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ABSTRACT This paper explores the 'issue-oriented' perspective on public involvement in politics opened up by recent research in Science and Technology Studies (STS). This research proposes that public controversy around techno-scientific issues is dedicated to the articulation of these issues and their eventual accommodation in society. It does not, however, fully answer the question of why issue formation should be appreciated as a crucial dimension of *democratic* politics. To address this question, I turn to the work of two early 20th-century American pragmatists: John Dewey and Walter Lippmann. In their work on democracy in industrial society, they conceived of public involvement in politics as being occasioned by, and providing a way to settle, controversies that existing institutions were unable to resolve. Moreover, Dewey developed a 'socio-ontological' understanding of issues, which suggests that people's involvement in politics is mediated by problems that affect them. Dewey and Lippmann thus provide important argumentative resources for further elaborating the approach to public involvement developed in STS. STS research has also developed a 'socio-ontological' approach, as it focuses on the 'attachments' that people mobilize (and that mobilize people) in the performance of their concern with public affairs. Such an approach provides an alternative to discursivist analysis of the role of 'issue framing' in the involvement of publics in politics.

Keywords issue formation, John Dewey, political democracy, public involvement in controversy, science and technology studies, Walter Lippmann

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The notion of an 'object-oriented' perspective on politics may seem to imply a rather technocratic view of government, but recent work in Science and Technology Studies (STS) makes it clear that this is not necessarily so. To give pride of place to the objects of politics and to regard defining and solving issues as its central challenge suggests an understanding of politics in which more straightforwardly democratic values, such as the inclusion of actors in political process and the facilitation of self-expression by citizens, come second. But recent work on public involvement in controversies about science and technology by authors such as Bruno Latour, Brian

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Wynne and Andrew Barry complicate this picture. Their accounts prioritize the objects of politics, showing that public involvement practices are principally concerned with the articulation of contested entities such as roads and epidemics. In providing 'object-oriented' accounts of public involvement practices, they present political objects that are so *engaging* that the association with technocratic politics cannot possibly be sustained in these cases. I will argue here that in this regard recent work in STS proposes a distinctive perspective on public involvement in politics. But its distinctiveness is not always recognized, and some of the reasons for why this is the case merit our attention. STS research does not provide an explicit answer to the question of why an object-oriented politics would have to take the form of democratic politics. In order to provide an answer to this question, I propose here that we must appreciate the extent to which STS research elaborates a view of democracy that was developed by two American pragmatists, Walter Lippmann and John Dewey.

Science and Technology Studies and the Question of Democracy

In recent years, researchers in STS have expressed renewed interest in public involvement in the politics of science and technology. Earlier work in the field already had described societal controversies around techno-scientific issues as important sites for the enactment of democracy (Bijker, 1995; Sclove, 1995). Since its inception, the field has been concerned with the question of the 'democratization of science': of how practices of techno-scientific research and development can be brought in agreement with democratic ideals of inclusive opinion-making and accountable decision-making (De Vries, 2007). However, recent studies of political processes concerned with science and technology have given a new formulation to this concern. British STS researchers, in particular, have observed that the need for public consultation on techno-scientific issues is increasingly recognized by governments. They conclude that such public consultation makes it possible, and necessary, to undertake critical analyses of actual instances of the 'democratization' of science and technology (Irwin, 2001; Irwin & Michael, 2003; Leach et al., 2005). Thus, Alan Irwin has argued that that we must 'move beyond the mere advocacy of scientific democracy and towards a more considered treatment of the possible forms of such democracy and their implication for wider publics' (Irwin, 2001: 4). A second motivation for a return to questions of public participation in the politics of science and technology is a more internal one, namely a concern with trends in STS research. For example, Sheila Jasanoff has criticized the tendency of some STS approaches to focus exclusively on 'institutional' relations between academia, industry and the state, while professing to be concerned with the role of science in democracy. She notes the 'need for new theoretical resources to bring the missing public back into studies of science and democracy' (Jasanoff, 2005a: 248).

Evocations of a 'missing public' draw on deeply engrained commitments to participatory politics, but STS research also aims to open up such commitments for questioning. Indeed, I want to emphasize that this line of work offers a distinctive perspective on democratization: it invites us to approach practices of public involvement in politics as dedicated to the articulation of public issues. Issue definition has been widely recognized as an important dimension of democratic processes in political science and democratic theory – especially in theories of agenda setting and deliberative democracy – but, I shall argue, STS offers a distinctive perspective on the matter. Theories of agenda setting regard issue definition as the decisive factor in democratic institutional politics, as it determines which actors can get involved in political process, and on what terms (Schattschneider, 1960; Lukes, 1974; Baumgartner & Jones, 1993).¹ According to theorists of deliberative democracy, one of the main values of public participation in institutional politics is that it renders issues publicly visible, thereby forcing them onto the political agenda (Habermas, 2001 [1998]: 111; Dryzek, 2000: 131). Also, in recent studies of more experimental forms of public involvement political issues have been given special importance. Research on global democracy proposes that political communities today are no longer exclusively territory-based (grounded in the nation-state), but also increasingly issue-based (Held, 2004). Such research also proposes that the relevant communities involved in decision-making should be demarcated on the basis of issues. Recent accounts of the rise of 'lifestyle politics' discuss the possibility that issues rather than political parties mediate public involvement (Bennett, 1998; Norris, 2002). However, while there is no lack of appreciation for the role of issues in democratic processes, political scientists and democratic theorists tend to characterize democracy primarily in other terms: namely, 'citizen representation', 'inclusive debate', 'rational deliberation'. In this regard, STS research stands out by characterizing democratic processes themselves as particular practices of issue articulation. Moreover, while democratic practices of issue formation are often understood in discursive terms, in political science and democratic theory, as well as in STS, STS research has also developed a socio-ontological understanding of these processes.²

The special emphasis on issue formation occurs in at least two ways in studies of public involvement with science and technology. To begin with, scholars working on the 'public understanding of science' (PUS) – or as it is now sometimes called, 'public engagement in science' (PES) – pay critical attention to issue framings mobilized in public consultations and citizen conferences (Irwin, 2001; Jasanoff, 2003; Wynne, 2005; see also Rogers & Marres, 2000). PES research makes clear that such events are not as 'democratic' as they may appear to be: while they are designed to take into consideration the concerns of average people, these events actually may preclude such consideration because the framings that delimit the topics of discussion do not allow for the formulation of their concerns³ (Irwin, 2001; Wynne, 2005). Thus, it recommends that 'democratization' strategies should focus on how the issues are defined. As Sheila Jasanoff puts it, 'growing

awareness that policy framings not only solve problems but allocate power ... has led commentators on the politics of science and technology to recommend greater democratic scrutiny of framing processes' (Jasanoff, 2005b: 194–95). Even though Jasanoff does not develop an explicit conception of democracy, she exposes the limits of calls for more participation, and the understanding of democracy in terms of inclusion they imply. According to Jasanoff, we do not simply need more participation, but 'richer deliberation on the substance of decision-making' (Jasanoff, 2003: 240).

A second strand of STS research that foregrounds issue formation is the work of Bruno Latour, Michel Callon, Pierre Lascoumes and Yannick Barthe. They go so far as to treat the articulation of matters of public concern as itself a principal merit of public involvement in science and technology. Callon, Lascoumes and Barthe elaborate the concept of 'the hybrid forum' to characterize the type of democratic process performed during public controversies over techno-scientific issues. Hybrid forums host deliberative processes in which heterogeneous actors – those belonging to affected groups, experts, politicians and officials – collectively define the problems in which they are all implicated (Callon et al., 2001: 36, 167–68). In *Politics of Nature* (2004 [1999]), Latour proposes the notion of 'matter of concern', which refers to troubling, partially unknown entanglements of humans and non-humans, which are often introduced to the world by science and technology, and which endanger society (from 'BSE' to 'GM Food'). According to him, these matters should be articulated in democratic processes, which should result in decisions on their accommodation in society. Latour outlines a democratic procedure for 'ecological politics', in which a range of competences – the sciences, ethics, politics, law and economics – contribute to the articulation of risky objects. And the principal aim of this process is the eventual accommodation of such objects within society. These French sociologists thus propose that democratic processes stand in the service of 'the composition of the common world' (Callon et al., 2001: 51; Latour, 2004 [1999]: 184–85).

A distinctive feature of STS approaches to democracy is that they dissolve the customary separation between the epistemic process of knowledge formation and political processes of community, opinion, consensus, decision or policy formation. No less distinctive is STS' emphasis on issue formation. Thus, according to Latour and Callon, Lascoumes and Barthe, the articulation of issues not only constitutes a notable dimension of democratic processes, it is what those processes are all about. One way to account for this shift in emphasis is to say that STS undertakes an ontological turn in the conception of democratic practices. Whereas political science and democratic theory often conceive of issue formation as a discursive process, involving the mobilization of terms, symbols and ideas that are to inform problem definitions, STS conceives of it as intervening in 'collectives' or 'life worlds' that include associations of material and social constituents. In the words of Leach, Scoones and Wynne, research in STS has shown that differences in perspective among social actors on techno-scientific issues are 'a matter of incommensurable practical human-cultural ways of being (ontologies),

not only of different human epistemologies or preferred ways of knowing' (Leach et al., 2005: 8). They also stress that STS has a distinctive commitment to recognize the role of nature and technology, that is, of 'non-humans', as 'agents' in democratic process, and more specifically, in the performance of citizenship (Leach et al., 2005; see also Irwin & Michael, 2003; Latour, 2004 [1999]). This 'socio-ontological' sensibility provides an initial clue as to why STS is predisposed to recognize the definition and settlement of issues as crucial elements of the democratic process. For a perspective that explicitly values the contribution of non-human entities to human forms of life, the fate of objects has immense political and moral consequences. However, work in STS has yet to fully elaborate what an 'issue-oriented' perspective can reveal about public involvement practices.

There are several ways in which STS approaches to issue formation remain underdeveloped. First, the commitment to consider the socio-ontological dimension of public involvement practices is not consistently maintained. For example, Brian Wynne has proposed that studies of public involvement should analyse the 'discursive framings' that bring about the public 'meanings' of issues, while preventing others from becoming manifest (Wynne, 2005), but in adopting such a discursivist understanding of issue formation his perspective loses much of its distinctiveness, as I discuss later. Second, while Wynne, Irwin, Jasanoff and others argue in favour of the 'democratization' of issue definition, it is not clear that they aim to conceptualize public involvement practices as practices of issue formation. In other words, it is still possible to interpret their arguments in 'issue-less' terms, implying that democratization refers mainly to the project (or hope?) of making policy-making more inclusive and accountable. A third criticism has to do with a preoccupation in STS with organized events, such as public consultations and citizen juries, that promote public involvement.

As the Dutch philosophers Rein de Wilde and Gerard de Vries point out (De Wilde, 1997; De Vries, 2002), STS perspectives on democracy all too readily adopt models of public participation developed in political science. This criticism also applies to the models of public involvement in politics proposed by Latour and Callon, insofar as they are procedural models. Such models break with insights that STS itself has marshalled, such as its commitment to follow practices-in-the-making, and the more general conviction that prescriptive conceptualizations are likely to place impossible demands on the practices they prescribe (Hinchliffe, 2001). Indeed, in this context it is important to remember that the well-known laboratory studies of the 1980s and 1990s advocated an 'object-turn' in the study of scientific practices, and that this 'turn' implied that formal, prescriptive accounts of practices, namely those in terms of scientific method, were undermined. Laboratory studies granted special attention to the objects and instruments of enquiry, and attributed to them a formative role in the organization of scientific fields (Rheinberger, 1997; see also Latour, 1983; Star & Griesemer, 1989). These studies criticized the subsumption of the objects of science by notions of method in traditional philosophies of science, but Callon and Latour do not extend this criticism to prescriptive accounts of

democracy. They do not criticize the widespread preoccupation with the 'method' of democracy: participatory procedure, but outline such procedures themselves.

Of course, the extension of a conceptual approach from one domain of study to another is a tricky matter, and, at the very least, it should involve careful consideration of the specific features of the phenomenon under scrutiny: public involvement in politics. In this regard, STS research does not yet provide a satisfactory justification for an 'issue-turn' in the study of public involvement in politics. Latour and Callon and their colleagues do elaborate a positive conception of democratic process in which issue formation is granted a central role. When they describe democratic processes in terms of 'the composition of the common world', they commit themselves to a republican conception of democracy: they adopt a sociologized and ontologized notion of the common good. The problem is that, by drawing upon this ideal, the French sociologists do not sufficiently account for the fact that particular, contingent entities that science and technology introduce into the world differ in crucial respects from the abstract, general entity – the common good – celebrated in classic and modern republican theories. That is, they do not make fully clear why democratic processes should be dedicated to the articulation of techno-scientific issues.

The limits of proceduralist approaches to democracy are addressed in another strand of recent work in STS; the last one that I shall discuss here. This work takes up the conceptual and methodological tools of STS to study public involvement in politics as practice. Field studies by Andrew Barry, Emilie Gomart and Maarten Hajer, among others, draw attention to the role of 'objects of contention'. In an empirical study of local protests against road construction projects in England in the 1990s, Barry (2001) proposed that such protests cannot be understood in terms of the defence of interests or the expression of political identity. Instead, they are mainly dedicated to making objects of contestation publicly visible. Gomart & Hajer (2003) studied a series of public events organized around the Hoeksche Waard, a controversial regional planning proposal in the southern Netherlands. They proposed that citizen involvement in politics is enabled by a 'shifting of the staging of the affair' among various locations, from a formal consultation conducted by the Province of South Holland to an outdoor event staged by a Rotterdam architectural association. However, while these STS-inspired studies foreground the public articulation of issues, they also, to a degree, leave unanswered the question of how to account for the important role of the object of democratic politics. Barry characterizes the protests as events of the public-ization of a political object – projected roads. But his account avoids reference to the notion of democracy, and instead describes the process in political terms, as opening up a space for contestation. In a review of Barry's study, Michel Callon (2004) attempts to explicate the connections between democracy and the practices of issue-making that Barry foregrounds. Callon proposes that issue formation, which he defines as the '*mise en politique*', or politicization, of the indirect effects of science and technology, constitutes an important

precondition for a democratic processing of these issues. However, Callon here characterizes political democracy itself in terms of discussions taking place in a well-ordered public space. Callon thus does not explicitly acknowledge the formative influence of practices of issue formation on the type of democratic politics performed – of which public debate is only one possibility. As for Gomart and Hajer, their notion of the ‘shifting of the staging of affairs’ accounts for the ways in which people may be transformed into active participants in public controversy, but they do not explicitly recognize the articulation of the issue in question, the Hoeksche Waard, as a benefit of public involvement in politics. Importantly, these empirical case studies account for the practical ways in which particular techno-scientific entities are contingently articulated as objects of public involvement. But they fail to answer the question of why issue formation constitutes an important dimension of *democratic* processes.

An answer to that question is required if we wish to maintain that public involvement in politics can be accounted for in terms of the articulation and settlement of issues. Indeed, the danger remains that such an approach to political democracy will count for little more than a residual artefact of a long-time concern in STS with how techno-scientific entities impinge on social life. The special attention given to issue formation would then have to be interpreted as the result of an important but rather limited concern with the democratic control of science and technology. However, the study of public involvement in politics inevitably mobilizes conceptions of democracy, and such studies thus require such a conception even, and especially, when considering techno-scientific issues. Fortunately, a theoretical perspective exists that goes a long way towards making it clear why public involvement practices should be dedicated to issue formation: that of the early 20th-century American pragmatist thinkers Walter Lippmann and John Dewey. Their perspective on political democracy in industrial societies, I hope to show, may enrich STS approaches on crucial points.

With the Help of Two American Pragmatists

The American philosopher John Dewey is recognized as an important predecessor for recent work in political philosophy and social theory. Dewey’s critique of modernist epistemology and his commitment to democratic public debate have had strong influence on American post-analytical approaches in philosophy (Rorty, 1982; Bernstein, 1985). Indeed, he is widely regarded in political theory as the 20th-century philosopher who most strongly realized the value of dialogue for democracy in post-industrial societies (Westbrook, 2005). Dewey has also been declared a philosopher of ‘ecological modernization’ *avant la lettre*; sociologists such as Ulrich Beck regard Dewey as the first to recognize the central importance of the ‘harmful indirect consequences’ of industrial life as an object of governance and public involvement (Beck, 2002; see also Thompson, 2002). Finally, Dewey is appreciated as the theorist who introduced a ‘spirit of experimentalism’ into the study of democracy. He was the first to establish the importance of *innovation* as an enabling condition for,

as well as a feature of, democratic process (Keulartz et al., 2002; Dratwa, 2003). These different aspects of Dewey's work, its emphasis on deliberation, his experimentalism and sensitivity to 'risk' issues, are also implicitly or explicitly taken up in STS research (Latour, 2001). However, Dewey's appreciation of issue formation as an important dimension of public involvement in politics has not yet received much explicit attention. One likely reason for this neglect is that this aspect of Dewey's work on democracy only becomes fully clear when it is read in tandem with the work of another American pragmatist and one of Dewey's interlocutors, Walter Lippmann.

John's Dewey's only book on political theory, *The Public and Its Problems* (1991 [1927]), was written in response to two books by the journalist and public intellectual Walter Lippmann: *Public Opinion* (1997 [1922]) and *The Phantom Public* (2002 [1927]). All three books discuss the fate of democracy in technological societies, and they have received widespread recognition in political theory as the Lippmann–Dewey debate (Ryan, 1995; Putnam, 2004). To begin with, it should be emphasized that the Lippmann–Dewey debate is not generally considered to be about the role of issues in the enactment of public involvement. More often, it is viewed as a conflict between two normative positions on the possibility of democracy in technological societies: Lippmann's sober democratic realism versus Dewey's ideals of participatory democracy (Ryan, 1995; Festenstein, 1997). According to the standard view, Lippmann favoured a strong role for expert advice in government decision-making, with limited input from citizens. He was a 'disappointed idealist', who claimed that political affairs in the industrial world had become so complex that ordinary citizens could not perform the governing role that democratic theory grants them. This disillusioned argument contrasts sharply with Dewey's claim that technological societies require *more* public involvement in politics, not less (Putnam, 2004). Dewey not only argued that it is possible to develop procedures that would enable citizens to contribute pertinent opinions to debates about the complex public affairs that are characteristic of industrialized societies. He also claimed that intelligent decision-making will occur only when expert knowledge-making is matched by citizen participation in public debates. The Lippmann–Dewey debate, therefore, is often portrayed as a contest between an advocate of expertocracy and a proponent of participatory democracy.⁴ While an emphasis on the differences between their political philosophies certainly is not wrong, it nevertheless tends to downplay the similarities between their arguments. Both Lippmann and Dewey characterized democratic politics as involving a particular practice of issue formation (Marres, 2005).

The Lippmann–Dewey debate can also be interpreted as an attempt to move the debate about democracy in industrial societies beyond the opposition between technocracy and public participation. The starting point for both of them is that certain features of industrial society compel a reevaluation of the conditions under which publics become involved in politics. In considering these features, both pragmatists come to suggest that the conditions for expertocratic rule are less pervasive in industrial

societies than is sometimes assumed. Two aspects of such societies, which today have become common features of the social and political landscape, were particularly relevant for Dewey and Lippmann. First, new forms of media, such as daily newspapers, radio and cinema, increasingly related citizens to public affairs, and second, in an industrial world such affairs were increasingly complex. According to Lippmann and Dewey, however, these changing conditions did not only pose difficulties for public involvement in politics: they both argued that the presentation of complex issues in the media must be understood as an *enabling* condition for democracy. As Lippmann put it in *The Phantom Public*:

[I]t is in controversies of this kind, the hardest controversies to disentangle, that the public is called in to judge. Where the facts are most obscure, where precedents are lacking, where novelty and confusion pervade everything, the public in all its unfitness is compelled to make its most important decisions. The hardest problems are problems which institutions cannot handle. They are the public's problems. (Lippmann, 2002 [1927]: 121)

Lippmann proposed that an opportunity for public involvement in politics is opened up by the emergence of controversy: when problems arise that prove resistant to definition and settlement by established knowledge and institutional procedures:

Government consists of a body of officials, some elected, some appointed, who handle professionally, and in the first instance, problems which come to public opinion spasmodically and on appeal. Where the parties directly responsible do not work out an adjustment, public officials intervene. When the officials fail, public opinion is brought to bear on the issue. (Lippmann, 2002 [1927]: 63)

This proposition is in line with the classic liberal ideal of limiting opportunities for public intervention in private affairs. But it also posits a practical condition for public involvement in politics, which breaks with the classic assumption that such involvement requires 'sufficient knowledge' of affairs. According to Lippmann, public opinion becomes concerned with problems whenever the relevant expertise and the required skills and resources for solving them are lacking. He thus broke with a classic understanding of the 'problem of expertocracy', according to which a limited number of professionals possess the necessary expertise and skill for the mastery of social problems. In *The Public and Its Problems*, Dewey elaborated further upon Lippmann's account of the conditions for public involvement in politics. He followed Lippmann in proposing that the need for public involvement in politics arises when the actors and institutions directly implicated in a problem fail to solve it, but he also made a crucial modification: he characterized such issues in more 'objective' terms, suggesting that they are made up of a particular entanglement of social associations. This is how Dewey defines 'the public':

The public consists of all those who are affected by the indirect consequences of transactions, to such an extent that it is deemed necessary to

have those consequences systematically cared for ... This supervision and regulation [of these consequences] cannot be effected by the primary groupings themselves. ... Consequently special agencies and measures must be formed if they are to be attended to. (Dewey, 1991 [1927]: 15–16)

Whereas Lippmann characterized the public's problems principally in terms of the inability of professionals to solve them, Dewey described them in terms of the scope and distribution of their effects on social actors. That is, he displaced Lippmann's account onto the plane of social ontology.⁵ Drawing on the liberal notion of the 'harmful consequences of action' that may affect third parties, Dewey conceived of the emergence of public affairs as events that happen at the level of the associations that make up social life. A relational ontology enabled him to argue that actors organize into a public to the extent that they are *implicated* in a problem that requires their intervention:

When a family connection, a church, a trade union, a business corporation, or an educational institution conducts itself so as to affect large numbers outside of itself, those who are affected form a public which endeavors to act through suitable structures (Dewey, 1991 [1927]: 28–29).

Passages like these clarify how Dewey can be viewed as an important precursor for contemporary perspectives in social theory. His point that publics are concerned with indirect 'consequences' of human action, over which affected actors have no direct influence, prefigures the sociology of risk.⁶ Dewey put 'externalities' that require 'domestication' centre stage in his account of the genesis of socio-political arrangements, even if he did not use those terms (Beck, 1986; Callon, 1998).⁷ But one crucial difference between the pragmatist perspective and the current approaches in social science under discussion here is that the former assumed that all public issues are ultimately *solvable* by a combination of political and scientific means. Thus, while the pragmatists did use the term 'issue', they considered it interchangeable with the notion of 'problem'.⁸ The sociology of risk and STS are post-positivist in that these approaches break with this assumption of possible mastery. Also, Dewey's 'objective' definitions of public affairs is problematic from the standpoint of STS research, insofar as it suggests that public affairs are givens, which do not require articulation to qualify as such. While many STS studies of public involvement are 'Deweyian' in that they define public affairs in terms of the entanglement of social associations, they are also constructivist: before a problematic entanglement counts as a matter of public concern, it must be actively articulated. For these two reasons, the term 'issue' is more appropriate than the notion of 'problem' to characterize STS perspectives on public affairs.

However, these differences do not make Lippmann's and Dewey's conceptions of public involvement any less important for the later work on the topic in STS. They both made it clear that under certain conditions a politics

of issues *must* take the form of a democratic politics. They proposed that the complex issues in industrial societies sometimes *require* public involvement. Dewey emphasized that in these societies existing political forms time and again prove inappropriate for handling the consequences of technological innovations. In the situations in which political forms cannot contain the effects of change, what I call issues appear as an organizing principle of the public. According to Dewey, publics come into being as an effect of changing consequences of human action, which existing institutions can't accommodate:

Industry and inventions in technology, for example, create means which alter the modes of associative behavior and which radically change the quantity, character and place of impact of their indirect consequences.

These changes are extrinsic to political forms, which, once established, persist of their own momentum. The new public which is generated remains inchoate, unorganized, because it cannot use inherited political agencies. The latter, if elaborate and well institutionalized, obstruct the organization of the new public. ... To form itself, the public has to break existing forms (Dewey, 1991 [1927]: 30–31).

Dewey here also gives a reason for why public involvement practices themselves cannot be contained by established institutional forms, such as participatory procedures. Lippmann makes a similar suggestion, when he argues that publics are concerned with problems that cannot be adequately handled within existing frameworks of knowledge production and policy-making. Indeed, both pragmatists argue in favour of an experimental approach to public involvement in politics, in which new forms and procedures must be developed to address public affairs, and both justify this experimentalism by referring to problems that institutions can't contain. However, Lippmann and Dewey did not stop with the recognition issues provide occasions for public involvement. Prefiguring STS accounts of democratic processes in yet another way, they argued that public involvement in politics can also serve to *settle* such issues.

As the passages from *The Public and Its Problems* cited earlier made clear, Dewey proposed that the purpose of public involvement in politics was to form 'special agencies and measures' to ensure that issues would be dealt with. Once again, Lippmann had earlier made a similar point:

The work of the world goes on continually without conscious direction from public opinion. At certain junctures, problems arise. It is only with the crisis of some of these problems that public opinion is concerned. And its object in dealing with a crisis is to allay that crisis. (Lippmann, 2002 [1927]: 56)

Lippmann and Dewey thus moved away from the modernist idea that public involvement in politics is dedicated to expressing popular will. They proposed a shift in the purpose of public involvement from will formation to issue formation. These pragmatists present the fate of the public – Will actors organize as a political collective? – as intimately tied up with the fate of issues – Will

problems be addressed and controversies resolved? In Lippmann's and Dewey's accounts, publics form when issues require their involvement, and these publics are dedicated to ensuring that such issues are dealt with. Thus, for Dewey the task for the public is to become 'organized by means of officials and material agencies to care for the extensive and enduring consequences of transactions' (Dewey, 1991 [1927]: 16). This conception of the public's task is problematic when used to describe politics today. One problem is that Dewey conceives of the state as a unitary entity, and this assumption can perhaps no longer be maintained in an era of 'global' politics; that is, now that institutional arrangements – on local, regional, national and global levels – are increasingly conceived of as pluralities. However, turning back to the pragmatists can help us elucidate current STS proposals about how public involvement in politics is occasioned by issues and dedicated to their settlement.

We have seen that STS research has not made it fully clear why political processes dedicated to issue formation should be democratic processes; that is, why *issue formation* requires the involvement of political outsiders, a public. Lippmann and Dewey provide important conceptual elements that can help us fill in this lacuna. They argued that public involvement is concerned with issues that existing institutions cannot settle. The pragmatists, importantly, appreciate the limits of proceduralism. They do not just say that practices overflow the formal procedures laid down in theories and rulebooks of democracy; the insufficiency of proceduralism, for them, is demonstrated by the role that problems and controversies play as occasions for public involvement. Moreover, Dewey's understanding of the public can help to further elaborate the socio-ontological approach to public involvement in controversy developed in STS. Dewey's understanding of the public as called into being by indirect consequences is too 'objectivist' from an STS perspective, which instead focuses on controversial issues that require articulation to qualify as public affairs. But his political theory can stimulate STS to further develop its issue-oriented perspective, as it develops a theory of the public that grants central importance to problematic associations among humans that are mediated by technology. Finally, Lippmann and Dewey break with idealistic accounts of democracy with their emphasis on particular problems instead of a general notion of the common good.⁹ These pragmatists also provide an antidote for a troubling tendency to treat democracy as an ideal, instead of a practical necessity. Consequently, their writings provide a suitable basis for STS accounts of public involvement practices in societies permeated by science and technology.

Public Involvement as Enactment of Issue Entanglement

Lippmann and Dewey provide important argumentative resources for substantiating the STS proposal that public involvement in politics is occasioned by issues and dedicated to addressing them. Adopting this proposal also has consequences for the empirical study of practices through which public involvement is attained. In particular, it has consequences for the *kinds* of practice that now require scrutiny if we wish to account for democratic engagement with controversies. In this section, I discuss some

of these consequences of adopting the pragmatist perspective, and I will try to make clear that, on the one hand, this approach sheds distinctive light on public involvement practices, and that, on the other hand, notions developed in STS can help to further elaborate it.

The first, and perhaps most drastic, consequence of following the pragmatists in approaching public involvement as being mediated by issues is that a relatively broad range of practices must now be taken into consideration. Instead of focusing exclusively on procedural events of public involvement, the pragmatist perspective suggests that we should view such events as occasions for broader processes of the articulation of public issues. This suggestion is made in studies of public involvement in STS by Irwin (2001) and Wynne (2005), among others, who emphasize that participatory events are constrained by issue definitions produced beyond these settings. They argue that such prior articulations of issues deserve critical attention, and that they should ideally satisfy democratic requirements of inclusivity and accountability. Lippmann and Dewey provide a different argument in favour of considering a broader range of practices. Their perspective directs attention to issue articulations produced beyond procedural settings, on the ground that such articulations are characteristic of public involvement practices. From their pragmatist vantage point it is crucial to *positively* value the production of issue definitions under conditions of procedural underdeterminacy. The role of the public is to articulate issues that have insufficient institutional support, while also requiring political settlement.

Empirical case studies in STS make clear that we cannot expect that 'public involvement' will be easy to distinguish from less authentic forms of lobbying or 'public window dressing'. Indeed, this is one of the crucial points at which the accounts of Lippmann and Dewey must be elaborated. Whether an issue qualifies as a public affair, requiring the involvement of political outsiders to be adequately addressed, is not only a matter of theoretical definition, as the pragmatists suggested, it is also at stake in public controversies. In this regard, constructivist approaches developed in STS have much to add to the pragmatist perspective. Studies of science and society conducted in this field have analysed how objects and social groups are 'co-constructed'. Applying this perspective to public controversies requires that we treat the definition of public affairs and the organization of affected publics as practical *achievements* of issue articulation. This also applies to the selection of the institutions that are to address public affairs. Efforts to assign issues to some institutions rather than others may be contested; something that the pragmatists did not consider. However, if we accept that it is likely to be controversial whether certain practices of issue formation indeed enact 'public involvement in politics', the question of how we can distinguish between practices that do or do not articulate matters of public concern becomes crucial.

From a pragmatist perspective, public involvement practices cannot be conclusively distinguished by their procedural features, but must be understood in terms of the particular operations upon issues that they perform.

This should not be taken to mean that we should now focus on practices of issue formation *instead* of those through which publics engage with issues. Indeed, a great merit of the pragmatist perspective is that it directs attention to precise moments in which issues are opened up for outside involvement, and attempts are made to move processes of issue formation beyond institutional settings.¹⁰ Lippmann and Dewey furnish a general criterion for distinguishing between such 'publicizing' issue articulations and other issue definitions: to articulate a public affair is to demonstrate for a given issue that, first, existing institutions are not sufficiently equipped to deal with it, and, second, that it requires the involvement of political outsiders for adequately defining and addressing it.

Earlier, I suggested that one customary way to account for the emergence of public issue definitions is to analyse the framing of issues for public involvement (Goffman, 1974; Entman, 1993; Wynne, 2005). The notion of frames stands out as an empirically useful concept to describe how public concern about issues is regulated by substantive means; that is, through issue definitions. According to one influential definition, the notion of 'frames' refers to 'ideas' and 'values' that help to 'select some aspects of a perceived reality and make them more salient in a communicating context' (Entman, 1993: 53). Frames are credited with the ability to organize public engagement with issues, insofar as they 'provide people with the considerations they use when they respond to the issue' (Entman, 1993: 55). Socio-technical arrangements that enable publicity, such as news media, obviously regulate who gets involved with issues and how. But the notion of frames draws attention to the role played by issue definitions in facilitating critical scrutiny by outsiders. However, from a pragmatist perspective the notion of frames cannot fully account for the substantial dimension of public involvement in politics.

A distinctive feature of the pragmatists' accounts of public involvement in politics is that particular characteristics of contested objects are taken into consideration. From this perspective, frame analysis does not attend closely enough to the different ways in which public articulations operate upon issues. The notion of frames, to which that of 'counter-frames' is sometimes added, sets up a symmetry between contesting issue definitions, which grant different meanings to issues, which are more or less able to attract public attention. The pragmatists' perspective, however, specifies characteristics of public affairs themselves, such as their resistance to institutional settlement, and from this vantage point it is crucial to distinguish between issue articulations that open an affair up for public involvement, and those that prevent this from happening. As public issues depend on outside involvement for their settlement, the difference between 'publicizing' and 'de-publicizing' issue articulations is of central importance. One way to further characterize this difference is to consider that alternative issue articulations highlight different associations that come together in an issue: to foreground some associations enables the opening up of the issue for outside scrutiny, while an emphasis on others closes it down. It now also becomes clear how Dewey's understanding of public affairs must be amended: Dewey defined a public

affair as a problem that *jointly* affects an association of actors who were not directly involved in its production, but it seems more appropriate to say that actors are *jointly and antagonistically* implicated in issues. *Partly exclusive* associations are entangled in an issue. Such an understanding of controversy brings into relief a distinctive merit of public articulations of issues: a publicizing issue articulation highlights the partial *irreconcilability* of the associations that coalesce with that issue. The public-ization of an issue in a controversy distills a specific point of contention from the tangles of divergent associations that make up an issue. Articulating a public affair renders explicit, and thereby opens up for critical scrutiny, the mutual exclusivities between associations that different constituencies bring to a controversy, and which are caught up in the matter at stake, and de-publicizing articulations can render such exclusivities obscure.

Such an account of the public-ization of issues raises several rather fundamental questions that I cannot hope to answer here. One question concerns the exact status of the divergent 'associations' that come together in issues. On the one hand, these associations may have to be understood in discursive terms, as they are highlighted in textual and visual accounts of controversy. On the other hand, they may be granted 'socio-ontological' status, to the extent that actors are implicated in the issue through these associations: issues should then be approached as being constituted by institutional, physical, monetary and legal ties, among others. But the relations that make up issues may also have to be understood in 'subjective' terms, because they refer to actors' commitments to things. Another question pertains to the conceptualization of political intervention in issues. To characterize issue formation in terms of the public articulation of points of contention is to evoke rather vague assumptions about the way in which institutions act upon issues, namely as responses to public conflict. This also opens up the further question of how to conceive of the 'political' dimension of public affairs. This question is about the extent to which we should acknowledge not only antagonisms between interests or concerns, but also antagonisms between the material, physical and technical associations that come together in issues. (This political dimension was not considered by Lippmann and Dewey.) Even a partial answer to these questions would involve many further considerations that I cannot cover here. However, a particular merit of STS perspectives for the study of public involvement practices can now be indicated. STS is well equipped to appreciate the multifaceted associations that are entangled in public affairs.

STS studies of public involvement in controversies pay special attention to relations between human actors and the non-human elements that constitute their life worlds. By doing so, these studies grant an important role to 'socio-ontological' associations in the enactment of public involvement. Thus, the famous study of the north-Cumbrian sheep farmers by Brian Wynne (1992) emphasized that farmers were implicated in the controversy over radioactive fallout after Chernobyl to the extent that the relations on which their livelihood depended came 'under threat': relations to their agricultural lands, and to the Sellafield nuclear power plant that provided

employment to their next-of-kin. More recently, Michael & Brown (2005: 53) described how members of the public related to a particular technoscientific issue, xenotransplantation, by evoking personal relations that they believed could be affected by it. People in focus group discussions about the issue speculated about potential effects on their families, the medical profession and their pets. These studies suggest that people draw upon such personal associations to enact and express civic concern with an issue. Now, of course, to recognize the role of 'affected relations' in the enactment of public involvement is not yet to say that these relations constitute issues – as a socio-ontological understanding of issues would suggest. But the studies of Wynne, and Michael and Brown, do suggest that public involvement in controversy can be described in terms of particular operations upon socio-ontological associations: the enactment of public concern involves the articulation of threats to actors' livelihoods, in the broadest sense of that term.

One last concept developed in STS is relevant to this discussion. Emilie Gomart and Antoine Hennion (1999) use the term 'attachment' to denote a relation between human and non-human entities that is characterized by both 'active commitment' and 'dependency'. They use the notion to describe the relations of drug users to their drugs and of music lovers to music, but it may be equally useful to characterize the associations that are at stake in public controversies. The notion of 'attachment' enables us to appreciate that actors may be implicated in issues through ontological associations. A particular combination of 'dependency on' and 'commitment to' such associations characterizes actors' involvement in issues: the 'endangerment' of associations brings dependency into relief, and may be productive of commitment. Indeed, I can suggest that if we wish to appreciate the 'endangered' status of associations highlighted by public controversies, then a focus on 'attachments' has advantages over the analysis of frames.

The problem with the notion of frames is that it does not allow us to appreciate sufficiently the difference between publicizing and de-publicizing articulations of issues. Attempts to open up an issue or controversy for outside involvement are different from attempts to prevent or avoid such involvement. Perhaps most crucially, they involve different operations upon the associations that constitute issues. The notion of frames does not capture this aspect very well, because frames are external to issues. As such, they do not allow us to conceive of the associations mobilized in the enactment of public controversy to be partly constitutive of the issues at stake in it. An additional problem with the notion of frames is that it usually refers to things and ideas that can be taken for granted (Goffman, 1974; Callon, 1998; Barry, 2001). Frames are usually characterized as relatively stable entities – established ideas, values, symbols or institutional devices – that are relied upon to set limits for unstable things. However, a distinctive feature of associations that are highlighted in public issue definitions is that they can no longer be taken for granted: they pose a threat to one another. By approaching the associations mobilized in public controversies as being

constitutive of issues, we can acknowledge this. It enables us to appreciate endangered status of the 'attachments' that come together in issues, and that mediate actors' involvement with them. Indeed, by approaching issues as particular entanglements of actors' attachments, it becomes possible to credit these entanglements as sources and resources for enacting of public involvement in controversy. When accounting for public involvement in politics, we should focus not only on the frames that actors mobilize to enact their concern with issues, but also on their attachments to things and people. This is what a pragmatist perspective invites us to consider, and what concepts developed in STS may allow us to describe.

Conclusion

This paper has explored the possibility of treating public involvement in politics as a practice that is occasioned by issues and dedicated to their articulation. This possibility was opened up by STS research on public participation in controversy, which pays special attention to the role of objects of contention. However, research in STS has as yet not made it fully clear why and how a dedication to issue formation is characteristic of *democratic* politics. This must be made clear, if the issue-oriented accounts of public involvement in controversy developed in this field are to count for more than artefacts of, on the one hand, the long-standing concern in STS with the social domestication of techno-scientific entities and, on the other, the theoretical choice for an object-oriented account of techno-scientific practices. I have tried to show that the work of Lippmann and Dewey put forward important propositions that help to clarify why public involvement practices should be dedicated to issue formation.

Lippmann and Dewey argued that public involvement in politics was occasioned by the rise of issues that existing institutional arrangements failed to address. They proposed that the settlement of public issues depends on institutional outsiders adopting and articulating those issues, and bringing them to the attention of institutions that are equipped to deal with them. Lippmann and Dewey thus clarified a conceptual point that remains obscure in STS: why a *democratic* politics would be dedicated to issue formation. The pragmatist perspective may also usefully inform the empirical study of public involvement in controversy. It helps to make it clear that a preoccupation with procedural events of public participation may leave important aspects of public involvement practices out of the picture. It suggests that the articulation of public affairs involves contestation of institutional issue definitions, in controversies that are likely to transcend procedural settings. To adopt these lessons does not make the study of public involvement in politics any easier, because the locus and status of 'public involvement' is likely to be contested. It is far from self-evident that attempts to open up issues for critical outside scrutiny can be qualified as instances of 'public involvement'.

However, I have argued that if we wish to account for the difference that publics can make to politics, we must focus on attempts at the public-ization

of issues. It requires that we attend to a broad range of events in which issues are articulated as objects of potentially widespread concern. Such an approach, moreover, must acknowledge the real possibility that such attempts fail, and that accordingly no public involvement in politics, in the sense of widespread mobilization of actors, is achieved. However, in the event that it does, the appearance on the scene (in the media or in the streets) of committed citizens may be described as a particular event of issue articulation.

In this paper, I argued that STS research can bring a distinctive perspective to bear on practices of public involvement, as it is well equipped to take up the pragmatist proposal that such practices can be characterized in terms of distinctive issue articulations. From an STS perspective, the enactment of public concern involves the mobilization of socio-ontological associations that mediate actors' involvement in the issues at stake. Performances of public involvement thus thematize, draw and operate upon endangered attachments. Such a socio-ontological approach to public involvement practices makes it possible to positively appreciate that such practices are underdetermined by institutional procedures. But it also can enrich the study of the social-technical arrangements that facilitate public involvement, ranging from ICT to architecture to the design of events. However, the distinctive affordances for public involvement must now be described, not only in terms of their capacity to add inclusivity and accountability to political dealings with issues, or to transform people into citizens. These arrangements must also be appreciated for the way they facilitate a distinctive articulation of issues, as matters of public concern.

Notes

1. In my PhD thesis (Marres, 2005), I discuss the consequences for conceptions of democracy of analyses of issue formation processes in post-pluralist studies of politics. There is an important difference between these studies of 'agenda setting' and the pragmatist perspective developed by Lippmann and Dewey. As discussed below, appreciation of the role of issues for the involvement of publics in politics led Lippmann and Dewey to open up established concepts of democracy for critical reconsideration. Post-pluralist studies of the 1970s steer clear of such a conceptual reevaluation and instead seek to adapt established notions of democracy to the new 'reality' of a politics constrained by issue formation processes, something that often attenuates them.
2. We can distinguish between 'objectivist', 'discursivist' and 'socio-ontological' understandings of the role of issues in democratic politics. The first is characteristic of the work on transnational democracy discussed above. Habermas (2001 [1998]) and Held (2004) propose to regulate democratic participation on the basis of the so-called 'affectedness principle', which proposes that the right to participate in decision-making depends on whether actors are affected by the issue under scrutiny. This perspective assumes that there are objective or at least neutral standards to determine the community of affected actors. A 'discursivist' understanding of issue formation, which is apparent in both the agenda-setting literature and theories of deliberative democracy, describes political processes of issue definition in terms of the mobilization of terms, symbols or ideas by the actors involved. The socio-ontological perspective on issue formation developed in STS problematizes the distinction between objectively existing issues and discursive definitions of these issues. As I discuss later, this perspective focuses on the 'attachments' that are entangled in issues: material, physical and technical associations that are at stake in controversies, which people are both dependent on and actively committed to.

3. Importantly, Irwin and Wynne argue that science is often called upon to inform and enforce exclusivist issue framings. But many other considerations also can be mobilized, such as policy relevance, manageability, and procedural consistency. Indeed, in these cases the political uses of science should be viewed in relation to political uses of policy, morality, and so on.
4. I use the term 'expertocracy', and not 'technocracy', to characterize Lippmann's position, as he emphasized the increasing importance of competence and intelligence in 20th-century politics, and not the technicalization and formalization of government, which critical analyses tend to foreground.
5. As I argue below, Dewey's definition of the public as a set of actors affected by indirect consequences evinces a rather objectivist understanding of issues. Nevertheless, I characterize his approach as 'socio-ontological'. Dewey argues that as actors are implicated in problematic entanglements, it becomes necessary for these actors to organize themselves. That is, Dewey does *not* describe the organization of the public in terms of the application of pre-existing standards or criteria of 'affectedness'.
6. Dewey's concept of the public co-definition of objects and social groupings is important for both political science and STS. Indeed, 'co-constructivist' studies of science and democracy need to be distinguished from research on agenda setting that proposes that political issue definitions and the composition of political communities are co-related (Schattschneider, 1960). Below, I propose that one important difference is that STS perspectives on co-construction pay attention to the ontological dimension of this process, exploring how human actors are challenged by their relations to non-human entities.
7. An important difference, however, between Dewey's approach to public involvement and the current perspectives is that Dewey does *not* posit a structural societal shift, as Ulrich Beck has done with his thesis of the rise of the risk society, and as some STS studies seem tempted to do when they posit that we now live in post-positivist times in which the modern division of labour between science and politics has dissolved. As I later note, Dewey argues instead that in technological societies issues continuously arise that prove resistant to settlement within existing institutional arrangements. This leads him to adopt an experimental approach to institutional design, in which political institutions must be continuously redone. That proposal itself has its problems, because it can seem noncommittal, but it does have the great merit of refusing the displacement of attention to questions of institutional design. Theorists who posit structural societal shifts often see it as their duty to develop new institutional models for the 'new' society. By contrast, Dewey argues that extra-institutional practices fulfil an indispensable role as producers of new issue definitions.
8. Dewey uses the term 'issue' mostly when he treats the challenges of the formation of a public: 'How can a public be organized, we may ask, when literally it does not stay in place? Only deep issues or those which can be made to appear such can find a common denominator among all the shifting and unstable relationships' (Dewey, 1991 [1927]: 140). Discussing political apathy, he says that it 'ensues from the inability to identify one's self with definite issues. These are hard to find and locate in the vast complexities of current life' (Dewey, 1991 [1927]: 135). Lippmann uses the term more indiscriminately, to denote a problem requiring outside intervention: 'when the officials fail, public opinion is brought to bear on the issue' (Lippmann, 2002 [1927]: 63). And the main question regarding public involvement according to him is 'how to justify the public in aligning itself for or against certain actors in the matter at issue' (Lippmann, 2002 [1927]: 133).
9. Dewey's definition of the public is an important innovation because it attributes the specificity of the public to the *distributed* nature of the entities that affect the constituent actors. Dewey's public is not a *general* public.
10. The fact that Lippmann and Dewey recognized the importance of issue formation in democratic politics did *not* distract them from the question of how publics become involved in politics. Such distraction did subsequently occur in some work in political science. For example, E.E. Schattschneider's (1960) acknowledgement of the formative role of issue definition in democratic politics resulted in a critical reappraisal of ideals of

strong democracy. It was recognized that processes of issue formation within institutions decisively constrained popular will formation with external audiences. Indeed, the agenda-setting literature tends to conceive of political issue formation as a process going on inside political institutions, such as policy 'subsystems' and news media (Baumgartner & Jones, 1993). By contrast, the pragmatist perspective invites us to focus on the way issues are opened up for critical scrutiny by outsiders.

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