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Moving towards hybridity in causal explanation: The example of citizen participation

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Abstract

The puzzle of causal explanation is a core issue for social science. Searches for causal patterns can be overly mechanistic, seen for example in the desire for the *magic bullet* in policy, or the lionising of the *celebrity* policy interventions of the moment. Emphasis in policy interventions on transferable practice is often dismissed as naive for failing to recognise the importance of context, contingency, and complexity. However, a focus on highly context-specific narratives, drawn from single cases, can be equally problematic and exacerbate rather than help the problem of reification of knowledge. This paper makes a reflective theoretical contribution to the debate on the need to tackle the dilemma of contingency versus certainty in causal explanation in the social sciences. It attempts to address this issue through the lens of a specific concrete puzzle of explanation; that of citizen participation in policy. Citizen participation is a salient policy topic, which demands a thorough understanding of causation. Using extended empirical examples of citizen participation in policy serves to highlight the intractability of different traditions of causal explanation and grounds the need for greater compatibility in approaches. The paper then offers two propositions centring on the notions of transdisciplinarity and hybridity in research practices and methodologies. It concludes with a discussion of more and less desirable forms of hybridity.

1 | INTRODUCTION

The puzzle of causal explanation is a core issue for social science. Adherence to the concept of mechanisms in a contemporary context is distinguished from the idea that the social world can be modelled mechanistically. Scientific approaches have moved on from Newtonian accounts of causation (House, 2001). Despite this, searches for causal patterns live in the long shadow cast by our "inherited [...] Humean" notions of causation (House, 2001, p.311). This can be seen in numerous ways in social policy; the desire for the *magic bullet* in policy, proposals for neat *what works* interventions in complex social issues, or the lionising of the *celebrity* policy interventions of the moment.

Like von Kempelen's 18th century chess-playing automaton *The Turk*, mechanisms are the modern confidence trick of policy. More mechanistic understandings of mechanisms signal an inaccurate grasp of how institutions are mobilised and obscure the reality of fallible human intervention. There have been serious challenges to the idea that we can easily generate knowledge about *what works*, which assume we can specify a set of conditions under which a particular set of structures and processes are more likely to occur. Or that this knowledge might be transferred to other times, places, and people. Yet, in different guises, reductivist arguments continue to bewitch.

However, although it may be the case that social processes are highly contingent, causal questions remain. How can we explain the existence of differing configurations of institutional or social forms, their presence and absence, under different conditions? How are effects produced? How can we say, with any certainty, how results X, Y, or Z might have been caused or might be caused in the future?

We are interested in understanding how we might approach causal questions in social policy, in ways that tackle the dilemmas of contingency versus certainty. An antinaturalist position implies a focus on narratives. A naturalist position implies a focus on causal explanations. We are searching for more hybridity between these traditions. Is there a way to move towards approaches to explanation that is compatible with seemingly opposed views on causal explanation?

We attempt to address this issue through the lens of a specific concrete puzzle of explanation; that of citizen participation in policy. Citizen participation is a highly salient topic, which demands a thorough understanding of causation. There have been many "just add participation" instant policy packages, promising shinier results, which are sometimes founded on overly simplified or mechanistic interpretations of causal mechanisms. This formula has costs, for citizens, for other policy stakeholders, and for policy outcomes.

We seek to provide a reflective theoretical piece, grounded in empirical illustrations of citizen participation, to explore some epistemological issues of causal understanding. It starts by outlining contested approaches to causal explanation. This prefaces a discussion of the substantive challenges of causal explanation. In the face of these challenges, there is also sustained need for causal explanation able to bridge rather than default to dichotomised positions. Using extended empirical examples of citizen participation in policy serves to highlight the intractability of these positions and grounds the need for greater compatibility in approaches to causal explanation. The paper then offers two propositions centring on the notions of transdisciplinarity and hybridity in research practices and methodologies. It concludes with a discussion of more and less desirable forms of hybridity. It recommends that academic research is opened up to an extended peer community and proposes a research agenda to develop hybrid research methods for causal explanation.

2 | APPROACHES TO UNDERSTANDING CAUSAL EXPLANATION

Causal explanation is a heavily contested issue. There has been an "outpouring of work on causation" (Gerring, 2007, p.161) in recent decades characterised by a "widespread turn towards mechanism-centered explanations" (p. 161). A

mechanism in a causal argument is a "means by which an effect is produced" (Gerring, 2007, p.163). Diverse scholars from staunchly different traditions have rallied against fetishising causal mechanisms; rejecting "dogmatic interpretation[s] of the mechanismic mission" (Gerring, 2010, p. 1500). Formulations for evaluation such as Suchman's—"Activities A, B, C will produce results X, Y, Z" (Suchman, 1967, p. 93, cited in House, 2001, p. 311)—are no longer given credence. They are seen as indefensible *dead ducks* (Dryzek, 2004, p.89; Fischer, 2003).

There are deep fault lines that underpin contemporary debates, centring on differing notions of causation. A useful heuristic is to see a distinction between naturalist and antinaturalist approaches (Bevir & Kedar, 2008). In a naturalist approach, "human sciences should strive to develop predictive and causal explanations akin to those found in the natural sciences [...] objects of human inquiry are amenable to explanations in terms of general laws [...]" (Bevir & Kedar, 2008, p.504). Contrasted to antinaturalist arguments that "the human sciences require a historical and contingent form of explanation that distinguishes them from the natural sciences" (p. 506).

2.1 | Naturalist and antinaturalist traditions in context

Why does an understanding of the naturalist and antinaturalist traditions of understanding in social science matter to understanding causal questions? What difference does it make to the ways we seek to explain processes and outcomes? What implications are there for methodologies? Some answers can be seen if we take an illustrative example of two different studies of the measurement of the *implementation* outcome from a range of policy-making processes involving some form of citizen participation (Font, Smith, Galais, & Alarcon, 2018; Innes & Booher, 1999). At stake are crucial questions about whether citizen participation actually makes a difference to policy decisions that then get delivered. Do citizen-led policy proposals get adopted and implemented?

One study looked at citizen participation in governance of water management around the San Francisco Bay area. the other at local participatory processes in three Spanish regions. What looks, on first sight, to be a technical debate about methodologies then reveals deeper dividing lines between scholars in their understanding of the nature of causality. Their methodologies flow from and are congruent with their epistemological starting points.

In these unrelated studies, which both attempt to measure implementation outcomes from participation in policy decision-making, both sets of scholars clearly have a well-developed and nuanced appreciation for the level of complexity of definition involved. For example, if a proposal arising from citizen participation is accepted, but then abandoned part-way through implementation, how is this counted? Both studies have some sympathy with the idea of taking seriously the context and meanings of outcomes and nonoutcomes. Both debate the implications and meanings of the use of *implementation* as an outcome measure, for example, if implementation is of *cherry-picked* cheaper citizen proposals, where lack of implementation is for publically acceptable or other good reason, or where *successful* implementation is later found to be inappropriate.

However, one study then goes on to firm up their operationalisation of the variable with a one sentence definition as part of a large-N quantitative analysis of correlations between aspects of policy processes and implementation outcomes. The other goes on to use what they call *abounding paradoxes* in understanding links between process, environment, and outcomes as grounds to "reconsider one's perspective, and look for better ways to make sense of the world" (Innes & Booher, 1999, p. 314), and then reject "a mechanical Newtonian" worldview (p. 412).

Innes and Booher could be seen as having an antinaturalist view and Font, Smith, Galais, and Alarcon as in the naturalist camp. Seen through the eyes of an antinaturalist argument, Font et al.'s research does violence to concepts—such as implementation—in ways that are ironically unnatural and constraining. Naturalists operationalise complex messy concepts, like the implementation of citizen proposals, into dependent or independent variables. An antinaturalist perspective would be that this is made possible only by reifying concepts in ways which do violence to their relevant meanings. Once *torn from their holistic contexts* and *atomised*, they are able to be "contained within naturalist forms of explanation" (Bevir & Kedar, 2008, p. 507). Bevir and Kedar argue that "naturalism encourages the

formation of concepts characterized by reification, essentialism, and an instrumentalist view of language." (2008, p. 504). Weak forms of essentialism allow for "variations in the degree to which a concept's attributes are manifested in various empirical cases [but] retains the logic of commonality as its normative horizon [... it] shares the strong essentialist assumption that [...] any slackening of the reins of commonality undermines the validity of social science concepts." (op. cit., p. 508).

2.2 | Causal explanation in nonlinear systems

Our efforts to attack the causation question are made more difficult when the phenomena being examined also have features of complex systems, which have contingent, nonlinear relationships between factors. Policy-making systems have features of complex systems, with nonlinear relationships (Head, 2008; Head & Alford, 2015; Peters, 2017). Nonlinear systems challenge our ability to develop causal explanations, as they "may exhibit erratic behavior through disproportionately large or disproportionately small outputs, or they may involve "synergistic" interactions in which the whole is not equal to the sum of the parts" (Beyerchen, 1992, p.62). Given a particular configuration of conditions, an associated set of outcomes cannot be assumed to occur, because of the specificities of dynamic interactions in the peculiar context of that case. Multiple interactions between factors in a dynamic complex system mean that the same combination of factors present in one case, when present in a second case, may lead to very different outcomes. Nor are outcomes proportional to inputs: "complexity assumes that the relationships among variables are not linear and small shifts (especially in the initial conditions) may produce large differences in the outcomes of the systemic dynamics" (Peters, 2017, p.386).

Such systems exhibit multiple causal interactions that may lead, or not, to different forms of citizen participation, or indeed, to other forms and outcomes. As some authors have expressed:

> Processes seem to unfold in unique and non-replicable ways, making it difficult to [...] develop general theories. [...] This then begs the question about how to develop knowledge about such an elusive subject (Teisman, Gerrits and van Buuren, 2009, p. 2).

Effects of parts of the whole on complex systems may not be as intended or anticipated and are often: "highly unpredictable" (van Buuren, Boons, & Teisman, 2012, p. 117). The "often capricious" effects (Teisman, Gerrits, & van Buuren, 2009, p. 2) may be to change the direction of an already "complex, uncertain, evolving situation." There is also the possibility of "second and third order effects years after a process is over" (Innes & Booher, 1999, p. 413). Adaptive processes may have:

> no clear boundaries in space, time, subject matter, or participation [...] It is difficult to define exactly what activities count as part of the consensus process or who is part of it, much less what outcomes can be attributed to it. It is difficult to specify when it actually begins and ends. (Innes & Booher, 1999, p. 416)

3 | WHY CAUSAL EXPLANATION IS REQUIRED FOR CITIZEN PARTICIPATION POLICY

Although the nonlinear, contingent nature of social processes presents many serious dilemmas of explanation, an antinaturalist position leaves social scientists with a core problem. That problem is, without some form of essentialism, whether strong or weak, are we left with $n = 1$ each time we do research? How is the cause of understanding causes advanced by this?

That is not to say that single cases are not useful. One analogy that has been made is where we are asked to imagine the case of a talking pig:

You might respond, '[...] That's amazing'. You are not likely to say, 'Ah, but that's just one pig. Show me a few more and then I might believe you!' Yet this is precisely the attitude of many people (Ramachandran & Blakeslee, 1999, p. xiii).

These authors, writing in the field of neurology, go on to argue that many major discoveries have been initially premised on single cases, before further testing. Although we agree with this line of attack, one problem in our field of citizen participation in policy-making is that whole government policies are premised on a single talking pig, with no guarantee that the circumstances will be conducive to other instances of talking animals. Good explanation also involves a level of prediction, that is, some sort of claims, however weak, to universality. Prediction is the claim that if X explains Y under conditions W, then this will be the case in "all relevantly possible worlds" (Dowding, 2017b, p.143). Prediction and explanation are not the same but are "inextricably bound" (Dowding, 2016, p.44). Although rather combatively put, we find much merit in the statement that: "Explanations that are non-predictive are not much use to anyone" (Dowding, 2016, p.44). "Demonstrating causation is [not] a sideshow" in social science, albeit, not the only show in town, (Dowding, 2017a, p.218).

In social policy terms, where explanation lacks nuance, and moves towards prediction on too crude an understanding of causal mechanisms, there is a danger of inappropriate generalisability and transferability, or in policy-speak, *one size fits all* policies. Differential levels of citizen participation in formal institutional settings between different socio-economic groups seen over time and across places and countries are an issue, which has bedevilled participation policy. Some inspiring talking pigs, such as community-led local development plans, have been successful in better-off places and unsuccessful in less well-off places (Jones et al., 2016, Hastings & Matthews, 2015). Alternatively, some heavily promoted citizen-led projects might be said to be the result of a configuration of nearly unique circumstances as to hold interest only as cases in their own right, for example, the social enterprise, Coin Street Community Builders on London's Southbank (Brindley, Rydin, & Stoker, 2005; Tuckett, 1988) and Liverpool's Turner Prize winning Community Land Trust, Granby Four Streets (Thompson, 2015). Governments have wrestled with lack of take-up of their participation initiatives; for example, in the UK context, over different political administrations, and different policies, the authors are just some of the academics who have advised Governments on this problem.

Beyond the academy, citizens and other policy actors themselves have demanded understandings of patterns of causes of different forms of participation as a basis for their own (grounded, contingent, and meaningful) action. As Dowding argues, people are pattern-finding or seeking creatures (2016). Listening to the narratives of policy actors, including citizens, involves hearing their own demands for causal explanation. Many policy actors are also keen to make their efforts the most effective they can be and want specific knowledge that can be then used in some way. However, the idea that social scientists might generate generalisable knowledge, which "could then be the basis for policy interventions in the causal web that constitutes social systems" is described with snorts of derision (Dryzek, 2004, p.89).

These critiques do not produce a satisfying answer to the problem of citizen participation in policy—what explains its differing forms, its presence and absence, under different conditions? Demands for causal explanation are not easily outrun nor would we want to. Although it might be interesting in itself to know more about talking pigs, single cases of unusual phenomenon only take understanding so far, and we need to go further.

4 | THE NEED FOR GREATER COMPATIBILITY BETWEEN APPROACHES TO CAUSAL EXPLANATION

To recap so far, causality is highly contingent on multiple interacting and context-specific pathways, which may be unique to a case. Combinations of highly similar factors in one case may lead to very different outcomes in another. Research ought to reflect the "meaningful and contingent nature of social life" (Bevir & Kedar, 2008, p. 503). At the same time, there is an on-going need to identify causal patterns, and see how far patterns could be translated into concrete applications under different contexts. We now turn to look in more depth at some of the problematic ways

the naturalist/antinaturalist heuristic appears in the empirical literature, underpinning the need for greater compatibility between approaches to causal explanation. Despite careful nuance and attempts to mediate between the general and specific, the literature on participation can at times default to either a *magic bullet* formula or iconic case, perhaps unwittingly resurrecting rather than bridging the naturalist/ anti-naturalist divide.

4.1 | Issues with *what works* understandings of causality

Not all, but some of the literature on participation seems to leave itself open to such attacks of overclaiming, reification, and essentialising. These features run risks of leading to mechanistic understandings of causal mechanisms. Traces of the search of the *magic participation bullet* lurk in policy and some of the literature, in A + B + C = X notions of causation. For example, that technical support from aid organisations (A), together with a sufficient committed budget (B), a strong set of civic organisations with traditions of cooperation (C), plus a left-wing mayor and little political opposition (D and E) will result in a set of Xs of effective participatory budgeting (Goldfrank, 2007). Others have put forward similar propositions; for example, that inclusive structures for participation, plus adequate financial resources and political commitment, are crucial conditions for successful outcomes in participatory budgeting (PB; Beard, Mahendra, & Westphal, 2016).

Despite the development of such models of causality, attacks on naturalists that they "characteristically search for causal connections that bestride time and space like colossi" (Bevir & Kedar, 2008, p. 506) are neither perhaps fair, nor accurate. Many scholars on both sides of the heuristic divide start from the same problem of explanation: how to mediate between the specific and the general and how to produce knowledge that might have practical applicability. Fung and Wright's now seminal book, *Deepening democracy* (2003), was part of the broader *Real Utopias* project, which elaborated a particular conception of participatory decision-making. Institutional design features are identified, which seem to stabilise and deepen the practice of empowered participatory governance, for example, devolution of public decision authority to empowered local units (Fung & Wright, 2001, p. 17). The identification of these features is part of an abductive process of theory-building, going back and forward between specific cases and broader patterns. Real Utopias acknowledges the core dilemmas of balancing between contingency and certainty, and dealing with *real-world* application, as they explain:

> The objective is to focus on specific proposals for the fundamental redesign of basic social institutions rather than on either general, abstract formulations of grand designs, or on small reforms of existing practices. This is a tricky kind of discussion to pursue rigorously (Wright, 2010, p. ii)

However, although nuanced and subtle in its approach, some of the concrete methodological solutions to emerge from Real Utopias project are inadequate to address the underlying epistemological problem. In particular, the ambitious Participedia database is a significant leap forward in availability, accessibility, and usability of potentially comparable data for researchers of participation. The straightforward and sensible idea is to generate greater capacity for systematic comparison of specific cases through large-sample databases (Smith, Gastil, & Richards, 2015, p. 244–245). Sadly though, this simply takes us back to the original naturalist/antinaturalist divide.

4.2 | Issues with a focus on narratives of a single case

Attacks on naturalist positions may be overly critical, but we end up back at the same problem. What might be the alternative? Unfortunately, neither are the methodology prescriptions of an antinaturalist position entirely satisfying. An antinaturalist position recommends that social scientists focus on the contingent and particular conditions of actions and events, and their meaning, and appears to limit methodology to narratives in specific cases.

Ironically, the use of the single case study, where aimed at avoiding a naturalist bias and reinforcing contingency and specificity, has in some cases exacerbated the reification of knowledge. The widespread vaunting of *models* and

success stories for importation to a variety of contexts is illustrative of an exemplary politics in the face of which the distinctiveness of place is at risk of evaporation (May & Perry, 2017; Perry & May, 2010). Our issue with the vaunting of single cases is not about single cases per se. Single cases have rightly enjoyed a robust defence in recent years, rebutting tired old criticisms about generalisability, for example, through the excellent articulation of their role in theory-building (Flyvberg, 2006). Single cases are extremely useful in advancing aspects of causal explanation. However, the issue is that they do not offer a credible way to bridge the gap between highly contingent, antinaturalist forms of explanation, and highly certain naturalist orientated forms of explanation. For example, as witnessed, for example, in critiques that causal claims, which are based on "inferring causation from process tracing and other single-case-study [...] work" are "formally fallacious or [...] suffer[s] from the specification problem," which cannot be overcome (Dowding, 2017a, p. 222).

Moreover, when rich, detailed, contextualised cases are translated into exemplars, then research is at risk of "dispens[ing] invalid as well as valid generalizations. Many of the social science understandings that gain currency are partial, simplified, inadequate, or wrong" (Weiss, 1979, p. 430). With these dangers in mind, in participation studies, there are numerous examples of the fetishisation of high profile cases of initiatives that are said to *prove* various success factors for citizen participation or control. Several valorised and highly cited (in academic research and policy) examples of participatory initiatives have been widely promoted as having potential for expansion and transfer to other sites. These initiatives may since have been developed theoretically and added to by other cases. However, they are notable for being very largely premised and inspired by an iconic single original case, upon which a broader set of claims have been made, although not necessarily by the original authors.

Although the literature *has matured*, we would also agree with the issue identified by Smith et al. (2015) that: "there is still a tendency to focus on case studies of causes célèbres that have particularly novel characteristics" (p. 244). It is a "significant challenge is to move beyond the case study research that continues to dominate the field" (p. 244). In this case the field being referred to is that of democratic innovations, which includes participatory policy-making alongside referendums and deliberative projects. Some analysis of academic studies of democratic innovations has suggested that "there is not a single article analysing a failure in any of the top 5 journals in political science" (Spada & Ryan, 2017, p. 772), which could result in models for successful outcomes being "chronically over-determined, which ultimately reduces their chances of adoption in practice." (p. 773). As Spada and Ryan point out:

> If the first cases brought to attention are all those with exceptional outcomes we might expect that in reality the typical case cannot be so, and we cannot be sure of what the typical case looks like and how it differs from our exceptional ones (2017, p.774).

4.3 | Examples of iconic cases

These celebrity cases include the now familiar case of PB in Porto Alegre, Brazil (Baiocchi, 2001; de Sousa Santos, 1998; Smith et al., 2015). The example was showcased at UN Habitat in 1996 as an exemplar model and has been described as one of the most visible and successful examples of empowered deliberative democracy in the world (Fung & Wright, 2001). It has been taken up around the world as reflected in the overview of studies from around the world, highlighting global trends and practices in PB (Dias, 2014, 2018).

Here again, the academic literature is much advanced since early work which "tended to focus on single case studies of the paradigmatic Porto Alegre, detailing the conditions seen as crucial for its successful outcomes (Abers, 2000; Baiocchi, 2001)" (Ryan & Smith, 2012, p. 91). Ryan and Smith (2012, p.91) go on to list significant cross-case comparative analysis studies of PB, which use comparative analysis to look at differing experiences in differing contexts, such as different starting points and barriers (Baiocchi, 2001, p.167), factors influencing varying degrees of success in PB (Nylen, 2003 and Wampler, 2007), and comparisons of PB across different country-specific contexts

(Goldfrank, 2007). However, overall, the literature remains dominated by studies of individual cases, and in any case, it is too late for policy; the PB cat is out of the policy bag and is unlikely to be stuffed back in by a devastating piece of comparative analysis.

We could also point to the broad-based Alinsky-ist model of community organising, associated with Barack Obama (Obama, 1988; Warren, 2001). The latter has had some policy success, for example, with versions of this model integrated into UK policy during 2011 to 2016 in a £15 m national programme (Wiggins, 2011). Theoretically, community organising is drawn from broader ideas of Alinsky, Friere, and others. Empirically, some of the proofs of the community organising pudding have rested on powerful, richly detailed, but context-specific cases, for example, in the south-western United States (Warren, 2001). Another example is that of the *Barcelona model* of urban regeneration (Gonzalez & Healey, 2005), which has "become a prominent example to other cultural regeneration approaches" (Degen & Garcia, 2012, p. 1022). The model is said to be participatory to the extent that it is "underlined by a unique governance style based upon strong citizen support (Gonzalez & Healey, 2005)" (Degen & Garcia, 2012, p. 1022). Scholars have been careful to recognise that "straightforward application of a unique 'Barcelona model' of city renewal is questionable" (Degen & Garcia, 2012, p. 1022) but have identified distinctive features in Barcelona's urban development since the 1980s (Degen & Garcia, 2012). Other examples include the Basque country's Mondragon worker's cooperatives (Whyte & King Whyte, 1991), a complex of cooperatives based in one city in Spain. Some have argued that for *growing numbers of researchers and activists*, the "story of Mondragon" is not only a specific and *fascinating* case of "success in a form of organisation for which failure is the general rule," but also "the most impressive refutation of the widely held belief that worker cooperatives have little capacity for economic growth and long-term survival" (Whyte & King Whyte, 1991, p. 3).

Barcelona's cultural regeneration approach with citizen backing, Mondragon's worker cooperatives, the Industrial Areas Foundation (IAF) network's community organising in Texas, PB in Porte Alegre—these are all indeed fascinating, and for those interested in participatory initiatives, impressive and inspiring. The works cited draw careful and cautious conclusions. However, in terms of social science, we can see how these kinds of claims, and how they are interpreted and used by others, are at risk of slipping from the talking pig, to broader claims about the likelihood of successful outcomes of these kinds of participatory initiative. Therefore, a focus on detailed, rich, context-specific narratives of contingent cases is not necessarily a solution to problem of reification of knowledge. In the field of participatory initiatives, ironically, what might have looked to be obvious antinaturalist approaches in the cases described have, in practice in policy terms, developed into the *colossi* derided by Bevir and Kedar (2008, p. 506).

In summary, there are acknowledged epistemological problems with a search for *what works* policy solutions. In contrast, a focus on narratives in cases has the advantage of richness and contextualisation. However, solving one problem then opens up new problems. Focusing on the specificities of single cases has perversely lionised *celebrity* policy interventions of the moment, running risks of those ideas becoming reified models, to be applied elsewhere. Where does this leave options for causal explanation?

5 | MOVING TOWARDS COMPATIBILITY?

What sorts of causal explanations, avoiding strong forms of essentialism, might be compatible with the nature of contingency and complexity in social life? We reject the idea that these questions can be dealt with by dismissing them as vestiges of reified, essentialised, and instrumental naturalist thinking lurking in the minds of those who use primarily qualitative methods (Bevir & Kedar, 2008, p.504). Many rightly search for patterns of causality in ways which do not seek to reify findings.

The naturalist/antinaturalist heuristic focuses us on the underlying problem, which is if and how it might be possible to bridge between two very different understandings of causal explanation. On one hand, an acceptance that outcomes are highly contingent on multiple interacting and context-specific pathways that may be unique to a case.

On the other hand, a desire to understand, what are the most likely conditions for the presence or absence of particularly institutional forms, or success or failure of policy interventions. An antinaturalist position implies a focus on narratives. A naturalist position implies a focus on causal explanations. The limits of each approach on its own terms suggest that there could be a more hybrid method of understanding that rebuts reification, yet can say something confidently about patterns. But how might this be achieved? How could social science attempt to pursue an interest in causal explanation that is also compatible with a contingent, situated, and dialogic approach?

We now put forward some tentative ideas for moving towards bridging between two often divergent worlds. One of the propositions is simply that it would be a positive step forward to move towards greater acknowledgement and recognition of multiple approaches to causal explanation in participation debates. Following this, and discussed below, a second proposition is that a more hybrid approach would be transdisciplinary, drawing in the additional expertise of an extended peer community. Third, that there is a continued search for methods, which operationalise hybrid notions of complex causality, allowing for both comparison and narrative, and able to identify equifinality, the idea that there are multiple causal pathways for given outcomes.

5.1 | Transdisciplinarity

On the value of transdisciplinary work, as science and society are interwoven or contextualised (Nowotny, Scott, & Gibbons, 2001), there is an increasing emphasis on multidisciplinary and transdisciplinary approaches including the *discipline* of experiential expertise as well as academic specialisms. As well as drawing on a range of academic disciplines, multiple forms of expertise and knowledge are needed, bringing new or additional perspectives to understand nonlinearity, through process tracing (Goertz, 2017) of possible causal connections, interaction effects, feedback loops, and specificities of context in each case. The case made here is for more participatory forms of science to assist in understanding causality in more participatory forms of policy. The process of knowledge generation about citizen participation in policy ought to *mirror* (Jasanoff, 2004) in some way the nature of the subject being studied.

Although remaining a potentially controversial claim across academic disciplinary boundaries, it is one which has barely been discussed in some academic disciplines, whereas in others has been more comprehensively covered. For example, some in political science posit a clear binary distinction (Flinders, Wood, & Cunningham, 2016) between the production of knowledge and production of policy. Others from the same discipline have long argued that transdisciplinary research "addresses two of the most serious methodological issues facing policy science - namely, the relationships between theory and practice, and empirical and normative inquiry" (Fischer, 1993, p. 171). Collaborative or transdisciplinary approaches can provoke an exploration of normative assumptions and biases in the research (Fischer, 1993, p. 172), and better unpick complex policy questions of negative and positive forms of participation, with Fischer using the example of NIMBY protests against housing development.

It would be naïve, however, to believe that advocacy of such a position by those so closely associated with positions that could be characterised as antinaturalist, would be convincing to naturalists. There is more open debate to be had about the values of such mirroring or what other see as *blurring*. This is a theme that is also picked up in work associated with the disciplinary field of science and technology studies; discussions of *postnormal science* (Funtowicz & Ravetz, 1990) helpfully set out the blurring between *science* and policy problem-solving that occurs around these complex issues in complex systems (Funtowicz & Ravetz, 1990; Ravetz, 1999). Postnormal science is needed where policy issues are not amenable to conventional *applied science*, where "facts [are] uncertain, values in dispute, stakes high and decisions urgent" (Funtowicz & Ravetz, 1990). In conditions of high uncertainty, complexity, and contingency, modes of enquiry need to marshal a more diverse set of forms of expertise and *extended facts* (Funtowicz & Ravetz, 1990) as part of a more *open dialogue* with an "extended peer community" (Ravetz, 1999, p.651) of research collaborators. More participatory science could assist in the grasp of the context and specificities, which help inform our understandings of a case. Inclusion of multiple stakeholder's perspectives has been argued to contribute to the articulation of patterns of cause and effect through providing increased capacity for learning about

complex and uncertain causal relationships (Connell & Klem, 2000; Papadopoulos & Warin, 2007). A priori knowledge through experience can be gained as the basis for hypothesising causal links. These experiential hunches enable a useful sifting to take place thus aiding the identification of factors for subsequent hybrid analysis.

Aside from these claims, perhaps more challenging and innovative is the proposition that an *extended peer community* undertaking post-normal science is likely itself to present diverse epistemological positions. Might understandings of causality be strengthened rather than diminished through such heterogeneity? Attempts at collective and collaborative inquiry may be conducted by people who hold many different variants of naturalist and antinaturalist positions between them. Prospects of seeing epistemological debates play out amongst the extended peer group have the potential to give greater pause for reflection. The first step, of greater acknowledgement and recognition of multiple approaches to causal explanation, may in turn be promoted.

5.2 | Searching for operational methods

The unpredictable, contingent, and nonlinear nature of the social world demands that attention is refocused on more holistic causal assessment (Gerring, 2010). But how we can embrace the challenge without beating too hasty a retreat to deep incrementalist or postempiricist positions? Ideally, an approach to understanding causality and complexity in participatory initiatives would offer the best of all worlds. We need neither too much emphasis on complexity nor too little: "like Goldilocks' porridge, the goal is to get complexity 'just right'." (Andriani & McKelvey, 2011, p. 262). As Byrne has argued:

> We need to get beyond the unique description of ideographic accounts of the individual cases, but not in terms of the establishment of nomothetic universal rules through some ersatz version of the experimental approach (2011, p. 134).

One way to understand mechanisms is to see them as context-specific, often un-surfaced or hidden, "underlying entities, processes, or structures" (Astbury & Leeuw, 2010, p. 368). Underlying entities are situated in, and therefore need to be calibrated to, "particular contexts" that "generate outcomes of interest" (p. 368). *Ensuing mechanisms* mediate between the activities and the outcomes and include affective and social responses emerging from specific activities or programmes (Weiss, 1997; Astbury & Leeuw, 2010, p. 367). Context-sensitive and contingent, often unarticulated, and generative of change by virtue of some form of emotional and collective reaction, this conception gets closer to some microfoundations of a defensible framework for interrogating causal assessment. Social scientific work on theories of change was part of a broader critical realist revolution in theory-driven policy evaluation (Chen, 1990), which has had a legacy on theory and practice.

We draw on Byrne in his advocacy of complex realism as a solution to hybridity (2011; Blackman, Wistow, & Byrne, 2013). He argues that mechanism & context => outcome. Where "&" is used rather than "+" to suggest generative interaction of mechanism and context rather than simple linear addition. The ">" indicates multidirectionality or at least reversibility of outcomes in a process (Byrne, 2011, p. 133). There is still much that gives pause in this formulation. It still requires the isolation of mechanisms distinct from context, privileging one supposed *causal* factor in amongst a set of environmental factors and may be seen as a form of essentialisation. However, in doing this, it starts to illustrate how a more hybrid notion of complex causality might be achieved. The criteria include methods which emphasises a range of configurations in relation to outcomes, equifinality (multiple causal pathways), and asymmetry between factors; for example, the converse of success is not failure. Hybrid methods would also allow for both comparison and narrative to be used in the analysis.

Some scholars have advocated for particular specific methods to pursue these goals, including Qualitative Comparative Analysis (QCA), which some have referred to as one of a growing number of hybrid *qualiquantalogical* (Dean, 2017) methodologies. The use of QCA is intended to allow for rich, deep case-specific understandings, alongside generalisable claims about causal mechanisms. QCA uses set-theoretical thinking rather than correlation-based analyses

to understanding relationships between causal conditions and outcomes. Set-theoretical thinking (Ragin, 2009) holds that for necessity to be established, the set of cases containing the outcome must be a subset of the set of cases displaying the cause. Sufficient conditions require the set of cases containing the causal condition to be a subset of the cases displaying the outcome. QCA uses a process of Boolean logic to analyse the necessary and sufficient conditions across a range of cases that resulted or failed to result in specific outcomes. Next in the process, the findings are taken back to the cases to enable the contingencies and specifics of place to be taken into account.

Of course, there is no quick fix, and the list of methodological *must-haves* is long. The dream method should ideally live up to the promise of providing the benefits of transparent, systematic comparison to explore equifinial causal patterns, but which epistemologically start from a qualitative worldview, retain richness and nuance, *and* offer insights into policy application and concrete issues of participation. Therefore, it might be setting up QCA to fail to say that it is situated:

> [b]etween the extremes of over-generalizing and "universalizing" macro-quantitative approaches, on the one hand, and purely individualizing case-oriented approaches, on the other, a meaningful "medium-range" social science can be built which, at the same time, has a higher explanatory power and a greater social and political relevance (Berg-Schlosser and Cronqvist 2005, p. 172, cited in Ryan & Smith, 2012, p. 92).

Byrne also advocates QCA as a way of avoiding being "trapped" in "a variable-centered understanding of causation" (2011, p. 134). He cites Peer Fiss to suggest QCA can produce a picture of configuration as embedded in space and time and involving varying level of complexity, dynamism, and analysis (p. 136). Importantly for hybridity, he argues that QCA helps us to move between the "detailed narrative of process tracing" into the "construction of configurations which represent multiple attributes leading or not leading to outcomes" (pp: 134–5). QCA is one option chosen by some scholars; there may well be others that move towards these goals. There is a growing interest in the technique, including for understanding aspects of citizen participation (Pratchett et al., 2009). However, the key here is at base, to have the goal of greater hybridity firmly in mind in debates about approaches to causal explanation.

6 | CONCLUSION

We have argued here for the proposition that greater hybridity is needed as a means of bridging different, often dichotomised traditions of causal explanation. In doing so, we are also alert to the different types of hybridity and the politics of hybridity. What is intended here by the term hybridity? The critique in this paper of the gap between traditions might be said to be akin to a type of dysfunctional hybridity or blocking (Skelcher & Smith, 2015). A blocking type of hybridity is where irreconcilable tensions arise between logics, which cannot be resolved or managed, leading to dysfunction. At the least, there could be said to exist a compartmentalised type of hybridisation (Skelcher & Smith, 2015), where constituent logics are effectively kept separate, relating to different constituencies. This occurs through tactics of either segmentation or segregation. What has been characterised as *either/or* approaches (Hargrave & Van de Ven, 2006) select one logic and deny others. This then requires a *policing* style to work with contradiction, to ensure that the other options do not rear their heads. In academic work one can see forms of epistemological policing taking place in many myriad ways.

Also limited as a form of hybridity is assimilation, where elements of new of different logics are selectively incorporated into the core or original logic ((Skelcher & Smith, 2015). There are echoes of this idea in discussions of institutional layering (Thelen, 2004). One would hope that the discussion presented here does not conform to this type, but we acknowledge the possibility that this is always a risk, despite competing epistemological starting points amongst the authors, for example.

In contrast, we would advocate for a blending form of hybridity, where logics collectively evolve in novel and contextually specific forms, creating new and durable identities (Skelcher & Smith, 2015). *Both/and* approaches (Hargarve and Van de Ven, 2006) to working with contradiction would see different logics as potentially complementary and contradictions as a source of innovation. Potential for advantage is found through the frictions and contradictions generated, rather than closing down of options.

What might be some of the tangible implications of our propositions for researchers? Two possible courses of action stand out. First is developing greater hybridity by working in more transdisciplinary ways. In particular, there should be serious consideration of the options of doing research, where appropriate, in collaboration with an extended peer community. For debates about participation, this could mean involving practitioners, policy-advisers and policy-makers, exert citizens, members of the lay public, and other technical experts. Their roles would be to contribute additional expertise about possible causal models or their own challenges to epistemological assumption in research. These discussions have proved fruitful in our own research. Second is continuation and strengthening of a research agenda developing more suitable research methods. By more suitable, we mean methods and approaches, which operationalise hybrid notions of complex causality, allowing for both comparison and narrative, and able to identify equifinality. Some possible specific approaches have been discussed in this paper, such as QCA. None are perfect; more work is needed on *qualiquantalogical* (Dean, 2017) methods, which mirror (Jasanoff, 2004) hybridity in forms of causal explanation.

Of course, it is often easier to outline a problem than to solve one. The emphasis in this paper has been on exposition, on the grounds that it is a positive step to acknowledge, and further elaborate and articulate the tensions. The tentative propositions of hybridity and extended peer communities are offered as modest ways to begin to move towards bridging between traditions. This may of course be a fool's errand. Bringing more people into the debate might simply mean more people to disagree with over the same irreconcilable logics. However, the case here is to attempt to move away from sitting happily, or unhappily, in our heuristic camps, as foolish as that endeavour may be.

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