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## ARTICLE



# Asymmetry, Disagreement and Biases: Epistemic Worries about Expertise

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## ABSTRACT

This paper contributes to an **on-going** exchange in political theory on the normative legitimacy of expert bodies. It focuses on epistemic worries about the expertisation of politics, and uses the Nordic system of advisory commissions as an empirical case. Epistemic concerns are often underplayed by those who defend an increasing role of experts in policy-making, while those who have epistemic worries often tend to overstate them and debunk expertise. We present ten epistemic worries, of which some are of an epistemological nature, while others are related to failures and biases. These worries must not be overstated, but no doubt point to real problems which have to be handled through the design of expert bodies and institutions of science advice. We introduce three groups of mechanisms that are likely to contribute to remedying the problems of expertise and discuss what they imply for the design of a system of public advisory commissions.

## KEYWORDS

Expertise; epistemic asymmetry; biases; policy advice; institutional design

## 1. Introduction

Contemporary governance relies considerably, and some claim increasingly, on scientific expertise (Turner 2003; Douglas 2009; Kitcher 2011). One sign of such a development is what Frank Vibert (2007) refers to as 'the rise of the unelected': an expanding role of courts, central banks, agencies and other expert bodies inhabited by academics with substantive discretionary powers. Another is the ascent of academics to high bureaucratic and political positions (Markoff and Montecinos 1993; Fourcade 2006). We can add to this an increased significance of epistemic logics in parliamentary processes and in the public sphere, as civil society organizations and political parties exceedingly feel the need to support their proposals with references to academic research (Weingart 1999; Landmore 2017). Expressions of such logics can also be found when governments seek policy advice from 'experts' and 'expert groups' to make policies more 'knowledge based', 'science based' or 'evidence based' (Cairney 2016; Gornitzka and Krick 2018).

Unsurprisingly, these developments have come under criticism. Extra political power to the educated and scientifically trained, what has been called 'epistocracy',<sup>1</sup> raises obvious democratic concerns. How can it be 'a rule by the people' if public policies are left in the hands of 'knowers'? Critics see severe participatory and representative deficits developing and a contemporary democracy that is becoming increasingly 'disfigured' (Urbinati 2014).

However, concerns are also raised from an epistemic perspective. Expert involvement in policy-making is often justified with reference to outcome improvements: Expertise is supposed to be the 'filter' that ensures the 'truth-sensitivity' of policies and legislation (Christiano 2012).<sup>2</sup> Yet, critics

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worry that the increasing role of scientists and professionals in policy-making do not contribute to enlightenment and problem-solving. Expert involvement, they claim, may even make decisions and policies come out worse.

AQ4 The focus of this paper will be on this epistemic worry. On the one hand, epistemic concerns are often underplayed, if at all considered, by those who defend an increasing role of experts in policy-making (e.g. Pincione and Tesón 2006; Caplan 2007; Brennan 2016; Sunstein Forthcoming), and evidence-based policy-making (e.g. Davies et al. 2000). Scholars in this camp typically fear 'irrationality', 'deliberative failures', and disregard for 'evidence' when political decision-making is left to 'the people', while paying less attention to disagreements, biases and mistakes among experts. On the other hand, when epistemic critique of the role of scientists and scientific knowledge in policy-making is explicitly raised, it tends, first, to be embedded in a rather sweeping critical discourse that does not distinguish between the different concerns involved. Second, it is often assumed – we will argue, misleadingly – that the potentially deteriorating consequences of 'scientisation' on governance and policy-making cannot be addressed effectively through institutional measures. The implication seems to be that we either have to debunk expertise – and somehow make rational public policies without it – or live with its dysfunctional effects on policy and decision quality, hoping that the epistemic benefits of our expertise reliance will weigh up the costs. 45 50 55

In what follows, we show that scientific experts' substantive involvement in policy-making raise some real concerns. We move beyond the uneasiness that many critics articulate, and present a list of ten separable claims: (1) that we cannot know who the 'real' or 'best' experts are; (2) that all political decisions have moral dimensions and that there is no moral expertise; (3) that expertise is only possible under conditions of 'normal science' and political 'well orderedness'; (4) that scientific experts, like laypeople, make cognitive errors; (5) that scientists, representing disciplinary perspectives or particular epistemic cultures, are one-eyed, overstretch their competence and fail to see their own perspective as one of many relevant perspectives; (6) that experts may be influenced by self-interest or (7) have ideological commitments that bias their judgements; (8) that we cannot be sure that scientific experts practice *parrhesia* and speak truth to power; (9) that scientists often lack the competence (or willingness) to translate their expert knowledge to make it understandable for policymakers and concerned citizens; and, finally, (10) that scientists do not understand the logic of politics and lack the ability of good political judgement. 60 65 70

The list makes visible the considerable complexity of the epistemic challenge that arise from the use and reliance on scientific expertise in policy-making – and as far as we are aware of, there exists no similar systematic overview in the literature. We argue, furthermore, that the problems that occur are not marginal, but problems that may confront us frequently, if not regularly, in real-world governance settings. In this connection, we draw examples from an on-going study of Norwegian policy advice commissions. These commissions, along with similar commissions in the other Nordic countries, constitute an important pillar in what is often regarded as a distinctive Nordic model of governance. The Nordic countries score generally high on international quality of government rankings, and their temporary advisory commissions, increasingly dominated by scientists and scientific knowledge (Tellmann 2016; Christensen and Holst 2017), have been assessed in success terms, as negotiating arenas for conflicting societal interests, while at the same time providing public policy with a sound cognitive basis (Krick 2015). Still, a range of epistemically oriented charges have been raised against this system and suggest that our ten point list is not only relevant under inhospitable conditions. It would hardly be surprising if systems of policy advice in regimes with a politicized civil service, low trust in public institutions, high levels of corruption etc. turned out to be of less than optimal quality. However, the Norwegian commissions are arguably a best practice candidate functioning in a friendly environment, and, as we will see, problems with expert disagreement, biases and mistakes are noteworthy even here. 75 80 85

Yet, this does not imply that science advice in policy-making ultimately is a misguided idea, or that it is impossible to institutionalize advice systems to better deal with our listed problems. Epistemic concerns over epistocratic tendencies in governance need to be recognized but should 90

not be overstated or conceived of as non-addressable. In this connection we introduce three mechanisms tailored to tackle the epistemic uneasiness that the involvement of scientists in policy-making has spurred. The mechanisms target (1) scientific experts' behaviour, (2) their judgement and (3) the conditions of their behaviour and judgement. Once more, we will rely on the Norwegian commission system as an illustration and show how a more consistent application of our proposed mechanisms are likely to increase this system's 'truth-sensitivity'. 95

In the next section of the paper, we present briefly the Norwegian knowledge regime and commission system. The section after presents a more extensive version of our ten point list with examples from the Norwegian policy advice commissions. We then give an outline of our three mechanisms and discuss their implications for reform of these commissions. The fourth part sums up and spells out some implications. 100

## 2. Nordic Style Temporary Advisory Commissions

When making political decisions, governments may seek informed policy advice through a number of channels, including the permanent bureaucracy, political advisers, interest group lobbying, think tanks, consultancy reports, government-funded research, and permanent and temporary advisory bodies. The specific configuration of policy advice varies considerably across countries, and leading scholars thus speak of different 'policy advisory systems' (Craft and Howlett 2013) or 'knowledge regimes' (Campbell and Pedersen 2014). For instance, Campbell and Pedersen argue that whereas the U.S. knowledge regime is characterized by competition among a multitude of private knowledge providers, the continental European countries rely more on policy knowledge from public and semi-public research organizations and standing advisory bodies. 105 110

Although Nordic governments draw on policy advice from numerous sources, temporary advisory commissions have traditionally been seen as an especially important channel for advice (Meijer 1969; Anton 1969; Christensen, Mouritzen, and Nørgaard 2009; Petersson 2015). The function of these commissions is to examine specific policy problems and recommend solutions, for instance about how the pension system should be reformed to meet the challenges of an ageing population, how to make better health sector priorities, or how to make tax schemes that take environmental concerns into account. Consequently, commissions usually contribute advice in the early stages of the policy-making process, that is, before the government puts concrete policy proposals on the table. The central and routinized role played by commissions in the formulation of public policy in the Nordic countries has led scholars to characterize them as a core element of the 'Nordic model of government' (Arter 2008). 115 120

Specifically in this paper, we will pick our illustrations from Norway and the Official Norwegian Reports (*Norges offentlige utredninger* – NOU), a commission system established in 1972 (Tellmann 2016; Ryymin 2017). A rather large number of NOUs are produced, 35 annually in the period 1972–2015, although lately there has been a drop in NOUs and an increase in other ad hoc advisory commissions – often simply referred to as 'expert groups' – that publish their reports outside the NOU series. There are examples of NOUs with low to zero impact, but overall both their agenda-setting power and legislative influence is regarded as considerable (Backer 2013; Ryymin 2017). NOUs are moreover so-called 'hybrid committees'; consensus-oriented groups including different types of members and competences (Krick 2015). Civil servants constitute the largest member category still; scientists come second; interest group representatives third; and politicians fourth. However, recent estimates show a steep increase in the share of scientists among NOU members and chairs, and scientists make up the largest member category in some policy areas and dominate among chairs. Moreover, more commissions consist exclusively of scientists or of a majority of scientists (Christensen and Holst 2017; Christensen and Hesstvedt 2018). The NOUs have thus exceedingly become a central channel for the providence of science-based policy advice to the Norwegian government. 125 130 135

Finally, the Nordic countries score high on international quality of government rankings (Rothstein 2011; Knutsen 2017), and their advisory commissions have been regarded as contributing valuably both to the negotiation of legitimate societal interests, and to ensuring knowledge-based policy-making (Krick 2015). Overall, both scholars (for example Lindvall and Rothstein 2006; Petersson 2015; Christensen and Holst 2017), and involved actors (for example Krick, Holst, and Gornitzka Under revision), have tended to assess the Nordic commission systems as a successful way of organizing science advice (see Christensen, Mouritzen, and Nørgaard 2009 for a more critical approach to the Danish commissions). However, closer investigations of the NOUs reveal a larger complexity. In the next section, we will elaborate on why the cognitive authority often ascribed to scientific experts is not necessarily warranted – focusing on ten distinguishable points in the critique – and give examples from the Norwegian commissions. The problems and controversies that are referred to are in part derived from an on-going large-scale study of these commissions and in part from existing studies, including in-depth studies of commissions or political processes where commissions have played an important role, and controversies that have been played out in the media.<sup>3</sup> Our claim is not that this selection of examples is in a strict sense representative for how this commission system generally works. However, our examples illustrate, we believe, some non-trivial problems that do occur, and re-occur, even in this relatively well-functioning advisory institution. Our claim is also not that the criticisms that are raised in the concrete controversies we refer to are altogether valid and beyond dispute. Still, we do not find any of them immediately unreasonable. As we will argue later (in section 4), this is partly because this commission system is not designed in a way that sufficiently safeguards against the development of biased expert cultures and poorly performing experts.

### 3. Ten Epistemic Worries

(1) *We cannot know who the experts are.* Generally, experts are persons who know things that other people do not know. Due to this epistemic asymmetry non-experts or lay people are often not in a position to know who among putative experts are ‘real’ or the ‘best’ experts, or to judge between competing claims when putative experts disagree (e.g. Hardwig 1985, 1991; Walton 1997; Goldman [2001] 2011). In absence of direct evidence, lay people thus have to rely on trust in experts. This may be fair in many contexts – consider for example the interaction between patients and doctors – but there is an inevitable tension between the use of expertise and democratic politics since the latter is based on political equality. Hence, when democratic bodies authorize experts to influence political decision-making, they at the same time risk being subject to an authority that they themselves are unable to review and hold accountable. Delegating power to experts may then result in what has been referred to as ‘political alienation’ (Dahl 1985, 6–7).

It is not hard to detect cases from the NOU context where epistemic asymmetries are salient. For one thing, commissions may deal with topics characterized by high levels of technical complexity. There are several examples of this in the area of economic policy. Take NOU 2015: 9 Fiscal Policy in an Oil Economy<sup>4</sup> that discusses how to apply fiscal rules in the management of the Norwegian government’s oil revenues, or NOU 2016: 20 that assesses the so-called ‘equity share’ of the Norwegian Government Pension Fund Global in light of ‘expected risks and returns’ and ‘consequences for other key investment strategy choices’. It is no doubt hard for non-experts to evaluate the quality and soundness of these discussions and assessments, and to make direct judgements of whether the involved experts are truly knowledgeable in the relevant domains. Similarly, when the putative experts disagree on which recommendations to make,<sup>5</sup> for example in the case of NOU 2016: 6 on the system and distribution of quotas in Norwegian fisheries, or in NOU 2016: 20 that assesses the portfolio of the government’s pension funds, it would require some expertise on the included topics to formulate an informed and independent opinion on which of the competing claims to support.

(2) *There are no moral experts.* A democratic polity is characterized by ‘the fact of pluralism’; there is inevitably disagreement about which political ends to pursue, and how to interpret and rank them. Questions about facts and the efficiency of means to ends are of course important. However, factual and technical considerations are often intertwined with norms and values. So even if experts may tell us something about is-questions, and if we as novices were able to identify the real or best experts with regard such issues despite epistemic asymmetries, the question remains if these experts would be able to deliver expertise on all the involved ought-questions, or moral questions, as well.

The default position in the literature on the question of moral expertise seems to be that there is no such thing. In democratic theory, this position has for example been put forward by Dahl (1989). According to Dahl (1989, 66), there is no moral knowledge, and hence no moral expertise, because there are no methods for demonstrating the intersubjective validity of moral judgements. Nevertheless, Dahl admitted that moral questions cannot be reduced to ‘subjective’ questions pertaining simply to different ‘tastes’; there is scope for ‘argument drawing on human reason and human experience’ (Dahl 1989, 67). This raises the question of whether there cannot be moral experts after all. Arguably, all accounts that consider normative questions to be possible objects of rational discourse open up, in principle, to the existence of moral expertise: If some moral arguments are more qualified than others, then some may be better able to make qualified moral arguments than others. On this premise, one could think of moral expertise for example in the following way (see also Gesang 2010):

Someone familiar with moral concepts and with moral arguments, who has ample time to gather information and think about it, may reasonably be expected to reach a soundly based conclusion more often than someone who is unfamiliar with moral concepts and moral arguments and has little time (Singer 1972, 117).

To talk about moral experts along these lines does seem to make it possible to identify someone as more competent in answering moral questions than others.

The problem of epistemic asymmetry would however stick. For example, how should citizens approach arguments based on highly complex theories of distributive justice? If they cannot assess them directly, they would again be dependent on trust in the epistemic communities to which the experts belong – be it, in this case, the community of moral and political philosophers or the more specialized epistemic communities connected to different policy areas. On what basis can one as a non-expert deem whether this or that community should be recognized as having the competences they claim to have?

If we return to the NOUs, a first observation is that several commissions have as a rather explicit part of their mandate to give advice not only on questions of facts and the technical efficiency of policies, but also on normative questions. A clear example is the so-called Gender+Equality Commission submitting NOU 2011: 18 Structure for Equality and NOU 2012: 15 Policy for Equality. This commission, consisting exclusively of researchers and university professors, was in its mandate asked,<sup>6</sup> not only to report on ‘the current status, and possible improvement’, of Norway’s gender equality policy ‘in the intersections between gender, ethnicity, and class’, but also to develop a ‘principle-based’ defence of why gender equality and gender equality policies are ‘important to pursue’. We can add to this the many occasions where normative assessments in the commission reports are made more implicitly and descriptive and prescriptive considerations are harder to disentangle. NOU 2014: 13 Capital Taxation in an International Economy and NOU 2018: 5 Capital in Times of Conversion – Business’ Access to Capital make up to interesting examples. These commissions discuss factors that affect capital flows and access, and the effects of different tax policies on a range of macroeconomic parameters in a well-structured way (see also Christensen 2017). However, it is hard to pinpoint the more detailed relationship between the analysis of means efficiency and the assessment of the relative importance of ends, and so to establish exactly on what grounds the two commissions recommend significantly different tax schemes. Finally, some commissions deal not only with issues that are technically complex, but also initiate ethical

deliberations on advanced levels. One example is NOU 2014: 10, on insanity **defence** in criminal law that includes a philosophically informed conceptual analysis of notions such as 'autonomy' and 'responsibility'. Another example is NOU 2014: 12 Transparency and Justice – Priority Schemes in the Health Services that addresses complex redistributive questions on the basis of theories of justice. Both commissions exemplify how epistemic asymmetry can be an issue also in the moral domain, and how it can be hard, in these cases for the philosophically untrained, to assess the relative merits of competing claims.<sup>7</sup>

(3) *Expertise requires 'normal science' and political 'well orderedness'*. Even if we would be able to know who the experts are, be they technical or moral – as far as there are ways to identify relatively credible epistemic communities – there is the additional worry that this only applies under 'normal' circumstances. We often see how fields or disciplines are characterized by competing paradigms or research programs and how they, after periods of production of expert knowledge within the parameters of a certain cognitive framework, undergo epistemic shifts that changes the notions of what qualifies as expert knowledge. The sources of such shifts can be more or less internal to the epistemic community, spurred by theoretical or conceptual innovation, methodological breakthroughs or new technologies, but they can also be external and related to social and cultural changes, economic crisis or political ruptures. One example is how the rise of new countercultures and social movements during the 1960s changed knowledge interests in the human and social sciences. Another more recent example is how the 2008 financial crisis has contributed to a renewed interest in Keynesian economics. The fact that there can be sharply competing epistemic cultures and implicative and sometimes radical shifts in expert standards and constellations makes the question of who the 'real' experts are harder.

Some recent controversies around NOUs can illustrate this challenge. A first example is the Commission on Financial Crises submitting NOU 2011: 1 on regulation of Norwegian financial markets. This commission report came with a set of dissents signed by different constellations of commission members and resulted in public quarrels reflecting the **on-going** struggles over 'heterodox' versus 'orthodox' approaches in economics. Another example is the controversy around NOU 2017: 4 The Sharing Economy, Opportunities and Challenges, where some experts claim that globalization, new technologies, the rise of big data etc., make traditional understandings and regulatory approaches to the economy, business and the **labour** market outdated, whereas other experts believe the 'sharing economy' should be targeted with established approaches and tool boxes. A final illustrative case may be the public controversies surrounding the **on-going** work of the Commission of Gender Equity in Education. The commission is mandated to focus on gender differences in school performance and 'the problem of boys'. The commission is dominated by professors and researchers who come from economics departments, are experts on randomized control trials (RCT) from the educational sciences or public health scholars. This disciplinary composition has spurred criticism not least from professors within feminist and gender studies who claim that this commission is 'incompetent' and lacks the relevant academic expertise. Part of the backdrop of this debate is clearly more fundamental discussions of methods, models and assumptions in research on gender differences and gender equality. Furthermore, it applies for all these controversies that it is far from straightforward for non-experts to assess directly and independently which camp among the experts to side with.

(4) *Scientific experts make cognitive errors*. It is reasonable to assume that experts, *when* they are using well-established scientific methods and follow the rules of scientific reasoning, are less prone to making errors than laypeople. Still, that experts make errors is a well-known fact, and research in cognitive psychology has shown that expert judgements are more exposed to elementary fallacies stemming from the use of the intuitive System 1 than we like to think (Tversky and Kahneman 1974; Tetlock 2005; Kahneman 2012). Experts have moreover a dubious reputation as forecasters. In *Expert Political Judgment*, Philip Tetlock (2005) presents results from studies of experts' ability to make economic and political predictions. Experts turned out to be overconfident: Their answers to questions scored bad on accuracy, especially if they were 'hedgehogs' who 'know one big thing' in

contrast to 'foxes' who know 'many things'. The average expert did about as well as those who do random guessing, or 'dart-throwing chimps'. 290

Once more, controversies around Norwegian commission reports can be illustrative of the problem. First, several commissions have been accused of producing poorly founded scenarios and long-term predictions based on uncertain, unlikely, or even random estimates. A debate along these lines occurred recently around the demographic projections outlined in NOU 2017: 2 Integration and Trust – Long-Term Consequences of High Immigration. Similar debates occur recurrently around the macroeconomic projections of economic policy commissions, recently most explicitly in the aftermath of the NOUs submitted by the Productivity Commission discussing challenges for Norwegian productivity in the years to come. The problem coming to the fore in these cases is maybe not so much that expert predictions are decisively false or flawed, but that commissions may operate too confidently and exaggerate the certainty of estimates that are key to their problem framing and recommendations. In the more unusual case of the 22 July Commission (NOU 2012, 14) – investigating the terrorist attacks on the Government Complex in Oslo and at the Labor party youth camp on Utøya island – the accusation of cognitive error has been raised more directly. A research project has analysed how the commission blames individuals for mistakes generated by system-level flaws and on the basis of information only retrospectively available (Renå 2017). 295 300 305

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(5) *Scientists are one eyed*. There is an old saying that for one who possesses a hammer, everything is a nail. Experts are no doubt often too confident of their own competence (Angner 2006); they identify with their disciplines and are prone to frame problems so that they fall within their disciplinary matrices, paradigms or 'epistemic cultures' (Buchanan 2004; Lamont 2009). For example, and in-depth study of NOUs from the 1990s onward show how engineers, lawyers and economists tend to approach environmental policy differently, focusing on technology, regulation and taxes/dues, respectively (Tellmann 2016). Another interesting debate has occurred on the 22 July Commission, and this time over its disciplinary bias. The Commission concludes, devastatingly, that the attacks 22 July 2011 could and should have been prevented, and recommends 'that leaders at all levels of the administration work systematically to strengthen their own and their organization's fundamental attitudes and culture' in respect to 'the acknowledgement of risk', 'implementation capacity' and 'result-oriented leadership'. This recommendation has however been accused of reflecting the domination of lawyers and the centrality of business sector background and management expertise in this commission, resulting in a narrow focus on legal regulations and obligations and on 'attitudes and culture' instead of on structure and organization, funding schemes etc. (Christensen 2013). 310 315 320

(6) *Experts operate out of self-interest*. Another objection is that experts may be more or less biased by their self-interests. A statement from the philosopher Robert Spaemann in a 2008 German parliament commission on the permissibility of using human embryonic stem cells in research can exemplify this: 325

'I take the liberty of a final remark on the status of the "experts" questioned. As an independent authority can only be considered whoever is not committed to a particular interest by his professional status. Thus, not researchers working with embryonic stem cells or representatives of research institutions under whose ceiling such research takes place. They are an interested party and must be viewed as competent lobbyists. Their (...) advice must be relativized and deserves no more hearing than that of a reflective nurse' (quoted in Zenker 2011, 362). 330

In a well-functioning political system, conflicting interests are normally taken care of by the procedures for the selection of experts. However, even if there are no direct ties to parties who are interested in a certain outcome, experts may favour outcomes that are to their own advantage – for example, those that confirm positions they have defended, be it in academic or more public settings, and so bolster their professional reputation. 335

Experts' possibly biasing self-interests is an issue also in the NOU context. The controversies surrounding the on-going Drug Reform Commission could exemplify. Here critics worry that the experts in the field will be unable or unwilling to give arguments for legalization a fair chance since they have invested their careers and prestige in the current criminalization regime. Illustrative are also the debates over NOU 2012: 2 Outside and Inside, a commission mandated to review Norway's agreements with the European Union. In this case, opponents of Norwegian EU membership worried that experts in favour of membership would be unfit to give a balanced assessment of Norway's EU relationships in light of their previous research that – according to membership opponents – has been unduly EU-friendly. 340 345

(7) *Experts are ideologically biased.* A related and frequent charge about bias is that experts have ideological commitments or other deeper normative orientations that influence their judgements. We see this when experts explicitly embed their decisions or advice in a particular ideological or moral outlook. In addition, there are the not so easily detectable cases. Numerous examiners of social science from Gunnar Myrdal ([1930] 1953) onward have noted how theoretical approaches may frame the problem at hand in such a way that some value options are tacitly favoured. For example, neoclassical economics frames problems in a way that favours market solutions. In the NOU context we see this when commissions dominated by economists are repeatedly accused of introducing market-conforming measures and 'neo-liberalism' in different areas of public policy and administration. Sometimes the charge is that the involved economists are politically conservative. Yet, it is well known that many Norwegian economists lean towards social democracy and support labour governments. On these occasions, the problem, according to critics, is rather that dominant approaches within economics have a systematic and inherent pro-market bias. Sociologists, on the other hand, are often attributed with an anti-market mentality. This is also a charge that is sometimes raised in public discussions over NOUs. We see for example a concern along these lines expressed in a statement formulated by a dissenting member in the Equal Pay Commission (NOU 2008, 6). This member reacts, not to the majority's left-leaning convictions, but rather to what he sees as an exaggerated market scepticism – not accounted for and inherent in the underlying intellectual framework. 350 355 360 365

AQ7

AQ8

(8) *Scientists fail to speak truth to power.* Yet another worry is that experts belong and identify with the societal or 'power elite', and that their elite position and frame of reference compromise their independence: Experts are supposed to 'speak truth to power' (Wildavsky 1979), but their connections to the 'establishment' tend to make them more affirmative than critical of the powers that be. This suspicion is a common ingredient in populist politics but is also fuelled by sober sociological scholarship on elite recruitment, formation and networks. Furthermore, despite its crudeness, the populist suspicion points to the circumstance that the duty of truth telling (what the Greeks called *parrhesia*) requires courage because it may involve personal risks (Foucault 2001). 370 375

A discussion along these lines have concerned the growing role of science and scientific knowledge in the Norwegian advisory system. Critics see in this scientisation an increasing elite bias, for example when the Gender+ Equality Commission lacked representation from women's organizations and civil society, or when a recent commission reviewing the role and tasks of school teachers included professors and researchers but no school teachers. Behind this criticism lies a democratic concern, but also a worry that elite commissions will reproduce convenient elite conceptions and prejudices instead of speaking up and speaking 'the truth' in the interest of ordinary people. 380

(9) *Scientists are bad at communicating their knowledge.* No doubt, experts are often bad at stating arguments in a comprehensible way: 'People have a hard time taking the perspective of a less knowledgeable individual, and the gap is only wider for experts addressing laymen' (Mercier 2011, 321). Because of elitist or paternalist attitudes, experts may also be unwilling to communicate in ways that reach out more broadly to stakeholders and the affected. Such translation problems, be they due to experts' limited abilities or lack of adequate motivation, add to the already troublesome situation of epistemic asymmetry between experts and non-experts. Due to cognitive 385 390

inequalities, it is hard for non-experts to hold experts to account. If experts are also bad communicators, then the situation will only worsen. This is also an issue in the NOU context where reports, for example in the domains of environmental policy and economic policy, are accused of being unnecessary technical and framed in ways that excludes the average citizen from its readership.

(10) *Scientists lack political judgement*. The last objection is that experts lack an understanding of political processes and the ability to make political judgements, since they tend to view political questions as if they were questions of facts and logic. On the one hand, this may result in recommendations that are 'right', in the sense that they are supported by solid evidence, but lack political feasibility, at least here and now. A variant of this is when experts give unfeasible recommendations because they ignore institutional political conditions for their implementation (Swift and White 2008). On the other hand, experts may exaggerate the extent to which the space for political action is constrained by *Sachzwang*, by given circumstances and parameters. The result in the first case is some kind of utopian engineering; in the other, the result is an adaptive, technocratic engineering that considers revisable facts and questionable concerns as 'necessities'. An example of the first is arguably NOU 2015: 15 Environmental Pricing. Report from a Green Tax Commission that was accused by commentators and stakeholders of proposing unrealistic recommendations on the basis of idealized presuppositions disregarding legitimate interests and concerns in the relevant sectors. Technocracy in the latter sense represents a rather persuasive problem with many of the NOUs. In particular, we often see how considerations that necessarily involve normative interpretation and ranking (e.g. when a commission recommends one policy over others) are presented as if they were purely technical or scientific questions.

Common to objections 4–10 is that they are about expert failures and inappropriate use of expertise, while objections 1–3 are of an epistemological nature and apply even under ideal conditions: If there is something like flawless expertise, objections 1–3 will still remain since epistemic asymmetry represent an inherent problem in all use of expertise in policy making. However, this does not imply that nothing can be done; that we either have to reject the use of expertise, or subject to it in whatever shape it occurs. There is room for taking measures in the design of expert bodies and institutions for science advice so as to make the use of expertise compatible with requirements of epistemic trust and democratic delegation. As for the objections 4–10, it would generally be a mistake to draw the conclusion that laypeople are as likely to be right as are experts, or that relying on experts inevitably disturbs the logic of political discourse rather than enhances its quality due to the risks of expert biases and mistakes. What is called for instead are mechanisms that can prevent expert failures and secure against the misuse of expertise. The central question is thus how institutions can be designed to better ensure that identified experts will perform their democratically entrusted tasks in an acceptable, and preferably the best, way possible.

#### 4. Institutional Mechanisms

Following this guiding thread, we may distinguish between three sets of institutional mechanisms with different targets. One group of mechanisms targets expert *behaviour*, a second group the *judgements* of experts and a third the *conditions* for expert inquiry and judgement.

To the first category belong the dos and don'ts of scientific communities aimed at guaranteeing the pursuit of truth through a fair competition between arguments. The adherence to such epistemic norms spelled out, for example, by Merton ([1942] 1973), Habermas ([1972] 1984) and Tranøy (1976), is presupposed when political authorities and citizens appeal to expert opinion. In the end, the latter have to rely on the functioning of scientific communities (i.e. that the norms of inquiry are enforced through mutual scrutiny and criticism). This is the predicament of epistemic asymmetry, but political authorities can influence on the conditions for their own trust. Decisions taken about the external organization of science and research, about funding of research and distribution of funds between different branches of research and so on, may have considerable effects on the internal functioning of scientific communities. The way expert bodies and public

commissions are organized may also be important for making the scientific ethos effective. In addition, more specific measures can be taken, such as checking academic merits, past records, vested interests and political affiliations in order to exclude unsuitable persons from assignments. 440

The second group of mechanisms aim at holding experts accountable by putting their judgements under review in different fora (Reiss 2008, 38 ff). The primary forum for testing judgements and detecting fallacies and biases is the forum of peers. However, in a process of democratic decision making, the testing of judgements and arguments must be extended from this forum – and, when needed, from experts in other relevant disciplines – to the legislature and other political bodies, and even to the public sphere at large. In these fora, experts can be asked to account for critical assumptions, explain models used, specify their limits, and present alternative models (see Schlefer 2012, 280–281). Of special importance is to demand that they account for their area of expertise – that is, that the tasks they are entrusted with lie within their domain of expertise. Mechanisms of this kind may influence to what extent experts are considered trustworthy, but they may also counteract expert failures, for example when experts fall victim to overconfidence or are insensitive to the evaluative, non-scientific dimensions of a problem. 445 450

The third group of mechanisms targets the conditions for expert inquiry and judgement. Epistemic self-constraint is closely related to the existence of cognitive diversity and an adequate intellectual division of labour. Experts who reason alone are exposed to ‘confirmation bias’, which is the tendency to only look for arguments that confirm their own ideas, and to ‘reason-based choice’, which is the tendency to pick the option for which reasons can be most easily gathered. Deliberating groups are less prone to these fallacies, and they may also enlarge the pool of ideas and information and weed out bad arguments (Mercier 2011). However, the positive epistemic effects of deliberation are dependent on diversity. Without diversity, deliberation may work in the opposite direction and create groupthink (Sunstein 2006; Sunstein and Hastie 2015). Hence, organizing expert work along team and deliberative lines and providing for necessary diversity and exposure to criticism from the wider epistemic community are important ways of fostering epistemic modesty and improving the quality and conditions of expert inquiry and judgement. Crucially, cognitive diversity also involves cooperation between different disciplines and fields consciously brought in to explain a subject matter from different angles. This includes a cooperative division of labour between factual and normative analysis. 455 460 465

The Nordic style science advice system from which we have taken our examples in this paper is arguably a best practice candidate. Yet, our discussion also has implications for this system. Firstly, existing NOU regulations<sup>8</sup> highlight how advisory commissions must respond to their mandates and make reports based on systematic and relevant arguments, adequate ‘knowledge’ and ‘expertise’, etc. However, the guidelines do not specify any special role for science and research. The responsible ministry is not required to involve scientists and check their training, background, achievements, interests, affiliations etc. A code of conduct stating responsibilities and standards of good expert behaviour is missing. 470 475

Second, regulations of Norwegian advisory commissions demand published commission reports are sent out on public hearing, and there are rather detailed guidelines for consultation and hearing among affected ministries and other public units. However, there is no mentioning of or system in place for peer reviewing of commission reports. 480

Third, regarding the composition of commissions, the Gender Equality Act requires gender balance in public committees and boards. Apart from this, formal requirements are once more general: Different interests should be included in ways that fit with committees’ purpose and mandates etc. Hence, the need for a competent and relevant cognitive diversity in commissions is left unmentioned and unaddressed. 485

Hence, overall, the proposed groups of mechanisms targeting experts’ behaviour, their judgements, as well as the conditions of their behaviour and judgement, turn out to have considerable critical force even in the context of a relatively well-functioning science advice system. There is a scope for institutional reform to improve on epistemic merits that both actors and observers so far have paid little attention to. 490

## 5. Conclusions and Implications

There are in the end fair things to say about the ten worries that we have presented and illustrated with the Norwegian system of public commissions, a cherished system with many merits, and so *prima facie* a least likely case for the listed worries to come true. Our ten-point list refers to real challenges that harkens back to the problem of epistemic asymmetries: how non-experts can trust that putative experts are real experts when these non-experts are not themselves in an epistemic position to assess experts' statements and justifications directly. Given 'the fact of expertise' in contemporary democracies (Holst and Molander 2017), i.e. that reasonable political decisions have to rely extensively on expert knowledge, epistemic concerns must be dealt with at the level of institutional design. What is called for are mechanisms that ensure putative experts' expertise and their performance to adhere to epistemic standards. We have tentatively sketched three groups of such mechanisms and showed what they imply for a Nordic style science advice system.

Yet, even if mechanisms to check on experts' epistemic credentials and improve on their performance can be put in place and made more effective, a problem remains which is not about epistemic trust. It is well known how politicians and officials often use expertise, not in the service of enlightenment and problem-solving, but selectively to consolidate organizational preferences or legitimize predetermined policy decisions, or symbolically to demonstrate competence and 'epistemic authority' (Hunter and Boswell 2015). This paper has discussed and addressed epistemic concerns over experts' disagreements, biases and mistakes in times of scientisation. However, to address the larger problem of ensuring the epistemic quality of political outcomes we not only need well-functioning organizations of science advice and experts who behave as good experts are supposed to, but also full-fledged political systems where all central actor groups, from citizens, **spokespersons** and opinion leaders, to party politicians, interest group representatives, civil servants and ministers, show a concern for ensuring truth-sensitive decisions and policies.

## Notes

1. For the original formulation of an 'epistocracy of the educated', see Estlund (2008).
2. According to Alvin I. Goldman's ([2001] 2011, 14) influential definition, experts are those with considerable knowledge, and more knowledge than most others, in this or the other domain. There is a special relationship between expertise and science because what counts as knowledge in modern societies must typically be validated with reference to scientific norms and procedures. Yet, experts are not only scientists, and there are other sources of expert knowledge than academic training (Collins and Evans 2007; Grundmann 2017). In this paper, our primary focus is however on the role of scientific expertise in policy-making. 'Science' is moreover used in a wide sense and includes also the human and social sciences.
3. See <https://www.sv.uio.no/arena/english/research/projects/eurex/> for more information about the EUREX project on advisory commissions.
4. Parts of some NOUs are translated into English and are out on the web, but most translations of NOU titles and quotes are provided by the authors.
5. The NOU reports are often consensus reports, but regulations allow members to dissent and write minority statements.
6. According to regulations, the responsible ministry is in charge of the formulation of committee mandates but should consult other affected ministries and the committee chair when this is appropriate.
7. NOU 2014: 10 came with an elaborated dissent signed by a minority of the commission members, whereas NOU 2014: 12 spurred public debate on the merits of different principles for redistributing health.
8. See [https://www.regjeringen.no/contentassets/fb9f8af4b54844f2821589b3d73b821e/utredningsins\\_truksen.pdf](https://www.regjeringen.no/contentassets/fb9f8af4b54844f2821589b3d73b821e/utredningsins_truksen.pdf), <https://dfo.no/filer/Fagområder/Utredninger/Veileder-til-utredningsinstruksen.pdf>, and [https://www.regjeringen.no/globalassets/upload/fad/vedlegg/statsforvaltning/veileder\\_utv\\_algsarbeid\\_2007\\_fad.pdf](https://www.regjeringen.no/globalassets/upload/fad/vedlegg/statsforvaltning/veileder_utv_algsarbeid_2007_fad.pdf), for the most important guidelines. We focus here on revisions of NOU regulations in the interest of ensuring a truth-sensitive advice system and leave aside questions of whether de facto practice reflects regulations, and regulatory amendments will have the intended effects.

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