**A Note on the Functioning and Role of Experts and Expertise**

**in Policy-Making Processes**

Tannelie Blom

For PCE Conference

07-12-2016 Maastricht

Introduction

Almost ten years ago Jarle Trondal thought to discern a ‘Public Administration Turn’ in EU studies, a turn that revealed itself as EU scholars became more attentive to e.g. the inner-organizational features of core EU executive institutions, the distribution of competences over superior and subordinate administrative units, and the mechanisms and forums of multilevel administrative coordination. (Trondal, 2007) Meanwhile this turn seems to take a specific twist as an increasing interest can be noticed in the different ways the bureaucracies of the EU obtain and use expert information. Early exponents of this scholarly concern with the roles and functions of experts/expertise in EU policy making and implementation were the publications by Krapohl (2003), Levidow, Carr and Wield (2005), Schröder (2006), Gornitzka and Sverdrup (2008), Haverland (2009) and Robert (2010), followed by Eriksen (2011), Metz (2013), Megie (2014), Chalmers (2014), and Rimkute and Haverland (2014), to name just a few. Perhaps even more telling is the fact that scholars working in this field are aware of each other’s work and are starting to cooperate, as exemplified by the special issue of *Politique Européenne* focusing on ‘Les groupes d’experts dans le gouvernement de l'Union européenne’, edited by Robert (2011), the publication of *The Role of Experts in International and European Decision-Making Processes*, edited by Ambrus, Arts, Hey and Raulus (2014) and the special issue of *Politics and Governance* dedicated to ‘The Role of Expert Knowledge in EU Executive Institutions’, edited by Gornitzka and Holz (2015). Some of this work has a more socio-political character in that it investigates the societal and/or professional background of the experts recruited by EU institutions and their bureaucracies, sometimes also scrutinizing (informal) mechanisms of recruitment (e.g. Chalmers, 2014; Christensen, 2015; Gornitzka and Sverdrup, 2008; Megie, 2014; Metz, 2013; Schröder, 2006). Others, in a more administrative science vein, concentrate on the actual use of expertise by EU bureaucracies and their attempts to direct the outcomes of the information processing by expert groups (e.g. Ballaert, 2015; Eriksen, 2011; Levidow, Carr and Wield, 2005; Rimkute and Haverland, 2014). And some, of course, cover both lines of interest (e.g. Robert, 2010; Schröder, 2006).

This heightened interest in the role of experts and expertise in EU policy-making is partly a continuation of earlier work on EU technocracy (e.g. Majone 1996, Radaelli 1999a, Radaelli 1999c, and Harcourt and Radaelli 1999) and on the role of epistemic communities and advocacy coalitions in the development of EU policies and policy fields (e.g. Dudley and Richardson 1999, Fligstein and Mara-Drita 1996, Nylander 2001, Radaelli 1999b). Yet there are some important differences between the ‘expert twist’ in the study of EU public administrations and earlier work on EU technocracy and the impact of ‘collectivized cognition’ on policy development. Compared to studies on the technocratic character of EU politics and policy-making the new approach to the role and use of experts and expertise seems to be much more aware of the differences in terms of roles and interests between the commissioned experts and commissioning bodies like Commission DGs or supranational agencies. And whereas the epistemic communities/advocacy coalitions based analyses typically show an interest in the question why certain policies developed and became established instead of alternative options and pathways, the new interest in the role of experts in the EU policy machinery concerns much more the actual, almost daily operations of the provision of expertise while taking the existence of a policy field as a given. All in all it seems that the mentioned ‘twist’ toward experts and expertise is less attracted to the macro-level of EU politics and policy development, while paying much more attention to the micro- and meso-level of the EU machinery, as indeed becomes the general quest of opening the black box of public administration beyond the nation state.

So far so good -, yet a survey of the ‘state of the art’ and the general development of this field of research will warn for a serious risk of passing up the opportunity to broaden the conceptual and theoretical vista by not paying attention to what other disciplines and sub-disciplines have to tell. Even if we limit ourselves to the behavioral sciences (taken broadly), we can identify, besides political science, at least three established fields of academic research with an articulate interest in what experts are and do: sociology, more in particular the sociology of science and technology as it has crystallized in Science and Technology Studies (STS); cognitive psychology, nowadays called cognitive science because of the strong influence of artificial intelligence and ergonomics; and behavioral psychology, more specifically the field of decision-making research. And there is a newcomer: socio-psychological research on expert groups.

Surely, short-sightedness is not the exclusive trouble of political scientists. As a rule, STS scholars are not aware of research on experts by behavioral psychologists; cognitive scientists are not interested in what political scientists have to say about it; and decision-making researchers do not seem to be aware that the role and functioning of experts is a core theme of STS. However, although in the end EU scholars may not be interested in expertise as such, but in the role it plays in the making and implementation of trans- and supranational policies, taking notice of what other disciplines have to say about the subject can at least function as a kind of mirror that confronts EU scholars with their own, often implicit assumptions concerning basic questions and topics like: What is it to be an expert? What constitutes expertness? How to identify experts? What makes experts exceptional, if at all? What exactly are experts good at, if at anything?

This note starts with unearthing the different conceptual and theoretical dilemmas that give rise to the divergent approaches and findings. Instead of ordering the discussion according to the questions mentioned above, the following sections will concentrate on what sociologists, cognitive scientists, decision-making researchers, political scientists, and social psychologists have to say about experts and expertise, this in order to give an easy-to-grasp impression of the different approaches and their mutual incongruities. Against this background it may well be asked how to make use of these diverging and sometimes contradictory insights in a still coherent and systematic manner. Attempting to answer this question, this note will subsequently outline the basic tenets of an information processing approach to experts and expertise as an analytical framework that may support a ‘controlled eclecticism’.

Science and Technology Studies

Since the 1970s, and more specifically since the proclamation of the ‘strong program’ by the Edinburgh School (Barnes, 1974, 1977; Bloore, 1977) and the Bath School (Collins 1985) Science and Technology Studies (STS) has been dominated by social constructivist epistemologies geared to the deconstruction of essentialist assumptions regarding the exclusive cognitive authority of contemporary science. Time and again the message has been that distinctions between scientific knowledge and other forms of knowledge are socially constructed (and contested). Gieryn’s (1983) concept ‘boundary work’, referring to the ideological strategies and rhetoric tactics that ‘statesmen of science’ have used to demarcate ‘modern’, ‘evidence based’ science from other knowledge practices, has also been applied to the demarcation between science and politics (cf. Jasanoff, 1987, 1994, 2003, 2005; Wynne, 1989, 2003). Against the Mertonion assumption of a strict role division between science and politics – ‘science speaking truth to politics’ - , STS researchers have repeatedly attempted to show that this distinction is not obvious at all, and that the demarcation of what is ‘scientific’ about a policy issue and what ‘political’, is the outcome of ongoing negotiations between groups of scientists and politico-administrative units, in which there are other interests at stake than only scientific ones

When approaching the more particular topic of the role of experts/expertise in public policy-making STS scholars tend, or at least tended, to equate expertise with scientific expertise, perhaps to be critically opposed in a next step to ‘lay experts’ (cf. Wynne, 1996; Horlick-Jones, 2004). Yet central remains the science-politics distinction as witnessed by the thematic centrality of the ‘scientification of politics’ that took place in the 20th century and thereafter and of its concomitant the ‘politicization of science’, driven, not in the least, by the emergence since the 1970s of environmental and other risk-related policies (cf. Bimber, 1996, p. 97; Jasanoff 1987; Weingast 1999). As Jasanoff points out, risk-related policies ‘placed unprecedented demands on the capacity of science to predict future harm. [-] But this shift of scientific attention to the unknown, and possibly unknowable, effects of technology highlighted the intuitive, subjective and uncertain underpinnings of much of the advice that scientists provide to government’ (Jasanoff, p. 1987, 201; cf. Yearly, 2000; Brown, 2009).

Being sociologists, SST researchers typically depart from a ‘relational’ concept of ‘expert’ when it comes to the identification of experts: to be an expert is to be recognized as an expert (cf. Collins and Evans, 2009, p. 2). Or as Martin an early forerunner of STS, maintained: ‘Expertness is an *ascribed quality,* a badge which cannot be manufactured and affected by an expert himself.’ (Martin, 1973, p. 159), Expertness then is not a specific quality some exceptional individuals have, but is something in the eyes of a beholding audience. Why an audience would recognize some individuals as experts yet others not, is then explained by social and socio-political processes and mechanisms, for example by professionalization processes (e.g. Wilensky, 1964; Brint, 1994; Turner, 2001), boundary work (e.g. Gieryn, 1983; Jasanoff, 1987, 1994), scientification of politics (e.g. Weingart, 1999; Maassen and Weingart, 2005; Brown, 2009), and the like.

Cognitive science

Starting with De Groot’s (1946), and Simon and Chase’s (1973) work on chess expertise – what is the secret of grand masters? – cognitive psychological research on experts and expertise became a booming field during the eighties, strengthened by the input of post-Piagetian learning theory, Artificial Intelligence and Ergonomics (e.g. Anderson, 1981, 1999; Larkin, McDermott, Simon and Simon, 1980; Cellier, Eyrolle and Marine, 1997; Chi, Glaser and Farr, 1988; Dreyfus and Dreyfus, 2005)[[1]](#footnote-1). To distinguish this line of research from decision making studies on expert performance (see below) we will follow current parlance and refer to it as ‘cognitive science’ (cf. Farrington-Darby and Wilson, 2006).

From the perspective of cognitive scientists the most fundamental criterion of expertise is not *scientific* training and the qualifications and certificates that come with it, but long time, domain-specific *experience.* Simon and Chase had already estimated that ‘a [chess] master has spent perhaps 10.000 to 50.000 hours staring at chess positions’. (Simon and Chase, 1973, p. 402) According to Ericsson and his collaborators studies like the ones by Simon and Chase, Hayes (1981), and Bloom (1985) reveal that it takes about 10 years of daily practice (and training) in a specific domain to become an expert (cf. Ericsson, Krampe and Tesch-Römer, 1993; Ericsson and Charness, 1994). From this intensive preparation, it is assumed, results the expert’s *intuitive* grasp and recognition of complex patterns of information that are relevant for the expert’s domain. As Cellier, Eyrolle and Marine maintain, expert skills ‘are based on routines and wider, deeper and more functional representations such as patterns or ‘chunks’ built up with practice’. (Cellier, Eyrolle and Marine, 2010, p. 29; cf. Larkin, McDermott, Simon and Simon, 1980) It is the quality of available patterns that ‘allows experts to identify faulty parameter outlines rapidly, to make inferences on covert or inaccessible variables, to store previous states of the process and to focus quickly on the relevant aspects of the task.’ (Cellier, Eyrolle and Marine, 2010, p. 32/33; cf. Greenwood, 2010) Dreyfus and Dreyfus, emphasize the intuitive aspect of expert performance: ‘an expert … intuitively sees what to do without recourse to rules. [-] The expert is simply not following any rules! He or she is …just…discriminating thousands of special cases.’ (Dreyfus and Dreyfus, 2005, p. 788)

Given these basic assumptions, for cognitive scientists a relational concept of ‘expert’ is out of the question. Instead, cognitive scientists opt for a ‘substantive’ assumption. Experts *do* possess special qualities and characteristics, independent of their expertise being recognized by others (cf. Collins and Evans, 2009. P. 2 – 3). For example Ericsson and Smith have strongly recommended that for the identification of experts researchers should not rely on the opinions of certain audiences concerning ‘who are the experts’. In its place, the first and crucial step is the development of a set of tasks that can capture the superior performance that is *the* characteristic of experts. ‘Once it is possible to measure superior performance under standardized conditions, there is no need to rely on social indicators.’ (Ericsson and Smith, 1991, p. 3).

Decision-making theory

Clearly, cognitive scientists are truly impressed by the abilities of genuine experts. (cf. Glaser and Chi, 1988, p. xvii/xviii; Shanteau, 1992, p. 255). Baffling, then, is that colleagues in the neighbouring psychological sub-discipline of ‘decision making research’ are highly sceptical about the assumed capabilities of experts (cf. Chan, 1982; Shanteau and Stewart, 1992; Farrington-Darby and Wilson, 2006). As Camerer and Johnson put it in their review of decision-making studies on medical experts: ‘The depressing conclusion from these studies is that expert judgments in most clinical and medical domains are no more accurate than those of lightly trained novices. (…) And expert judgments have been worse than those of the simplest statistical models in virtually all domains that have been studied.’ (Camerer and Johnson, 1991, p. 203; cf. Johnson 1988: 211; Farrington-Darby and Wilson, 2006, p. 14) If experts are exceptional, if at all, this pertains predominantly to what has been labelled the ‘representation phase’ of a problem solving process. (cf. Voss, Vesonder and Spilich, 1980; Voss and Post, 1988) In the representation phase the goal of the task is identified, its basic pattern (or: ‘deep structure’) and the constraints on possible solutions. Crucial for this phase is the ability to extract the relevant information concerning core variables and parameters. As already becomes clear by the quotes from Cellier, Eyrolle and Marine, and Dreyfus and Dreyfus, cognitive scientists claim that experts excel exactly in identifying quickly the relevant information and faulty solutions (cf. Priest and Lindsay, 1992, p. 403). Camerer and Johnson (1991, p. 211) do indeed concede that experts ‘are successful at generating hypotheses and inducing complex decision rules. The result is a more efficient search at the available information directed by goals and aided by the expert’s superior knowledge.’ And as Johnson (1988, p. 213) had put it earlier: ‘Experts’ strength is in the selecting and coding of relevant variables; their weakness seems to be in combining them.’ (cf.Chan, 1982, p. 437)

Political Science

Compared to STS researchers political scientists interested in experts and expertise are less inclined to equate expertise with *science* based knowledge and skills, although depending on the subject of investigation the relevant experts may well happen to be qualified scientists. Yet as Gornitzka and Sverdrup (2008) have shown, the 1237 expert groups organized by the Commission in 2006 are clearly dominated by representatives of member state governments; next comes the private sector, and representatives of academia come only third. According to Eriksen (2011, p. 1169), ‘[i]n security politics, more than in any other policy area, we seem to be in the hands of experts’. Yet, ‘there is no such thing as security expertise in a scientific sense of the word’ (Eriksen, 2011, p. 1184).

Consequently the aim of political scientists studying the relation between experts and politics is not the deconstruction of stuck assumptions concerning the distinctions between science and other social practices, an endeavour that is at the core of the STS movement. Going back, at least, to Carol Weiss’ ‘The Many Meanings of Research Utilization’ (Weiss, 1979), the interest is much more in the *use* of experts and expertise by policy-makers and the bureaucracies involved. Weiss herself identified no less than 7 policy and politics related uses of scientific research and knowledge. Current approaches are more modest, identifying in general three modes of exploiting expertise, which may be labelled as *instrumental*, *political*, *symbolic* or *consensual*. (cf. Boswell, 2008; Weible, 2008; Schrefler, 2010). Expertise is used instrumentally if it is used by policy-makers to improve the quality/effectiveness of their policies. The use of expertise is political when it is used ‘as “ammunition” for substantiating organizational preferences’ (Boswell, 2008, p. 472) - ‘when decision makers rely on expert-based information to legitimize previously made policy decisions’ (Weible, 2008, p. 629). The symbolic use of expertise is evident when hiring experts or referring to in-house expertise has no other aim than showing the outside world that the policy-making organization is operating according to the norms and standards of ‘rational’, preferably ‘science-based’ policy-making. Yet as Schrefler maintains ‘the symbolic use of knowledge is not a viable strategy in the long run .... as no agency can afford to pretend doing something for a sustained period of time.’ (Schrefler, 2010, p. 315) This may well have been the reason for authors like Metz (2013) and Krick (2014) to exchange the category ‘symbolic use’ for ‘consensual use’– the EU system of expert committees as an ‘institutional framework where stakeholders can meet, exchange (contradicting) views and reach agreements’ (Metz, 2013, p. 271). Which way ever, one of the basic question that inspires a lot of this type of research is the question under which conditions which use of expertise – instrumental, political, symbolic, or consensual - can be expected to become the dominant mode (e.g. Dunlop, 2010; Schrefler, 2010)

When it comes to the operationalization of ‘being an expert’, political scientists tend to fall back on a rather ‘relaxed’ relational concept of ‘expert’. To be an expert is simply to be a member of a group that is officially labelled or is throughout perceived as an expert (or scientific) group or committee. (e.g. Dunlop, 2010; Schröder, 2006; Metz, 2013; Robert, 2010) Given, amongst others, the formal rules and informal practices that govern the recruitment of experts for the Commission - the biggest consumer of expertise in the EU - , most authors are rather sceptic when it comes to the quality of experts that make up the temporary or standing expert groups purposively established by the Directorates General of the Commission. Robert, for example, has pointed out that the way in which EU experts are recruited and expert groups are formed runs counter to what one may expect from genuine experts and expertise. ‘[E]ach recruitment is thought of and performed as, choosing a representative and an expert. This view of expertise leads consequently to ceasing to think of experts as top-rank specialists in the same discipline: expert knowledge is neither a prerequisite nor a widely shared property.’ (Robert, 2010, p. 253) As Chalmers observes: ‘To a certain extent expert group membership is just as much about expertise as it is about superior resources, particular interests and existing institutional ties (Chalmers, 2014, p. 989/90; cf. Eriksen, 2011, p. 1171; Mégie, 2014). This is of course a far cry from the cognitive scientists’ appreciation of experts and from the familiar association of ‘being an expert’ with ‘being exceptionally good’ in a certain field or societal practice, or at least substantially above average compared to peers participating in the same practice.

Social psychology of small[[2]](#footnote-2) groups and of expert groups in particular.

In the introduction to this note the social psychology of expert groups was announced as a ‘newcomer’ in comparison to more established lines of research into the characteristics of experts and the role of expertise. This is not to deny that social psychology, taken more broadly, has a long history, beginning at the end of the 19th century and famously represented by authors like Lewin in the thirties and Milgram after WW II. Yet from the early seventies onwards the social psychology of small groups saw a serious decline, only to find a ‘second wind’ in the early nineties (Cf. Brauner and Scholl 2000). Two cognitive developments have been especially relevant for this new boost. On the one hand the ‘emerging conceptualization of groups as information processors’, as Hinsz, Tindale and Vollrath (1997) retrospectively labelled this development; on the other, and of particular importance for the social psychology of *expert* groups, the elaboration of the ‘hidden profiles’ paradigm in the wake of Stasser and Titus’ seminal publication of 1985. The hidden profiles paradigm departs from the assumption that groups are indeed information processors but asks more specifically why ‘instead of sharing all information team members consistently focus on shared information at the expense of unshared information’ (Sohrab, Waller and Kaplan, 2015. P. 490). This bias towards shared information tends to undermine group performance when confronted with problem solving tasks.

Building upon these conceptual and theoretical developments in social psychology, scholars working on expert groups first of all recognize that ‘the lone analyst working in isolation to extract the meaning from a set of data is the exception rather than the rule.’ (Woolley, Genbasi, Chabris, Kosslyn and Hackman, 2008, p. 353) Moreover, their research conveys the impression that the ‘expert’ members of the groups they study are not per se exceptional individuals or ‘above average’ compared to their peer practitioners. What it asks to be an expert member is to be knowledgeable or skillful in a specific knowledge domain or social practice, based on longstanding experience and/or training. So they should be ‘above average’ compared to non-experienced and non-trained individuals. As Woolley and his collaborators put it: ‘Experts are individuals who possess an appreciably higher level of knowledge or skill than the average person’. (Woolley, Genbasi, Chabris, Kosslyn and Hackman, 2008, p. 354)

Still, the question remains whether expert groups perform better when put to problem-solving than other, non-expert groups. Or in reminiscence of cognitive scientists’ appreciation of experts: are expert groups faster and better in representing the basic structures of problems/tasks and in identifying relevant parameters for solutions than groups consisting of novices/lays? Research suggests that expert groups tend to outperform non-expert groups, in particular when the following conditions are satisfied (cf. Hill 1982):

1. Groups comprising experts will perform better than average if the expert members are identified prior to group discussions about problems and their solution (Franz and Larson, 2002) – ‘members may need to be mutually aware of each other’s area of expertise at the onset of discussion to facilitate dissemination of unshared information’ (cf. Majchrzak, Jarvenpaa and Hollingshead 2007). Left to themselves, however, groups are not very good in identifying their expert members, ‘often simply assuming that the more dominant and assertive group members are the most expert’ (Bunderson, 2003, p. 559; cf. Bonner, Baumann and Dalal 2002; Bonner and Bolinger 2013).
2. Heterogeneously composed groups tend to perform better than homogeneous groups – ‘functional diversity is important [-] teams with relevant functional diversity generally outperform teams that lack such diversity’ (Woolley, Genbasi, Chabris, Kosslyn and Hackman, 2008, p. 367). Yet this will only happen if this diversity is well coordinated. This means in turn that not only diversity in task *content*related expertise is required for a group to perform well but also other skills and roles. Woolley and his collaborators note for example that expert groups need ‘members with the intrapersonal diversity or breadth of personal skill and experience to help bridge among others with more narrow expertise’ (Woolley, Genbasi, Chabris, Kosslyn and Hackman, 2008, p. 356)

Pursuing the idea of group coordination and group internal role differentiation, Garret and his collaborators distinguish between six different ‘dimensions’ of expertise – subject matter related, situational context related, interface tool related, expert identification expertise, communication related, and information flow path related -, adding that ‘any one individual must be able to perform well on multiple dimensions at the same time; however it is likely that specific individuals’ job functionality will require more expertise in some dimension than others’(Garret, Caldwell, Harris and Gonzales, 2009, p. 101).

Taking up position: an information processing approach

A first encounter with academic thinking about experts and expertise, even if limited to the social and behavioral sciences, is indeed rather confusing: different approaches and findings which in juxtaposition produce seemingly intractable dilemmas and paradoxes. Although, at closer inspection not all the observed differences appear to be that disturbing, some dilemmas seem really obdurate, being deeply embedded in principled ontological and epistemological convictions. Still, the divergent empirical findings and assessments of scholars working in the different disciplines mentioned above are usually the result of robust and methodologically sophisticated research. Some of these findings and conceptions are intuitively plausible and theoretically interesting also for those who are interested in (the politics of) trans- and supranational public administrations. The basic question then is how to make use of these diverging and sometimes contradictory insights in a still coherent and systematic manner.

The strategy probed in the following is to embed thinking about experts and expertise in a more encompassing theory and to let this theory function as a ‘selector’ of multi-disciplinary insights and approaches. How encompassing that master scheme should be, i.e. what level of theoretical aggregation is needed to provide a theoretical context which allows for a controlled eclecticism depends on one’s basic research interests (cf. Sil and Katzenstein, 2010). For example, for STS researchers with a focus on the phenomena of scientification of politics, and politicization of science, a macro-level theory of modern, functionally differentiated society in which ‘politics’ and ‘science’ represent two of its subsystems, may well be attractive (cf. Maasen and Weingart, 2005). Yet for those interested in the influence *administrative* (non-elected) actors exert on the content, scope, and execution of trans- and supranational policies formally decided upon by *political* actors, such a level of theoretical aggregation would be too high. Instead one better takes note of Boswell’s dictum that ‘any account of how organizations use expertise will inevitably be premised on a theory of organizations’ (Boswell, 2008, p. 473). The wider framework used in the following is indeed an organization theoretical one, more specifically an information processing approach to public organizations. Starting point is the ontological assumption that organizations exist in the form of subsequent episodes of information processing with explicit decisions as transitional events that mark the end of one episode and the beginning of a new one (cf. Simon, 1997, p. 240 *ff*; March and Simon, 1958, p. 152 *ff.*) Following Luhmann (2000) it is moreover assumed that ‘reflexive’ or ‘second order’ decision-making is the main device of organizations for developing their formal structures: organizations inevitably decide on deciding (including decisions not to decide). Organizations decide for example on their *temporal* order, i.e. on *when* decisions have to be made, and, as a corollary, when information has to be accessed and made available. In a similar way, organizations do decide on their *substantiv*e order, i.e. on the (global and less global) goals of the organization, on what kind of information is relevant and should be accessed, on the rules and routines specifying how relevant information should be processed, and on how decisions should be made, e.g. which voting rules have to be followed, but also which values/interests have priority or even have to be ‘protected’[[3]](#footnote-3) when choices are made. Last but not least, organizations decide on their *social* order, i.e. on their membership rules, on the distribution of information over the organization, and on who will have a voice or even a say during which episode of information processing/decision-making. The overall point to be made is that *the core structures of organizations consist of the rules and routines that prescribe when, how and by whom information is accessed, processed, distributed, stored, etc. and decisions are made*.

From an analytical perspective an information processing approach fits quite logically research on the role and functions of expertise within public administrations. After all, policy-relevant expertise only begets social reality as communicated *information*. Consulting experts and generating expert advice is just a particular instance of information processing, just a specific episode of the sequence of information processing episodes out of which organizations exists. Moreover, an information processing approach suggests, and this in line with socio-psychological research on expert groups, that expertise is the product of communicative interaction and thus involves minimally two actors - a ‘sender’ and an understanding ‘receiver’ of expert information. Yet usually more actors are involved – expertise is typically the product of group work. In the words of Mieg: ‘Expert as a form of interaction rather than as a person – it is a social form’ (Mieg, 2001, p. 43) As also STS scholars have noted, this holds true in particular for policy related expert advice. Jasanoff (2011, p. 28): ‘expert advice is rarely the prerogative of single individuals’. As a consequence the basic unit of analysis should in general not be individual experts but expert *groups* contributing to policy-making and –implementing processes.

Politics of expertise

In *The politics of Information – The Case of the European Union* Blom and Vanhoonacker (2014) distinguish between the ‘constitutional politics of information’ and the ‘operational politics of information’. This distinction can be specified with a view to the use of expertise in policy processes. ‘Constitutive politics of expertise’ then refers to the (sometimes politically charged) processes by which political principals formally decide on the rules covering the use of expert groups by their bureaucratic agents. Political principals may for example decide on who is formally eligible for positions in expert groups/committees; on recruitment procedures; on the overall composition of the expert group (e.g. on gender, interests, or geographical balance); on how broad or restricted the mandate of an expert group should be – inspection and assessment of the ‘evidence base’ of policy proposals (‘diagnostic’ use of expert groups) only, or also the evaluation and formulation of policy alternatives?; on whether, if in-house expertise is not sufficiently available or suspect in the eyes of the outer world, the commissioning organizational unit should rely on independent epistemic communities, or on expert groups purposively established by the organization self (cf. Dunlop 2010); on during which phase of the policymaking process expert groups have to be consulted and when exactly expert reports have to be delivered; on how binding expert advice will be (strict coupling), or whether it can be taken into consideration as just one of the informational inputs (loose coupling); etc.

How fixed and detailed prescriptions on the intake and use of experts ever may be, there usually will still be room for ‘operational politics of expertise’. ‘Operational politics of expertise’ refers to the actual organizing and maneuvering of expert groups by civil servants in order to get the desired outcomes/advices – and this thanks to, and in spite of the rules fixed during the constitutional phase. For a start, representatives of the commissioning bureaucracy may claim the role of chair in order to stay in charge of the agenda and minutes, of how uncertainty and dissent come to the fore in the final advisory reports, and to act as gate-keeper between the expert group and the political level. Bureaucracies that fear ‘expert drift’ – i.e. expert groups developing and following their own agenda and preferences - , may counter that by inviting experts who do not know each other personally and/or who don’t have a common agenda, or simply by establishing expert groups on an interdisciplinary basis. Against expert pressure commissioning bureaucracies may establish different expert groups, preferably with different disciplinary/professional backgrounds in order to insulate themselves from each particular expert group and to create more leeway. And the representative of the commissioning bureaucracy can of course attempt to frame the mandate or objectives of the expert group in a way that suggests political in/feasibilities.

On the different dimensions of expertise in policy expert groups

Though inspired by Garret, Caldwell, Harris and Gonzales’ analysis of the different dimensions/functions of expertise/experts the following *five*-fold differentiation fits better the different roles of experts/dimensions of expertise within policy expert groups:

1. **Subject matter expertise** is related to the content of the issue at hand, more specifically to the scientific, technical and normative aspects of policy problems and their proposed solutions. It refers to intimate knowledge of the cause-effect relationships between the variables pertaining to a specific domain, or to the skill of interpreting the normative aspects of possible political courses of action against the background of more general and widely accepted moral frameworks. (Cf. Lindvall, 2009)
2. **Political Expertise** refers to the ability to assess the political feasibility of possible courses of action/policies - what are the preferences of the formally competent decision makers? What is their combined win-set? – and to the ‘skills to effectively steer negotiations to an outcome’(Beach, 2005)
3. **Procedural expertise** refers to extensive knowledge about the legal parameters and requirements of possible policy solutions and about the formal procedures policy-making and –implementation are subject to: which institutions/actors have to be involved in which capacity, when, and how? (Cf. Beach, 2005; Talberg, 2008; Haverland, 2009)
4. **Policy expertise** refers to **‘**knowledge of the range of policies and instruments, past and current, proposed and enacted, governing a particular policy area as well as knowledge of how they work’. (Page, 2010, p. 259)
5. **Expertise on experts** refers to the ability to identify experts - knowing who has what kind of expertise – and to handle expert groups with a view to elicit expertise opinion/information and getting shared *and* unshared information at the table (to uncover ‘hidden profiles’) (cf. Garret, Caldwell, Harris and Gonzales Stasser, 2009, p. 101; Stewart and Wittenbaum 1994)

This five-fold differentiation has of course to be explored further, analytically (are we dealing with really different dimensions?) as well as empirically (are we not missing other relevant dimensions?). However, as it stands now, it enables more explicit reflections on the relations between policy expert groups and their socio-political and legal environments. For example, within the EU context expertise on experts, and political expertise seem (prima facie) qualities that typically inhere in representatives of the EU bureaucracies who normally establish, compose, and chair the EU’s expert groups, while performing at the same time the role of gate keeper between the group and the wider bureaucratic and political environment.

To conclude

The analytical framework spelled out above to handle the multi-faceted and sometimes contradicting findings of different disciplinary strands of research on experts and expertise, suggests some general questions and concomitant lines of research. For example: under which conditions will a public organization rely on in-house expertise or on external expert groups purposively established by the organization itself? Under which conditions will policy makers decide for a narrow or a wide-ranging mandate for their expert groups? Under which conditions will the political echelon of a public bureaucracy decide for a loose or a strict coupling between expert advice and decision making? During which phase/episode of policy-making – planning, proposing, or implementation phase – is expert advice usually accessed?

Perhaps even more important than suggesting such questions, the information processing approach to the role and functioning expertise sketched in this note supports attempts to find answers with some practical recommendations. In essence these would be:

1. Expert advice is usually group work. The basic unit of analysis then is not the individual expert but expert *groups* contributing to policy-making and –implementing processes.
2. In researching the roles and functions of expert groups, attention should be given to the social dynamics and structures of expert groups.
3. Policy relevant expertise is not limited to scientific, technical, or subject matter expertise. Instead, a broad spectrum of (functional) dimensions of expertise should be taken into account.
4. Attention should be given to the linkages between expert groups and their bureaucratic and (wider) political environments.

Finally, exchanging an individualistic understanding of the role and functioning of experts and expertise for a group-based approach, may well be a convenient way to circumvent principled controversies such as between a relational versus a substantial stance on the ontology of the expert.

References

Ambrus, M., Arts, K., Hey, E. and Rauls, H. (2014), *The Role of Experts in International and European Decision-Making Processes*, Cambridge: Cambridge UP

Anderson, J.R. (1981), *Cognitive Skills and their Acquisition*, Hillsdale: Erlbaum

Ballaert, B. van (2015), ‘The Politics behind the Consultation of Expert Groups: An Instrument to Reduce Uncertainty or to Offset Salience?’. *Politics and Governance* Vol. 3, No. 1, pp. 139–150

Barnes, B. (1974), *Scientific Knowledge and Sociological Theory*, Abingdon: Routledge

Barnes, B. (1977), *Interests and the Growth of Knowledge* (London: Routledge and K. Paul)

Baron, J. and Spranca, M. (1997), ‘Protected Values’. *Organizational Behavior and Decision Processes* Vol. 70 No. 1, pp. 1–16.

Beach, D. (2005), *The Dynamics of European Integration* (Basingstoke: Palgrave Macmillan)

Bimber, B. (1996), *The Politics of Expertise in Congress – The Rise and Fall of the Office of Technology Assessment* ( New York: State University of New York)

Blom, T. and Vanhoonacker, S. (eds.) *The Politics of Information. The Case of the EU*, (Basingstoke: Palgrave).

Bloor, D. (1977), *Knowledge and Social Imagery*, (London: University of Chicago Press).

Bonner, B., Baumann, M. and Dalal, S. (2002), ‘The effects of member expertise on group decision-making and performance’. *Organizational Behavior and Human Decision Processes* Vol. 88 No. 2, pp. 719–736.

Bonner, B. and Bolinger, A. (2013), ‘Separating the confident from the correct: Leveraging member knowledge in groups to improve decision making and performance’. *Organizational Behavior and Human Decision Processes* Vol. 122 No. 2, pp. 214 – 221.

Boswell, Ch. (2008), ‘The political functions of expert knowledge: knowledge and legitimation in European Union immigration policy’. *Journal of European Public Policy,* Vol. 15 No. 4, pp. 471 – 488.

Brauner, E. and Scholl, W. (2000), ‘Editorial: The Information Processing Approach as a Perspective for Group Research’. *Group Processes & Intergroup Relations,* Vol. 3, No. 2, pp. 115 – 122.

Brint, S. (ed.) (1994), *The Future of the City of Intellect: The Changing American University,* (Stanford: Stanford UP).

Brown, M. (2009), *Science in Democracy. Expertise, Institutions and Representation* Cambridge (Mass.): MIT Press

Bunderson, J. (2003) ‘Recognizing and Utilizing Expertise in Work Groups: A Status Characteristics Perspective’. *Administrative Science Quarterly* Vol. 48, No. 4, pp. 557–591.

Camerer, C.F. and Johnson, E. J. (1991), ‘The process-performance paradox in expert judgment: How can experts know so much and predict so badly?’. In Ericsson, K. A. and J. Smith (eds), *Toward a General Theory of Expertise* (Cambridge: Cambridge UP) pp. 195-217

Cellier, J–M., Eyrolle, H. and Marine C. (1997), ‘Expertise in Dynamic Environments’. *Ergonomics* Vol. 40, No. 1, pp. 28–50.

Chalmers, A. (2014), ‘Getting a Seat at the Table: Capital, Capture and Expert Groups in the European Union’. *West European Politics,* Vol. 37, No. 5, pp. 976–992

Chan, S. (1982), ‘Expert judgement under uncertainty: some evidence and suggestions’. *Social Science Quarterly,* Vol. 63, No. 3, pp. 428-444.

Chi, M. T. H., Glaser, R. and Farr, M. J.(eds) (1988), *The Nature of Expertise* (Hillsdale: Erlbaum)

Christensen, J. (2015), ‘The Role of Expert Knowledge in EU Executive Institutions’. In Gornitzka, A. and Holst, C. (eds) The Role of Expert Knowledge in EU Executive Institutions, *Politics and Governance* Vol. 3, No. 1, pp.13 –25.

Collins, H. (1985). *Changing order: replication and induction in scientific practice.* (London: Sage Publications).

Collins, H. and Evans R. (2002), ‘The Third Wave of Science Studies: Studies of Expertise and Experience’. *Social Studies of Science* Vol. 32, No. 2, pp. 235 – 296.

Collins, H. and Evans R. (2009), *Rethinking Expertise*, (Chicago: University of Chicago Press)

De Groot, A. ([1946] 1978), *Thought and Choice in Chess*, (The Hague: Mouton)

Dreyfus, H. L. and Dreyfus S. E. (2005), ‘Peripheral Vision: Expertise in Real World Context’. *Organization Studies,* Vol. 26, pp. 779–792.

Dudley, G. and Richardson, J. (1999), ‘Competing Advocacy Coalitions and the Process of Frame Reflection: a Longitudinal Analysis of EU Steel Policy’. *Journal of European Public Policy* Vol. 6, No. 2, pp. 225–248.

Dunlop, C. (2010), ‘Epistemic Communities and Two Goals of Delegation: Hormone Growth Promoters in the European Union’. *Science and Public Policy* Vol. 37, No. 3, pp. 205–217.

Ericsson, K. A. and Charness, N. (1994), ‘Expert Performance. Its Structure and Acquisition’. *American Psychologist* Vol. 49, No. 8, pp. 725–747.

Ericsson, K. A., Krampe R. Th. and Tesch-Römer, C. (1993), ‘The Role of Deliberate Practice in the Acquisition of Expert Performance’. *Psychological Review* Vol. 100, pp. 363-406.

Ericsson, K. A. and Smith J.(1991), ‘Prospects and limits of the empirical study of expertise: an introduction’. In Ericsson, K. A. and Smith J. (eds) *Toward a General Theory of Expertise*, (Cambridge: Cambridge UP).

Eriksen, E. (2011), ‘Governance between expertise and democracy: the case of European Security’. *Journal of European Public Policy*, Vol. 18, No. 8, pp. 1169–1189.

Farrington-Darby, T. and Wilosn, J. R. (2006), ‘The Nature of Expertise: A Review’. *Applied Ergonomics* Vol. 37, pp. 17–32.

Fligstein, N. and Mara-Drita, I. (1996), ‘How to Make a Market: Reflections on the Attempt to Create a Single Market in the European Union’. *American Journal of Sociology* Vol. 102, No. 1, pp. 1–33.

Franz, T. and Larson, J. (2002), ‘The Impact of Experts on Information Processing During Group Discussion’. *Small Group Research* 33(4), pp. 383-411.

Garret, G., Caldwell, B. Harris, E. and Gonzales, M. (2009), ‘Six dimensions of expertise: a more comprehensive definition of cognitive expertise for team coordination’. *Theoretical Issues in Ergonomics Science,* Vol,10, No. 2, pp. 93–105.

Gieryn, T.F. (1983), ‘Boundary-Work and the Demarcation of Science from Non-Science: Strains and Interests in Professional Ideologies of Scientists’. *American Sociological Review* Vol. 48, pp. 781–795 .

Gornitzka, A. and Holst, C. (eds) (2015), ‘The Role of Expert Knowledge in EU Executive Institutions’. *Politics and Governance* Vol. 3, No. 1, Special Issue.

Gornitzka, A. and Sverdrup, U. (2008), Who Consults? The Configuration of Expert Groups in the European Union’. *West European Politics* Vol. 31, No. 4, pp. 725–750.

Greenwood, D. (2010), ‘Facing Complexity: Democracy, Expertise and the Discovery Process’. *Political Studies* Vol. 58, pp. 769–788.

Harcourt, A. and Radaelli, C. (1999), ‘Limits to EU technocratic regulation?’. *European Journal of Political Research,* Vol.35,pp. 107–122.

Haverland, M. (2007), ‘How Leader States Influence EU Policy-Making: Analysing the Expert Strategy’. *European Integration Online Papers* Vol. 13

Hill, G. W. (1982), ‘Group Versus Individual Performance: are N + 1 Heads better than one?’. *Psychological Bulletin*, Vol. 9, No. 3, pp. 517-539.

Hinsz, V., Tindale R, and Vollrath, D. (1997), ‘The Emerging Conceptualization of Groups as Information Processors, *Psychological Bulletin* Vol. 121, No. 1, pp. 43-64.

Horlick-Jones, T. (2004), ‘Experts in risk? … do they exist?’. *Health, Risk & Society* Vol. 6, No. 2, pp. 107 114.

Jasanoff, S. (1987), ‘Contested Boundaries in Policy-Relevant Science’. *Social Studies of Science* Vol. 17, No. 2, pp. 195-230.

Jasanoff, S. (1994), *The Fifth Branch – Science Advisers as Policymakers,* (Cambridge (Mass.): Harvard University Press)

Jasanoff, S, (2011), ‘Quality control and peer review in advisory science’. In Lentsch, J. and Weingart, P. (eds.) (2011), *The Politics of Scientific Advice – Institutional Design for Quality Assurance*, (Cambridge: Cambridge University Press), pp. 19-35.

Johnson, E. (1988), ‘Expertise and Decision under Uncertainty: Performance and Process’. In Chi, M. T. H., Glaser, R. and Farr, M. J. (eds) (1988), *The Nature of Expertise*, (Hillsdale: Erlbaum), pp. 209-228.

Krapohl, S. (2003), ‘Risk regulation in the EU between interests and expertise: the case of BSE’. *Journal of European Public Policy*, Vol. 10, No. 2, pp. 189-207.

Krick, E. (2014), ‘Negotiated expertise in policy-making: How governments use hybrid advisory committees’. *Science and Public Policy,* pp*.* 1 – 14

Larkin, J., McDermott, J., Simon D.P. and Simon H. A. (1980), ‘Expert and Novice Performance in Solving Physics Problems’. *Science*. New Series 208 (4450), pp. 1335–1342.

Levidow, L., Carr, S. and Wield, D. (2005), ‘European Union regulation of agri-biotechnology: precautionary links between science, expertise and policy’. *Science and Public Policy,* Vol. 32, No. 4, pp. 261-276.

Lindvall, J. (2009), ‘The Real but Limited Influence of Expert Ideas’. *World Politics* Vol. 61, No. 4, pp. 703-730.

Luhmann, N. (2000), *Organisation und Entscheidung*, (Wiesbaden: Westdeutsche Verlag).

Maasen, S and Weingart, P. (2005), ‘What is New in Scientific Advice to Policy? Introductory Essay’. In Maasen, S and Weingart, P. (eds), *Democratization of Expertise ? Novel Forms of Scientific Advice in Political Decision-Making*, (Dordrecht: Springer Verlag), pp. 1-20.

Majchrzak, A., Jarvenpaa, S. and Hollingshead, A. (2007), ‘Coordinating Expertise Among Emergent Groups Responding to Disasters’. *Organization Science* Vol. 18, No. 1, pp. 147-161.

Majone, G. (1996), *Regulating Europe*, (London: Routledge)

March, J.G. and. Simon H.A ([1958] 1993). *Organizations*. (Cambridge (Mass.): Blackwell Publishing).

Martin, B. L. (1973), ‘Experts in Policy Processes: A Contemporary Perspective’. *Polityu* Vol. 6, No. 2, pp. 149–173.

Megie, A. (2014), ‘The origin of EU authority in criminal matters: a sociology of legal experts in European policy making’. *Journal of European Public Policy* Vol. 21, No. 2, pp. 230–247.

Metz. J. (2013), ‘Expert groups in the European Union: A sui generis phenomenon?. *Policy and Society* Vol. 32, pp. 267–278.

Mieg, H. (2001), *The Social Psychology of Expertise*, (New Jersey: Lawrence Erlbaum Ass.).

Nylander, J. (2001), ‘The Construction of a Market – a Frame Analysis of the Electricity Market in the European Union”.  *European Societies* Vol. 3, No. 3, pp. 289–314.

Page, E. (2010), ‘Bureaucrats and expertise: Elucidating a problematic relationship in three tableaux and 6 jurisdictions’. *Sociologie du Travail,*  Vol. 52, pp. 255-273.

Priest, A. and Lindsay, B. (1992), ‘New light on novice-expert differences in physics problem solving’. *British Journal of Psychology* 83, pp. 389 – 405.

Radaelli, C. (1999a), ‘The public policy of the European Union: whither politics of expertise?’. *Journal of European Public Policy* Vol. 6, No. 5, pp. 757-774.

Radaelli, C. (1999b), ‘Harmful Tax Competition in the EU: Policy Narratives and Advocacy Coalitions’. *Journal of Common Market Studies,* Vol. 37, No. 4, pp. 661–682.

Radaelli, C. (1999c) *Technocracy in the European Union,* (London: Longman).

Rimkute, D. and Haverland, M. (2014), ‘How does the European Commission use expertise?’. *Comparative European Politics*, pp. 1–20.

Ritov, I. and Baron, J. (1999), ‘Protected Values and Omission Bias’. *Organizational Behavior and Decision Processes* Vol. 79, No. 2, pp. 79-94.

Robert, C. (2010), ‘Who are the European experts? Profiles, trajectories and expert ‘careers’ of the European Commission’. *French Politics* Vol. 8, No. 3, pp. 248–274.

Robert, C. (ed) (2010), ‘Les groupes d’experts dans le gouvernement de l'Union européenne’. *Politique Européenne* Vol. 32, No. 3, Special Issue

Royer, J., Carlo, M., Dufresne, R. and Mestre, J. (1992), ‘The Assessment of Levels of Domain Expertise while Reading’. *Cognition and Instruction* Vol. 14, No. 3, pp. 373-408.

Schrefler, L. (2010), ‘The Usage of Scientific Knowledge by Independent Regulatory Agencies’. *Journal of Policy, Administration, and Institutions* Vol. 23, No. 2, pp. 309-330.

Schröder, U. (2006), ‘Security Expertise in the European Union. The Challenges of Comprehensiveness and Accountability’. *European Security* Vol. 15, No. 4, pp.471–490.

Shanteau, J. (1992), ‘Competence in Experts: The Role of Task Characteristics’. *Organizational Behavior and Human Decision Processes* Vol. 53, pp. 252–266.

Shanteau, J. and Stewart, T. (1992), ‘Why Study Expert Decision Making? Some Historical Perspectives and Comments’. *Organizational Behavior and Human Decision Processes,* Vol. 53, pp. 95–106.

Sil, R. and Katzenstein, P. (2010) *Beyond Paradigms Analytic Eclecticism in the Study of World Politics*  (Basingstoke: Palgrave MacMillan)

Simon, H. (1997) *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations*. (New York: The Free Press)

Simon, H. and Chase W. (1973), ‘Skills in Chess’. *American Scientist* Vol 6, No. 4, pp. 394–403.

Sohrab, S., Waller, M. and Kaplan, S. (2015), ‘Exploring the Hidden Profile Paradigm: A Literature Review and Analysis’. *Small Group Research*, Vol. 46, No. 5, pp. 489–535.

Stasser, G., Stewart, D. and Wittenbaum, G. (1995), ‘Expert Roles and Information Exchange during Discussion. The Importance of Knowing Who Knows What’. *Journal of Experimental Psychology* Vol. 31, pp. 244-265.

Tetlock, Ph.E., Kristel, O.V., Lerner, J.S. and Green, M.C. (2000), ‘The Psychology of the Unthinkable: Taboo Trade-Offs, Forbidden Base Rates, and Heretical Counterfactuals’. *Journal of Personality and Social Psychology* Vol. 78, No. 5, pp. 853–870.

Trondal, J. (2007), ‘The Public Administration Turn in Integration Research’. *Journal of European Public Policy* Vol. 14, No. 6, pp. 960–972.

Turner, St. (2001), ‘What is the Problem with Experts?’. *Social Studies of Science* Vol. 31, No. 1, pp. 123–149.

Voss, J. and Post, T. (1988), ‘On the Solving of Ill-Structured Problems’. In Chi, M. T. H., Glaser, R. and Farr, M. J. (eds), *The Nature of Expertise*, (Hillsdale: Erlbaum), pp. 261 - 285

Voss, J. , Vesonder, G. and Spilich, G (1980) ‘Text generation and recall by high-knowledge and low-knowledge individuals’. *Journal of Verbal Learning and Verbal Behavior* Vol. 19, No. 6, pp. 651-667 **Text generation and recall by high-knowledge and low-knowledge individuals Text generation and recall by high-knowledge and low-knowledge individuals.**

Weible, C. (2008), Expert-Based Information and Policy Subsystems: A Review and Synthesis’’. *The Policy Studies Journal* Vol. 36, No. 4, pp. 615-635.

Weingart, P. (1999), ‘Scientific Expertise and Political Accountability: Paradoxes of Science in Politics’. *Science and Public Policy* Vol. 26, No. 3, pp. 151–161.

Weiss, C. (1979), ‘The Many Meanings of Research Utilization’. *Public Administration Review* (Sept./Oct.), pp. 426-431.

Wilensky H. (1964)‘The Professionalization of Everyone?’. *American Journal of Sociology,* Vol.70, No. 2, pp. 137-158.

Woolley, A., Genbasi M., Chabris C., Kosslyn, S. and Hackman, R. (2008), ‘Bringing in the Experts: How Team Composition and Collaborative Planning Shape Analytical Effectiveness’. *Small Group Research* Vol. 39, No. 1, pp. 352-371.

Wynne, B.. 1989**, ‘**Sheepfarming after Chernobyl: a case study in communicating scientific information’.*Environment,* Vol. 31, No. 2, pp. 10-39.

Wynne B. (2003), ‘Seasick on the Third Wave? Subverting the Hegemony of Propositionalism: Response to Collins and Evans’. *Social Studies of Science* Vol. 33, No. 3, pp. 401–417.

Yearly, S. (2000), ‘Making systematic sense of public discontents with expert knowledge: two analytical approaches and a case study’. *Public Understanding of Science* Vol. 9, pp. 105-122.

1. For an informative summary of the early development of expert research see Ericson and Smith, 1991; see also Shanteau and Stewart,1992**.** [↑](#footnote-ref-1)
2. ‘Small’, in order to distinguish this branch of social psychology from mass psychology. [↑](#footnote-ref-2)
3. ‘Protected values’, are ‘values that resist trade-offs with other values’ (Baron and Spranca, 1997: 1; cf. Ritov and Baron, 1999; Tetlock, Kristel, Elson, Green, and Lerner, 2000). [↑](#footnote-ref-3)