) that address both the government and the public; they provide information and guidance, but are also used for societal involvement and policy coordination; they assemble experts from different backgrounds alongside societal representatives and civil servants, and they tend to be open to public input.

NOUs are in several respects a suitable setting for studying our selected trends and possible shifts in the reliance on scientific expertise and citizen input, respectively, in governance. First, if the trends are salient we should be able to track them not only under special circumstances, but within the NOU system in general since it constitutes one of the key auxiliary governance structures of the Norwegian polity. Second, NOUs are relevant for the study of both our selected trends. If NOU committees were introvert committees producing purely expertise-based advice, with the bureaucracy as their exclusive addressee, a ‘participatory turn’ as described here would not be likely. Conversely, if the NOUs were simply public arenas for negotiations between societal interests, the scientization expectation would be less obvious. However, since the NOUs have multiple, and both social and epistemic functions, both expectations seem to apply. Third, studies of the NOU system describe it as flexible and adaptive (Tellmann 2016), in contrast to more rigid and formalized advisory systems where governance trends of the kind we are interested in would less likely strike in. Finally, as the NOU system is comparably transparent with detailed public reports and additional material available on the government’s official webpage, data availability for our longitudinal study is unusually high and allows us to cover a range of different policy fields and indicators.

At the same time, the results of our study are not confined to the Norwegian case, but speak to larger governance trends and shifts in the ‘politics of expertise’ and their effects on advisory

mechanisms and committee systems. Importantly, the central role of the hybrid ad hoc advisory committee is not limited to the Norwegian political system, but is typical for compromise-based political systems with a corporatist legacy and consensus-oriented cultures of public sense-making and expertise-production, such as the Scandinavian, the German-speaking and the Low countries, as well as the European Union (see e.g. Christensen et al. 2017; Krick 2015; Krick and Holst 2018).

We examine the trends of scientization and extended citizen participation by looking at advisory commissions within two different policy areas. The policy areas selected for study are climate change policy, and gender equality and family policy. While both are comparably “new” policy fields that are closely connected to contemporary social movements, climate change policy can be described as a primarily regulatory policy type, but with clear distributive consequences in the longer run, while family and gender equality policy is primarily distributive (Lowi 1979).

Within both policy areas, we search for developments over time by examining all advisory commissions set up by a specific department that investigated a specific policy issue from the mid-1980s up until today. This includes four commissions appointed to investigate the climate change issue, and four commissions dealing with equal pay and policies for families with children. The commissions examined within each field are highly comparable, thereby allowing us to isolate and identify changes in the reliance on scientific knowledge and in citizen participation over time. The analysis draws on data from official documents: commission reports and material available on commission websites. The documents have been analyzed both quantitatively and qualitatively. See the original, full-length study (Krick et al. 2019) and the overviews provided by this text's tables for details on the operationalization of our criteria as well as further comparisons to the fields of tax policy and energy policy.

NOUs ON CLIMATE CHANGE POLICIES

Four NOUs on climate change policies were set up by the environmental ministry since the climate change issue gained momentum in the mid-1990s: the ‘Measures commission’ (‘Virkemiddelutredningen’ NOU 1995:4) evaluated the efficiency of policies aiming at reducing environmental pollution and emissions, the ‘Quota commission’ (‘Kvoteutvalget’ NOU 2000:1) focused on the establishment of a quota system for greenhouse gases, the ‘Low emissions commission’ on the reduction of climate gas emissions (‘Lavutslippsutvalget’ NOU 2006:18) and the ‘Adaptation commission’ on adaptation measures to an already changing climate (‘Tilpassingutvalget’ NOU 2015:15).

Scientization of Climate Change NOUs?

On the climate change issue, we see a certain tendency towards scientization, reflected within the composition as well as the citation patterns. Over time, NOUs assemble more academics in their ranks and they are more likely to be led by a researcher in the chair position. The general scope and the number of academic publications in the reports’ reference lists also grows considerably over time. An interesting shift is also observable in the framing of the report. The use of epistemic language is particularly marked in the latest report and there is a clear tendency towards a more frequent use of the terms ‘research’ (forsk(n)ing) and ‘knowledge’ (kunnskap), while in older reports, the more general keywords ‘analyze’, ‘data’, ‘modell’, ‘information’, ‘theory’ and ‘method’ dominated (Tables 18.1a–c).

Table 18.1a *Results of the scientization analysis (climate change NOUs) – composition*

Indicators	NOU 1995:4	NOU 2000:1	NOU 2006:18	NOU 2010:10
Scientific chair	No	No	Yes	No
Number and share of researchers as members (including chair)	2 18%	3 27%	3 43%	2 24% (plus 2 in 'research' positions at research directorates = 48%)

Table 18.1b *Results of the scientization analysis (climate change NOUs) – citation patterns*

Indicators	NOU 1995:4	NOU 2000:1	NOU 2006:18	NOU 2010:10
Number and share of academic commissioned studies	1 13%	4 44%	2 50%	6 60%
Number of publications in reference list	54	30	93	208
Number and share of academic publications in reference list	22 43%	3 10%	21 23%	69 33%

Table 18.1c *Results of the scientization analysis (climate change NOUs) – epistemic language*

Indicators	NOU 1995:4	NOU 2000:1	NOU 2006:18	NOU 2010:10
Number of epistemic keywords used	1100	529	258	1374
Frequency of epistemic keyword	2, 2 per page	1, 7 per page	1, 8 per page	5, 2 per page
Number of epistemic keywords in the mandate	2	1	0	14
Most frequent keywords (used more than 50×)	Data, metod*, analys*, teori/teoretisk, fag*	Metod*, data, modell, informasjon, analys*	Forskning	Kunnskap, forskning, analys*, data, fag*, information, modell, undersøk*

A Participatory Turn on the Climate Change Issue?

We see clear signs of a participatory turn amongst climate change NOUs, and this applies to both the citizen inclusion and the transparency criteria (see Tables 18.2a–b). In the latest NOU, an environmental pressure group received a seat and, over time, non-organized lay citizens were increasingly involved through various input channels in the role of input receivers and providers of fresh perspectives, but not as co-deciders or committee members. The NOU's internal deliberation is documented in more and more detail and public access to key documents is clearly increasing. Similarly, the newer reports describe their participatory approach in detail, account for their dissemination efforts, and increasingly summarize the public input they receive and the way the NOU dealt with it, although this feedback remains relatively vague. Yet, there is no linear rise, with the Low Emissions Commission (NOU 2006:18) standing out in several respects.

Scientization of Gender Equality and Family Policy NOUs

Both composition and citation patterns have features that confirm the scientization expectation in the gender equality and family policy area (see Tables 18.3a–c). There is a steep increase both in the number and share of researchers as commission members, in the number of publications included in the reference list and in the number and share of academic publications referred to. The framing analysis also shows that *Forsk(n)ing/forsker* (research/researcher) is an epistemic keyword most often used by the most recent NOUs. However, some sub-area differences occur, in particular, in the framing analysis, where the frequency of the epistemic keywords used and the number of epistemic keywords used in the mandate are consistently lower in the family policy NOUs than in the equal pay commissions.

Table 18.2a *Results of the participatory turn analysis (climate change NOUs) – citizen inclusion*

Indicators	NOU 1995:4	NOU 2000:1	NOU 2006:18	NOU 2010:10
Citizens involved as committee members	No	No	No	1 environmental group No ordinary citizens as members
Channels of citizen input	No (not mentioned in report)	No (not mentioned in report or on website)	Yes, 4 open access, regional, public conferences, public online debate forum and public survey	Fairly, 1 open access 'dialogue conference'
Citizens involved in other roles than members	No (not mentioned in report)	No (not mentioned in report or on website)	Yes, information receivers and providers of fresh perspectives	Yes, mainly information receivers

Table 18.2b Results of the participatory turn analysis (climate change NOUs) – transparency

Indicators	NOU 1995:4	NOU 2000:1	NOU 2006:18	NOU 2010:10
Documentation of internal deliberation	No (not mentioned in report)	No (not mentioned in report)	Fairly, summaries of the NOU's debates on website lavutslip.no	Yes, according to the report, minutes of committee meetings and conferences were available as electronic annex on the department's website
Easy access to key material used/processed by the committees	Barely, commissioned studies partly in annex	Fairly, 9 written opinions annexed to report, only stakeholder advisory group had access to the commissioned studies	Yes, 13 written opinions annexed to report, commissioned studies on website	Fairly, 22 written opinions delivered, but not annexed to report, commissioned studies were published on Klimatilpasning.no
NOU's self-description as transparent, participatory and responsive	No	Fairly, no explicit description of participatory approach, committee members attended external conferences, vague description of content and processing of the received input	Yes, explicit description of participatory approach, handouts, leaflets, newsletter, informative website, description of content and vague description of processing of the received input	Fairly, no explicit description of participatory approach, pamphlets, committee members attending conferences and holding lectures, description of the content of the received input

Table 18.3a *Results of the scientization analysis (gender equality and family policy NOUs) – composition*

Indicators	NOU 1996:13	NOU 1997:10	NOU 2008:6	NOU 2017:6
Scientific chair	No (SSB)	No	No	Yes
Number and share of researchers as members (including chair)	2 18% (+1 SSB) (National Statistics Office of Norway)	2 15%	6 75%	7 78% (+1 SSB)

Table 18.3b *Results of the scientization analysis (gender equality and family policy NOUs) – citation patterns*

Indicators	NOU 1996:13	NOU 1997:10	NOU 2008:6	NOU 2017:6
Number and share of academic commissioned studies	7 47% (+8 SSB studies)	0 0	1 33% (+1 SSB study and 1 study from other research directorate)	0 0 (+1 SSB study)
Number of publications in reference list	158	83	231	489
Number and share of academic publications in reference list	36 23%	14 17%	126 55%	317 65%

A Participatory Turn in Gender and Family Policy NOUs?

There are some signs of a participatory turn in the gender equality and family policy NOUs, even if the tendency is far from clear-cut (see Tables 18.4a–b). It goes for all the studied reports that commissioned studies are accessible in the annex. The earliest NOUs score, however, negative or low on the rest of the citizen inclusion and transparency indicators. One of the most recent NOUs – The Ellingsæter Commission on family policy (NOU 2017:6) scores almost as low. However, the Equal Pay Commission (NOU 2008:6) has significant participatory features. This commission emphasized and specified a participatory approach laid out in the report. It had also channels of citizen input and involvement – a website and a public mid-way seminar – and scored higher than the other commissions on transparency.

DISCUSSION

With regard to the two policy fields analysed, our analyses confirm the expectation of scientization to a considerable extent. They show how the notion of a ‘knowledge society’, with its growing focus on building public policies on scientific knowledge and ‘evidence’, has set its mark on temporary policy advice commissions: academics are increasingly making up and chairing the committees we study; the reports have ever-growing reference lists and refer

Table 18.3c Results of the scientization analysis (gender equality and family policy NOUs) – epistemic language

Indicators	NOU 1996:13	NOU 1997:10	NOU 2008:6	NOU 2017:6
Number of epistemic keywords used	1742	1098	1413	872
Frequency of epistemic keyword	2,51 per page	3,88 per page	4,60 per page	2,39 per page
Number of epistemic keywords in the mandate	1	4	13	4
Most frequent keywords (used more than 50×)	Undersøkelse, Analys*, Modell, Data, Forsk(n)ing/forsker, Teori/teoretisk, Metod*, Fag/lig, Empiri*	Fag/lig, Metod*, Analys*, Informasjon, Kunnskap, Undersøkelse	Analys*, Fag/lig, Forsk(n)ing/forsker, Modell, Undersøkelse, Teori/teoretisk, Informasjon, Data	Modell, Forsk(n)ing/forsker, Data, Analys*, Kunnskap

Table 18.4a Results of the participatory turn analysis (gender and family policy NOUs) – citizen inclusion

Indicators	NOU 1996:13	NOU 1997:10	NOU 2008:6	NOU 2017:6
Citizens involved as committee members	No	No	No	No
Channels of citizen input	No (not mentioned in report)	No (not mentioned in report)	Yes, an open access public seminar and an online debate forum	No (not mentioned in report)
Citizens involved in other roles than members	No (not mentioned in report)	No (not mentioned in report)	Yes, primarily information receivers, but also providers of fresh perspectives	No (not mentioned in report)

increasingly to academic literature. Commissions also make active use of epistemic language, although there is no uniform increase in the frequency of science-oriented keywords over time. At the same time, we see signs of a turn towards more participatory and transparent committee governance: in both policy fields under scrutiny here, channels of lay citizen input are amplifying; citizens tend to be included in more active, responsible roles; the degree of documentation and data access grows; and commissions increasingly express commitment to participation, transparency and responsiveness.

Yet, neither the scientization tendency nor the participatory turn are unambiguous: we do not see a clear increase in the epistemic terminology used in the gender equality and family policy field, for instance. Besides, all the commissions we study, not only the more recent ones, include scientists as members, and the amount of academic references has also been significant in several of the early commissions. Thus, the scientization trend we observe is taking place in a commission system where scientists, scientific knowledge claims and terminology have been playing a role for quite some time.

Our findings indicate – at least in the policy fields we look at – that scientization sometimes comes in tandem with an increased focus on citizen participation and transparency. Yet, we hardly see a full-fledged participatory turn. Lay citizens, if anything, are still mainly included in relatively passive roles and they are therefore unlikely to significantly shape public policies through these channels. That ordinary citizens are hardly included as a force to be reckoned with may have to do with the complexity of the commissions' mandates and the concomitant need for specialized expertise. The general idea of knowledge-based policy-making might be considered at odds with the idea of direct citizen participation because the 'lay citizens' targeted by these endeavors by definition are not specialists on the policy issue in question. The lack of a full-fledged participatory turn may also be explained in part by the corporatist tradition of the Norwegian political system and its system of hybrid ad hoc committees in particular. In these committees, interest groups have traditionally been involved as members, through additional external advisory panels ('reference groups'), more informal bilateral exchanges and as routine providers of written statements during the hearing process that takes place after submission of the report and lets affected interests have a say. In many of our cases, these corporatist channels of influence still play a pronounced role, despite the widespread

Table 18.4b *Results of the participatory turn analysis (gender and family policy NOUs) – transparency*

Indicators	NOU 1996:13	NOU 1997:10	NOU 2008:6	NOU 2017:6
Documentation of internal deliberation	No (not mentioned in report), apart from listing of visiting presenters (researchers/SSB)	No (not mentioned in report)	Limited, but commission chair and members presented at a public seminar organized a year before submission (2007)	No (not mentioned in report), apart from limiting of visiting presenters (researchers, including international scholars/SSB)
Easy access of key material used/processed by the committees	Commissioned studies provided in annex to NOU report	Commissioned studies provided in annex to NOU report	Commissioned studies and inputs from organizations in reference group provided in annex to NOU report	Commissioned studies provided in annex to NOU report
NOU's self-description as transparent, participatory and responsive	No explicit description of this sort	No explicit description of this sort	Explicit description of participatory approach The importance of broad dissemination and public debate is stressed Mentioned are a public meeting, website and reference group, media coverage, interviews/op-ed (in addition, reference group inputs (unspecified) have been 'used in the commission's work'	Limited description of this sort (but mentioned are a meeting with interest groups and those groups' invitation to provide additional written input)

evocation of an 'end of corporatism', and they may well fulfill the participatory functions that many expect from citizen inclusion. The limitations to data access and transparency could also be a path-dependent feature: the corporatist bargaining system is relatively closed during negotiations in order to facilitate concessions and package deals. 'Deliberation behind closed doors' can furthermore be conducive to the deliberative and epistemic quality of expertise production in committees because transparency and epistemic concerns can pull into opposite directions. There is a certain tension between the level of civility and the level of openness in deliberations (Mansbridge et al. 2012) and the public gaze can nudge the involved stakeholders to follow a logic of interest-based bargaining instead of reason-based arguing (Gornitzka and Krick 2018).

There are, moreover, noteworthy differences between the policy areas. As for the scientization of the committees' composition, this is less pronounced in the climate change policy area. This may be connected to the relatively young age and cross-cutting character of this policy field. The lack of fixed corporatist bargaining relations and institutions is likely to leave advisory structures flexible and open for competing knowledge actors and forms of expertise. Environmental groups have been shown to be amongst the most professionalized and knowledge-oriented, using information as 'access goods' to the policy process (Bouwen 2004; Yearly 2005). They also advocate public concerns, not special interests, and are thus likely to be considered relatively impartial. Their trustworthiness and professionalization may have equipped their representatives with the capacity to replace the input of scientists to a certain extent. Besides, the ministry that is primarily concerned with climate protection issues (currently called Ministry of Climate and Environment) is a relatively weak actor in bureaucratic politics, but has pronounced expertise on environmental issues and we can thus assume that scientific knowledge on climate issues is partly channeled into NOUs through the presence of expert civil servants.

Several scientization indicators increase most steeply in the gender equality and family policy area. This is a policy area with a relatively weak ministry with limited budgets and considerably less agenda-setting power within economic and social policy than for example the Ministry of Finance or the Ministry of Labor and Social Affairs. The civil society and interest groups in this area are also relatively weak. Obviously, key issues in gender equality and family policy overlap with questions that are central to the social partners (pay, welfare services and benefits, etc.). However, in these organizations, gender perspectives are often trumped by other concerns, and the women's movement outside of political parties has in recent years become relatively marginal both in terms of members, budget and influence (Skjeie et al. 2017). Overall then, gender equality and family policy is an area where ideas of knowledge-based policy-making are particularly likely to be embraced in order to increase salience and impact. The period we have studied is furthermore one where Norwegian women and gender studies has become more deeply institutionalized as an academic field, while preserving its relatively applied and policy-oriented orientation. These additional factors seem to sit well with high and increasing scores on scientization variables.

As for the participatory turn, it turns out to be most pronounced in the climate change area. In this new policy field, power relations and bargaining structures are less fixed and there are fewer strong, resourceful pressure groups with pronounced ownership in the policy field. Institutional flexibility is likely to be higher and societal demands (such as for participatory governance) can be more easily incorporated. Besides, in the climate policy field, 'cause groups' dominate. In contrast to 'sectoral groups' that advocate special interests and

are established players in many of the traditional policy fields, cause groups represent post-materialist viewpoints, stand for collective concerns and human rights, and often radiate a certain moral authority (see Stewart 1958 and Klüver and Saurugger 2013 for these concepts). They are closely interlinked with social movements and typically promote more direct citizen participation. Besides, within environmental policy, political commitment to the openness of policy-making seems particularly pronounced, reflected, for instance, by the ambitious Århus Convention (UN 1998), national legislation on Environmental Impact Assessments and the multitude of participatory experiments in this field (Lidskog 2008). The relative newness of the climate change issue also means that policy approaches, problem definitions and agendas are more dynamic (see also Rothstein 1998 on the distinction between 'static' and 'dynamic' policies). The NOUs on climate change policy we studied reflect this. Problem definition was not completed and policy solutions were not treated as known. In fact, these NOUs were relatively open to new perspectives and new actors. From this perspective, public inclusion into policy development may be more of an asset than a mere liability.

Gender equality and family policy falls here in an in-between category and the two sub-issues studied (citizen inclusion and transparency) vary systematically. There are few signs of any increased concern for broad inclusion and transparency in the reports on policies for families with children. 'Families' were established as objects for technocratic policy interventions well before the rise of the feminist movement with its new actors and participatory approach to policy-making. In accordance with this legacy, family policy has been conceived of as a rather technical and settled field, with SSB (Norwegian Statistics), at least up until recently, as a dominant producer of policy-relevant knowledge on these issues. Hence, there is maybe not so much fertile ground for a participatory turn in this area. In contrast, the equal pay agenda is more closely connected to the new and more participatory grammar of politics introduced by the new women's movement.

CONCLUSION

Overall, our findings show a stronger reliance on science-based claims and on academics as policy advisors across the board of Norwegian temporary advisory committees and a turn towards openness and lay citizen involvement in the policy fields we study here, which are new and closely linked to social movements. We believe that such changes in the routines of policy-making reflect – and shape – our cultural understandings of democratic legitimacy and of the validity of public claims-making and that their analysis is therefore highly relevant for society and political decision-making. The actors involved and the perspectives included in advisory institutions make a difference for the substance of the policy advice generated and thus the way a problem is framed, addressed and eventually solved in a certain policy domain. Of prime importance here is the question of composition. Not accidentally are questions of composition often issues of fierce political struggle behind the scenes when advisory committees are set up. This is particularly the case when advisory institutions are of such central importance in a system of governance as the here-analyzed NOUs. Virtually every important social reform, every new or especially contested issue, has been taken up by an NOU in the past and these reports tend to be followed by a government white book that draws on the NOU's advice. Key for their prime importance in a consensus-oriented knowledge society such as Norway is their double function and their traditionally hybrid composition (Arter

2004; Christensen and Hesstvedt 2019; Christensen, Gornitzka and Holst 2017; Krick and Holst 2018). They assemble both key holders of relevant knowledge and societal perspectives and thus generate ‘negotiated expertise’ (Krick 2015), that is knowledge-based as well as agreed upon by the main societal stakeholders and thus particularly implementable, usable and socially embedded. When the participation patterns of these important venues of policy development change, this tells us something about shifting societal understandings of valid knowledge and of democratic legitimacy – and these institutional changes may then reconfirm such cultural shifts. When governments increasingly open up advisory processes to the public, they probably value this kind of input as such, or at least flag a commitment to public scrutiny and ‘ordinary people’. When they build policy advice more substantively on research, they probably value this kind of knowledge as particularly helpful and valid – but they may also use the status of science for policy reforms to appear as particularly rational and objective.

Our analysis is an important first step towards tracing the two popular claims in real-life policy-making, not least since there is a pronounced lack of longitudinal analyses of these trends. Yet, our study clearly has several limitations. By focusing on specific policy areas, we have ensured strong comparability between reports over time. However, this limits the number of reports analyzed, which restricts our ability to draw firm conclusions. One direction for further research would be to apply the indicators of scientization and a participatory turn to a larger number of commissions and to other policy policy fields (see Krick et al. 2019 for the cases of tax and energy policy). Our indicators of scientization are also sensitive to how they are specified. For instance, exactly which keywords are included in the dictionary of epistemic language matters for the scores and the trends over time. Furthermore, we draw on the commission reports as the primary source of data. Our indicators thus capture visible aspects of these reports and the reported behavior of the commissions. However, they do not allow us to examine other ‘hidden’ aspects of the commission’s work, such as the role of scientific arguments in the commissions’ deliberations or commissions’ actual engagement with citizen input. This could be an interesting path for subsequent research.

NOTE

1. This chapter is a condensed version which originally appeared as Krick, Eva, Johan Christensen, and Cathrine Holst. 2019. ‘Between “Scientization” and a “Participatory Turn”’: Tracing Shifts in the Governance of Policy Advice.’ *Science and Public Policy* 46(6), 927–939.

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