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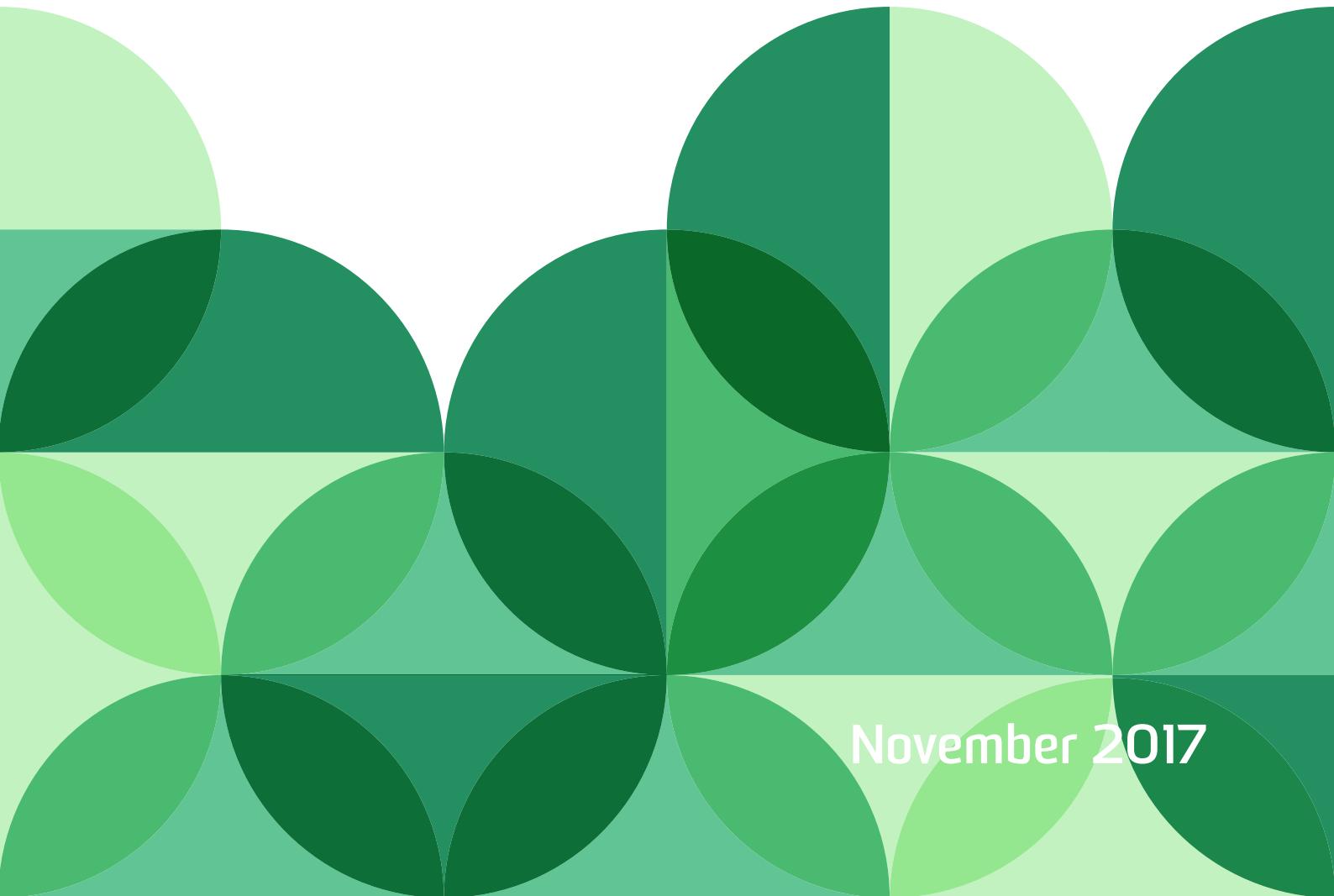
*Not Another Review About Implementation?
Reframing the Research Agenda*

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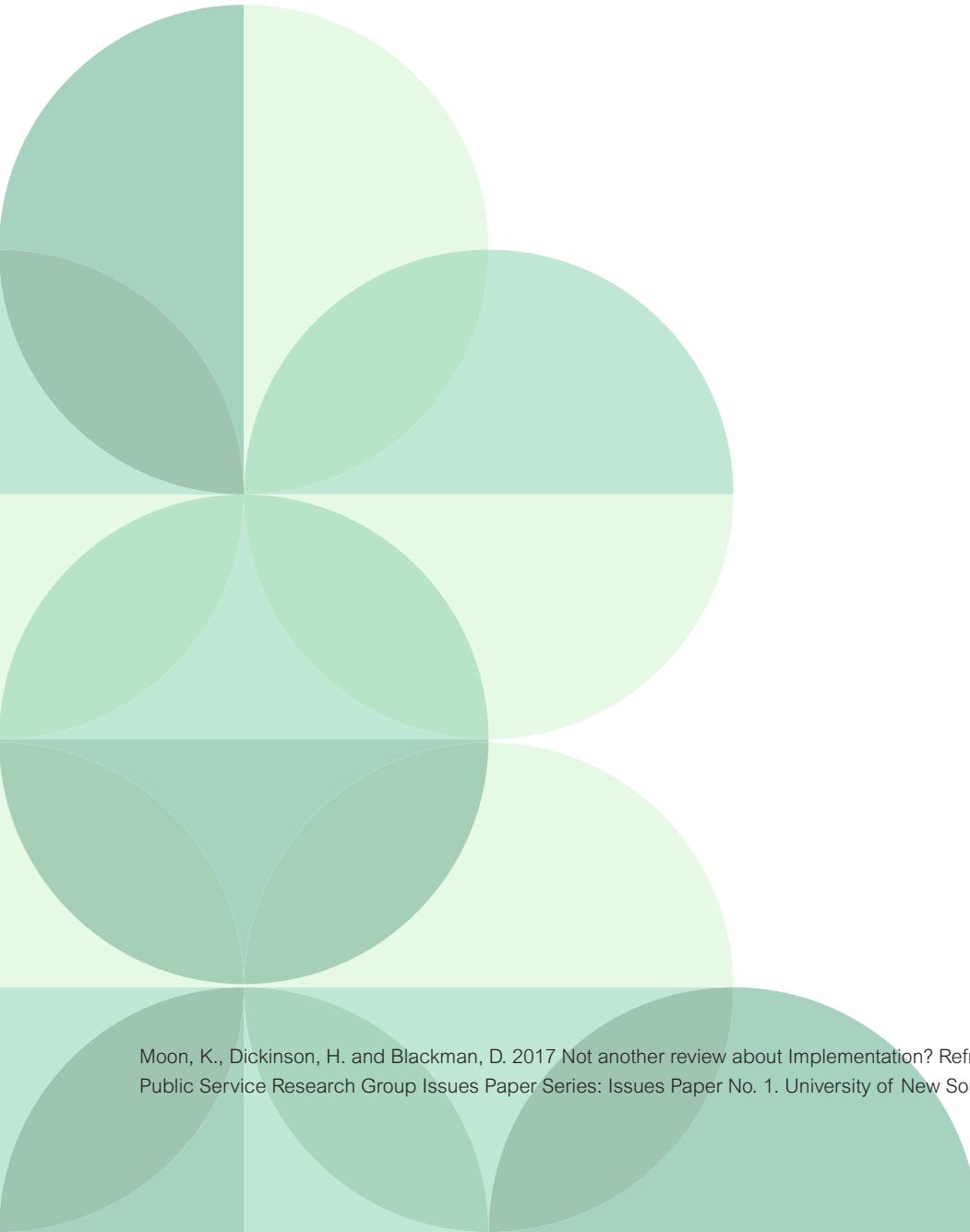
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EXECUTIVE SUMMARY

In this Issues Paper we examine what light current literature can shed on the processes of policy implementation, what we know about this topic and where gaps remain. We found a burgeoning literature, but within this literature the concept of implementation is a rather contentious affair with contributions from a range of different academic disciplines and replete with many examples of what happens when implementation goes wrong.

The boundaries of this concept are unclear and while the literature offers a number of descriptive accounts of implementation, it does not necessarily tell us all that much about the actual concept and its practice. Despite contributions from a number of countries and policy areas, many unanswered questions remain about policy implementation. We do find, however, some useful new contributions and opportunities to explore within this evidence base.

This paper maps the literature revealing a number of overarching themes: that an understanding of how implementation decisions are made, by who, and why, can help to explain the outcomes of implementation processes; that certain elements of implementation are under-researched or overlooked when attempting to understand implementation and that bringing a focus on these elements could help understand processes and outcomes, and that determining what has worked, and why, in ways that can be effectively compared between policies can inform effective implementation design

Through our analysis we identify a series of major research themes where we think current literature is either lacking or unclear: complex social systems, theory, policy and implementation processes, behaviours, assumptions, analytical evaluation and context. We suggest more research might enable enhanced implementation design such that outcomes become, if not predictable, at least more understandable.

We conclude that implementation is an area of public service research that is still in need of much effort in terms of defining what needs to be known and then how to know it. We suggest that to date there has been too much effort made in attempts to find ‘an answer’. That is, the research objective of much research appears to have been that, by clarifying the problems, implementers can avoid repeating such errors and a ‘best practice’ solution will emerge.

Instead, we suggest that we need to embrace the messiness and spend time analysing implementation in different ways. If there is to be a new research conversation we have to start to talk about different things. By analysing implementation in different ways including, how currently missing aspects interact both with each other and other parts of the implementation system, we will gain greater insights into what works and why. We suggest that this new research agenda will lead to more explanations for what has happened earlier, help us understand things that have previously surprised researchers and practitioners and, potentially, be able to develop real advice for improved implementation design, enactment and evaluation.

INTRODUCTION

During 2017, implementation has come firmly back into the national policy spotlight. Concerns around the timescales and costs of the National Disability Insurance Scheme (Productivity Commission, 2017) and the National Broadband Network (Mason, 2017), amongst others, seemingly demonstrate how well-intentioned policy ambitions can be dashed in complex processes of implementation. A cursory glance at the Australian policy landscape reveals some high-profile incidents of policy failures, for example the home insulation (Pink Batts) program, electronic health records, the 2016 census and the VET FEE-HELP program. Beyond the types of policies that are familiar to most of us, sit a range of other less well-known, or more local, initiatives that similarly have failed to meet their intended goals and/or have been hampered by implementation challenges.

This implementation ‘gap’ between aspiration and reality is a frustrating scenario given the significant sources and attention that goes into designing policies. The gap, however, may be because insignificant attention has been paid to the implementation of policies until it is too late. As Martin Parkinson, Secretary of Prime Minister and Cabinet, has noted ‘Implementation should never be seen as the poor cousin of policy development...yet too often it is’ (Parkinson, 2016). In the same speech he argues that we often assume that policy development is a much harder and intellectually taxing exercise than its implementation, but the reality is that the latter is more difficult in practice. Our failure to recognise this point, and a lack of engagement with those with implementation expertise is, potentially, one of the reasons we do not always see the results we might expect from policies.

In this Issues Paper we turn to the academic literature to examine what light it can shed on processes of policy implementation, outlining what we know about this topic and where gaps remain. In doing so, we summarise the state of the art of policy implementation knowledge and signpost some fruitful areas for future research. On examining the literature base, we find a burgeoning literature that has been growing in size and scale since studies began to emerge in the 1970s (Saetren, 2005). But, we also find that the idea of the implementation gap is a rather contentious affair with vast tracts written about: what implementation looks like in practice; what can be done to overcome it; who is responsible; and, even in some cases, whether it actually exists at all. The boundaries of this concept are unclear and while there are a number of descriptive accounts of implementation to be found in the literature, they do not necessarily tell us all that much about the actual concept and its practice. Despite contributions from a number of disciplines, countries and policy areas many unanswered questions remain about policy implementation. We do find, however, some useful new contributions and opportunities to explore within this evidence base.

Our first step is in explaining why, despite the existence of several extant reviews of the implementation literature, we consider it to be of use to re-examine what is being researched in this area. Next, we provide a high level overview of the field by mapping some of the different theories and disciplines that have contributed to the implementation literature, considering the literature in terms of some of the problems that exist and where the frontiers of this research territory are. The mapping reveals a number of overarching themes running through the literature that we consider in turn:

- that an understanding of how implementation decisions are made, by who, and why, can help to explain the outcomes of implementation processes
- that certain elements of implementation are under-researched or overlooked when attempting to understand implementation and that bringing a focus on these elements could help understand processes and outcomes
- that determining what has worked, and why, in ways that can be effectively compared between policies can inform effective implementation design

Throughout the paper, we highlight areas of research focus that could help to advance the field of implementation research.

WHAT IS IMPLEMENTATION AND WHY REVIEW THE LITERATURE (AGAIN!)?

Studies of policy implementation first started to emerge in the 1970s with the publication of Pressman and Wildavsky's (1973) comprehensively titled *Implementation: how great expectations in Washington are dashed in Oakland or, why it's amazing that federal programs work at all, this being the saga of the Economic Development Administration as told by two sympathetic observers who seek to build morals on a foundation of ruined hopes*. It is hard to believe now, but policy implementation had been the "missing link" (Hargrove, 1975) in the study of policy processes until this time. The 'discovery' of implementation led to a vast amount of debate in the literature, although this discussion petered out somewhat in the mid-1980s, only to be 'discovered again' by the academic literature a decade later (see Althaus et al, 2012). Early in the study of policy implementation, essentially two sides dominated the debate. On one side were those who favoured 'top-down' accounts of policy and on the other, those who advocated 'bottom-up.' We reflect briefly on these here not only because they remain powerful ideas in the literature, but also because they clearly demonstrate the challenges with defining what implementation is, and where its limits lie.

Top-down models of implementation are most often associated with central planning functions where the government holds the political mandate to determine what is best for the population, designing policies and detailing how they should operate in practice. Top-down theorists view the functions of policy formation and implementation as profoundly separate activities. Much of this literature is concerned with understanding why gaps occur between policy development and implementation and what can be done to prevent these gaps from occurring (see for example: Sabatier and Mazmanian, 1979, Hogwood and Gunn, 1984). This literature is often made up of studies of how "perfect administration" might be achieved and the most effective ways in which complex administrative systems might be "controlled" (Hood, 1976). The implicit assumption here is that policy-makers should take responsibility for the formation of policy; local actors and services should then put these actions into place in the manner intended (Hill, 2009).

In contrast, bottom-up theorists argue that it is not just the case that can policy be fully formed and local agencies implement them. They consider that policy processes are inherently more dynamic and complex than the simplistic top-down model would suggest, in at least two senses. First, policy is rarely coherent, fully formed and clear; and second, policy-making might actually continue into the implementation phase. The latter point is important in the sense that it suggests that policy development and implementation are not completely separate functions; the work of Michael Lipsky (1980) is a well-known example of this perspective. He argued that professionals were not necessarily interested in 'how to implement' particular policies, but instead they wanted to figure out how they could best provide services within the range of constraints they faced. Illustrated through the notion of 'street-level bureaucrats', he drew attention to the degree of autonomy that professionals have in practice, which provides them opportunities to stray from centrist edicts. Even when all the conditions are in place for 'perfect implementation', policies could still be implemented in ways that policy makers had not necessarily expected or intended because of the influence of implementers at the local level.

From the mid-1980s a number of syntheses of these top-down/bottom-up perspectives emerged, dealing with different parts of the broad policy process (e.g. Sabatier, 1986). Yet, no single theory of implementation developed from this synthesis process has taken hold widely; perhaps unsurprising given that they have different understandings of where implementation starts and ends. Peck and 6 argue that these two theories are asking different questions: the top-down question is 'how, if at all, can the centre get its way?' (2006, p. 15). The bottom-up question is 'how can processes be identified that might, on average and over the long run, be more likely to produce better outcomes from the implementation processes, whatever the centre might have wanted originally?' (Peck and 6, 2006, p. 15).

Peck and 6 go on to suggest the question for implementation research should actually be: "how can general strategies and practice be developed and institutionalised for coming to settlements between rival but asymmetrically legitimate conflicting interests, which recognise their legitimacy, the inequalities of such legitimacy and the empirically known constraints on achieving effectiveness (either by simple demands for faithful compliance or by allowing indefinite freedom) and which cultivate long term organisational and inter-organisational capabilities among service-providing organisations?" (2006, p.15). As Dickinson (2011) remarks, when questions of this sort of length start to appear, it might seem apparent why researchers started to abandon this area of study!

Essentially what Peck and 6's re-framing of the implementation question does is draw attention to a need for the capability or the capacity of the organisation(s) involved to be able to implement changes and co-ordinate these activities between themselves. The context of public services has changed significantly since the 1970s. We have seen increasing numbers of actors enter the system on both the supply side (within increased private and not-for-profit organisations working under contract to government) and the demand side (greater citizen expectations, greater numbers of advocacy organisations, think tanks, interest groups seeking to influence policy processes). These shifts are important because, if it was ever the case that central bodies could make policies and then demand that local areas implement these, then these changes in the environment would make this expectation even more of a challenge. So, in our contemporary context, it is unlikely that implementation of any but the most simple policies is a technical issue of adoption.

What the top-down and bottom-up perspectives of implementation do have in common is they are largely providing accounts of the ways that they think policy implementation should be done, that is, normative accounts of how things ought to be (Hill and Hupe, 2009). As we will demonstrate in the next section, the literature has remained dominated by descriptive accounts of particular policy implementations, with little contribution to the concept of implementation per se. Indeed, a vein of research suggests that the role of researchers is to simply describe and document implementation processes because of the immense difficulties in implementing policies in practice and the many unintended consequences that arise out of these processes (Bovens and 'T Hart, 1996). We believe that such a perspective construes the value of research in a rather narrow sense. Although it is unlikely that one theory or approach would ever be able to encapsulate something as complex as the implementation of policy in its entirety, we can learn much from current literature and use the knowledge to frame a new research agenda.

In this Issues Paper, we provide an account of the implementation literature and seek to map out where some of the gaps are and what might be fruitful areas for our research team and others to pursue. We think it is worth us coming back to this important topic because implementation is a real and significant challenge that public service organisations grapple with and that has implications for us all. We will use this process as a platform for setting out the Public Service Research Group's ongoing research agenda.

MAPPING THE IMPLEMENTATION LITERATURE

As the overview of the implementation field set out above suggests, mapping the terrain of the implementation literature is no easy feat. The literature is vast, with rather fuzzy boundaries, with contributions made from a variety of different disciplines and fields of study. As such, despite more than forty years of research, we still lack consensus about what implementation is and how it might be most effectively achieved.

To illustrate, studies of implementation have revealed over three hundred variables that are thought to be of importance (O'Toole, 1986). The identification of new variables became such a popular endeavour that a number of scholars argued that the field needed more structure (Matland, 1995). Indeed, Meier (1999, p. 6) went as far as to recommend that “any policy implementation scholar who adds a new variable or a new interaction should be required to eliminate two existing variables”! Such a situation means that a systematic review of the implementation literature is almost impossible; this is not to say that no one has tried often constructing elaborate methods and coding approaches (see for example Fixsen et al., 2005, Hupe and Hill, 2016, Saetren, 2005). These reviews, however, typically end with unsatisfactory conclusions about the challenges of identifying commonalities between cases, variety in language and difficulties in making statements about links between factors. Johansson (2010) compared the list of two large-scale implementation reviews published in the same year, one with 418 references and another with 508 references and found only four references in common between the two reviews. As Fixsen et al. (2005, p. 4) observe “there is no agreed-upon set of terms, there are few organized approaches to executing and evaluating implementation practices and outcomes... The lack of common definitions and the lack of journals specifically oriented to implementation research probably reflect the poorly developed state of the field”.

In this short section we seek to provide a high level of overview of the field by mapping it via a few different approaches. First we consider some of the different theories and disciplines that have contributed to the implementation literature, then we consider the literature in terms of some of the problems that exist within it and, finally, where the frontiers of this research territory are.

Implementation theory

The implementation literature is not short of theories seeking to explain why policy implementation fails and possibly how to improve it or avoid failure in the future. These theories cover a broad range of different disciplines and fields of study. As Meier (1999, p. 7) observed, “a wide range of journals publish articles that inform the study of policy implementation – the mainstream sociology journals, most of the public administration journals, the professions journals (public health, social work, sometimes law or medicine), many of the economics journals, and on rare occasion a political science journal”. So not only is the policy implementation literature spread across a number of disciplines and fields of study, but some of the more important ideas might not actually be ‘labelled’ as policy implementation at all.

Despite a plethora of theories (Box 1), they have not led to significant improvements in implementation practice. In part, this lack of improvement may be because these theories explore different parts of different implementation processes, focusing on specific problems and making particular assumptions. For example, game theory was developed in the field of economics to explore the ways in which individuals make choices in situations where there are competing demands (Aumann, 1989). Structuration theory derives from the field of sociology and seeks to explore how structure and agency come together to create and reproduce social systems (Giddens, 1991). These are just two examples that demonstrate how different theories focus on slightly different problems within the context of policy implementation: how individuals make decisions in competitive environments versus the role that structure and agency play in developing social systems. One takes as its starting point an interest in the distribution of goods and services and the other an interest in human society. Neither theory tries to map out or provide an entire account of the full process of implementation.

Box 1: Theories used in implementation research (derived from the coding of implementaiton literature for this review)

Actor centred institutionalism	Forward and backward mapping	Network management
Advocacy coalition	Game theory	Policy frameworks
Ambiguity Conflict model*	Garbage can model	Policy streams
Bottom up*	Governance theory	Politics of structured choice
Boundary spanning	Hierarchical linear modelling	Principal-agent theory
Change and consensus model	Implementation science	Rational and bureaucratic models
Communications model	Institutional analysis and development	Regime framework
Complexity theory	Interpretive theory	Structuration theory
Contextual interaction theory	Issue-attention cycle	Third generation theory
Discourse analysis	Model of policy failure	Top down*
Diffusion of innovation		

* Most common theories identified in the literature reviewed

Given the extensive number of theories that populate this field, we have seen a number of calls to adopt a ‘synthesizing approach’ (e.g. Goggin et al., 1990). Such approaches, called ‘third generation’, attempted to deal with the challenge that policy implementation processes encompass a great range of different ‘layers’ of policy systems and technical and non-technical complex processes. On face value, synthesising theories that focus on different aspects of the complex processes of implementation seems like an effective idea. Yet, seamless integration of different theories continues to prove challenging because they start from different points and may not be epistemologically or ontologically commensurate.

In attempting to overcome these and other challenges, theories relating to multi-level governance (Peters and Pierre, 2001) or middle-range theories (e.g. Shea, 2011) have emerged. Both kinds of approaches recognise the influence that a range of different actors and agencies have on implementation processes and seek to develop a way to capture the messiness of implementation processes. However, although these theories are helpful to some extent in mapping these processes and recognising the influence of a range of different stakeholders on implementation processes, our review demonstrated that neither of these approaches has succeeded in providing a clear account beyond single cases.

One approach that does try to encompass the whole implementation system is complex systems theory. After all, if the introductory sections have demonstrated anything it is that policy implementation is typically a rather complex affair – although this observation does not mean that implementation always takes place in a ‘complex system’ per se (see Table 1). Systems theory aims to characterise systems according to its component parts, layers, feedback loops, linearity and size, which then allows classification as complicated, complex or chaotic systems (Hawe et al., 2009) (Table 1).

Table 1: Definitions of different types of systems and their descriptions (Hawe et al., 2009)

System type	Definition
Complicated systems	Many interacting component parts, guided by simple rules; system may break down when a component part is removed
Complex systems	Very simple interactions among many interacting component parts; robust to the removal of a component part; increase in robustness over time due to capacity to self-organize
Chaotic systems	Few component parts, but they seem to produce random behaviors from the simple interaction of these parts

What such a perspective suggests is that different properties are associated with these classifications, which have implications for how systems might be altered through interventions. Some systems will obey simple rules, while others will respond ‘randomly’ to an intervention. Where an intervention involves the removal of one part of a system, it might cause the entire system to fail, while another system could re-organise, increasing its resilience in the process. Emerging research on complex systems is starting to focus on these elements of policy implementation, but a significant amount of research is still required (Klijn, 2008, Koehler, 2003, Ostrom, 2010). What becomes clear is that theory based research is developing but has not, as yet, provided a structure to overcome implementation problems.

Implementation problems

Hupe (2014) offers a different way to map the implementation literature, using a classification of research types to assess ongoing ‘problems’ in implementation research. He identifies four different categories of contemporary implementation research, demonstrating how these vary in terms of theory and method:

- Mainstream implementation studies – comparison of intentions and achievements to identify the degree to which compliance with goals is achieved. Research design is typically a single case study, methods are mostly qualitative research and a ‘downward’ theoretical approach is adopted
- Neo-implementation studies – focus on the range of different stakeholders that influence policy processes e.g. through a multi-level governance lens.
- Advanced implementation studies – seek to synthesise a number of different ideas across disciplines through ‘third generation’ approach. There are two versions of this paradigm depending on whether an upward or downward theoretical stance is drawn on (Table 2)

Hupe (2014) examines progress in each of these categories according to problems identified by Goggin et al. (1990): the existence of a large number of variables; the challenge of how researchers engage with the object of their research; how to handle the many different actors and layers of implementation processes; and, how to deal with technical and value-based factors in systems (Table 2). His review finds that some of the more advanced studies are better able to deal with some of the common problems of implementation research, although the trade-off is that these studies are often expansive and expensive research projects.

Table 2: Summary of Hupe’s (2014) categories of studies, with definitions and modes of dealing with problems of implementation research (++ yes; - no; +/- yes and no)

Category of studies	Definition	Too many variables	Theory/practice relationship	Multi-layer problem	Policy/politics nexus
Mainstream	<ul style="list-style-type: none"> • Single case studies • Qualitative research • Downward theoretical approach 	+-	-	-	-
Neo	<ul style="list-style-type: none"> • ‘Multi-level governance’: EU at the top • Multiplicity of actors active at all levels • Non-state actors become involved 	+-	-	+-	+-
Advanced upward	<ul style="list-style-type: none"> • Sophisticated research design • Downward theoretical approach • Two-layer comparison 	++	+-	+-	-
Advanced downward	<ul style="list-style-type: none"> • Beyond a single case study (larger n) • Upward theoretical approach • Explains empirical variation in respect of policy outputs or sometimes outcomes • Inter-organizational relations and street-level bureaucracy 	++	+	+	+

While this analysis is interesting, it highlights ongoing attempts to find ‘an answer’. The objective appears to be that, by clarifying the problems, implementers can avoid repeating such errors and a ‘best practice’ solution will emerge.

Implementation frontiers

A final route we take in charting the terrain of the implementation literature is a pragmatic approach that considers what the literature tells us about ‘what works’ and why. Here, the focus is on not on persistent problems, different theories, identifying best practice, or even how to define implementation. Instead, the focus is on identifying themes that might provide explanations of phenomena or provide insights into where future research endeavour should go. This exercise is about establishing the frontiers of implementation research; identifying those areas that offer the greatest potential in helping us to understand policy implementation in greater and more meaningful detail.

To overcome the limitations of the implementation literature to date, and the lack of detail and repeatability of existing reviews, for this Issues Paper, we adopted an iterative, systematic approach that began with a scoping literature review. Having identified that we wanted to know: ‘what appears to work and why’, we chose studies that were focused on success and failure in particular. We then coded these papers to look for themes that either (a) provided some insights into what is currently understood within the implementation literature or (b) enabled us to identify gaps in the literature that would provide the basis for a future research agenda (see Appendix for more details of the methods employed).

Our review and coding analysis (see Appendix for an example) revealed a number of overarching themes running though the literature that we now explore in turn:

- that an understanding of how implementation decisions are made, by who, and why, can help to explain the outcomes of implementation processes
- that certain elements of implementation are under-researched or overlooked when attempting to understand implementation and that bringing a focus on these elements could help understand processes and outcomes
- that determining what has worked, and why, in ways that can be effectively compared between policies can inform effective implementation design.

UNDERSTANDING WHAT DECISIONS ARE MADE AND WHY

“Scholars reflecting on the empirical reality of decision making have an eye for the fact that ‘decisions’ can be seen throughout a policy process – even at the street level. The relationship between policy goals as expressed and policy as implemented is not an obvious one. This relationship cannot be taken for granted, neither in practice nor in studying it” (Hupe and Hill, 2016, p. 107).

What the quote from Hupe and Hill demonstrates is that policy decisions are not simply confined to one part of the process. As Simon explains (1957, p. 1), “the process of decision does not come to an end when the general purpose of an organization has been determined. The task of ‘deciding’ pervades the entire administrative organization quite as much as the task of ‘doing’ – indeed, it is integrally tied up with the latter”. Thus, the challenge becomes, how can we understand what types of decisions are important to implementation outcomes and why. We suggest that we can begin by examining the relationship between politics and administration and how it highlights some of the challenges in understanding decision-making.

Politics and administration

Classic public administration theory in the Wilsonian tradition suggests that we should be able to distinguish between politics and administration; the former is about making public policies, while the latter is about implementing them (Bourgon, 2007). In this approach, politics affects implementation via a process of policy-making, rather than through the direct involvement of elected officials in the act of implementation (Box, 1999, Hupe and Hill, 2016, Lane, 2013). This distinction raises a number of important questions:

- If elected officials have limited control over public administration, “is it reasonable to hold them accountable for the decisions and actions of the public service, and if elected officials should not be held accountable, who then is accountable?” (Peters and Pierre, 1998, p. 228)
- Do public administrators answer to elected officials, or the public?
- Who has the ability and the right to make policy and implementation decisions?

According to a Wilsonian view of public administration, elected officials are solely accountable for generating policy. The role of public administrators has been seen as offering support by: a) providing information to elected officials and citizens; b) generating proposals and framing policy decisions; c) serving as experts; and d) facilitating the public discourse (Box, 1999). So, is it possible, or even desirable, to separate politics and administration? Or are they part of the same process: the state’s authoritative allocation of resources, via social processes that underpin decision-making (Bourgon, 2007, Butler et al., 2007, Lynn, 2001)? Figure 1, developed from our coding of the dominant theories within the literature, demonstrates the complexities of these relationships and suggests that ignoring the political element of implementation could result in a complete inability to understand why a policy succeeded or failed.

A mapped separation of politics and administration influences how we understand policy processes and outcomes (see Joaquin, 2009). For example, a focus on problems with administration can result in assessments of shortages in organizational capacity and misaligned incentives, ignoring the role of politics in determining the likelihood of implementation success or failure (May, 2015). Thus, Figure 1 offers implementers and researchers an analytical map that can be used to consider: (a) where decisions need to be made to frame a new implementation initiative; (b) what needs to be captured when evaluating whether an initiative succeeded or failed; and (c) how to analyse the context of implementation.

INSTITUTIONAL LEVEL MANAGERIAL LEVEL

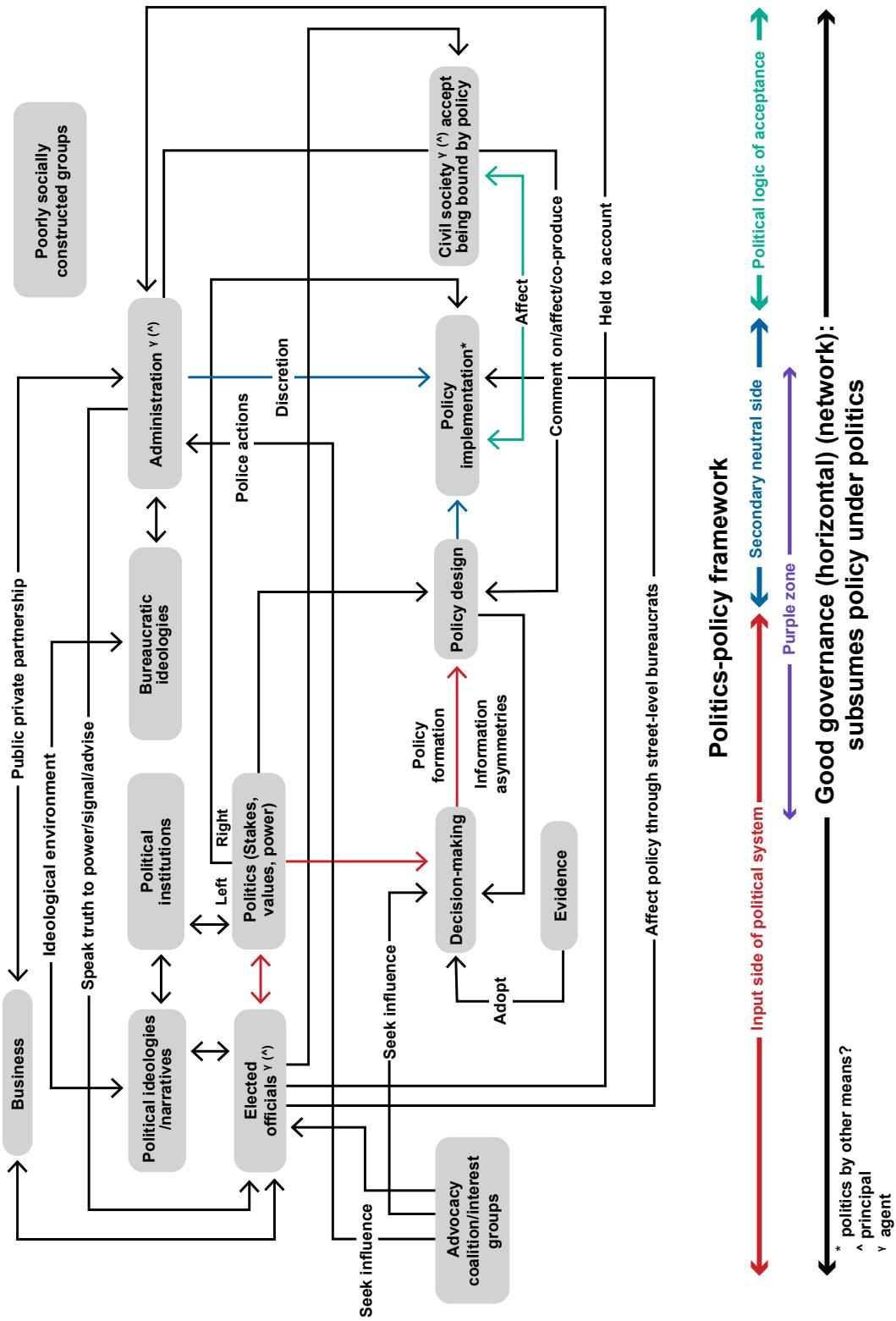


Figure 1: Relationships between politics and administration (developed from our coding of the implementation literature)

Most recently, Hupe and Hill (2016) attempted to understand the ‘nexus’ between policy and administration by looking at the extent to which researchers considered ‘implementation as politics’ (Table 3). They looked at whether researchers ‘problematised’ the policy/implementation nexus and how it is specified in making a difference to implementation outcomes. They also examined how researchers deal with the (politically) intrinsic and multi-dimensional nature of policy processes. Drawing on Matland’s (1995) ambiguity-conflict model and May and Jochim’s (2013) regime perspectives work, they offered five research approaches that can be used to understand and explain “what happens after policy goals have been formulated and decided upon” (Table 3).

Table 3: Comparing types of research approaches to the policy/implementation nexus (adapted from Hupe and Hill, 2016, p. 115)

Indicators	Technical	Normative	Types of approaches Control	Institutional	Comparative
Policy as ...	clearly defined prescriptive input	broadly desired outcome	circumscribing permitted divergence	institutional mandate	actual output
Implementation as ...	applying instructions (residual)	realizing an ideal	adopting the legislator's intentions (residual)	using institutional preconditions	to be comparatively measured
Specification of the relationship between policy formation and policy implementation	Low	Low	High	High	High
Attention to ‘implementation politics’	Little	High	Moderate	Moderate	High
Focus	Narrow	What determines the output of a policy process?			

Their interrogation of the literature identified that in some research the question is ‘what determines the output of a policy process?’, while in others policy implementation is simply viewed as a technical process of administration. Thus, hidden behind the term ‘implementation’ are very different definitional and research approaches to the relationships between policy formation and implementation. These differences affect implementation, design and enactment. If, for example, an over-simplified, normative view of implementation is adopted, policy makers might assume that their stated guidelines will ensure that planned policy outcomes come to fruition. In another case, differences of perspective between legislators and service deliverers might lead to new legislation designed to frame policy implementation being interpreted very differently. In research terms this potential disconnect between perspectives can cause scholars to talk past one another, and may explain some of the burgeoning, but apparently disconnected literature indicated earlier. What becomes clear is that understanding more about how decisions are framed from this perspective, reflecting this more nuanced map of relationships will be a useful research agenda. Two aspects emerge particularly strongly: first, that policy development and implementation is an inherently social process and, second, that actors matter, not just in terms of who they are for any given implementation, but also because their perspective of implementation will influence both its design and enactment.

Social processes and actors

Figure 1 highlights that policy development and implementation is a social process. According to our review, social elements of policy processes include: language and discourse, political ideologies and orientations, coalitions and policy networks. Social processes were also determined to include discretion, accountability, legitimacy and institutional arrangements that define the rules, influence equality outcomes, and provide for individual choice at different levels of implementation (see Table 4 for more details).

Table 4: Dimensions of social processes (developed from our coding of the implementation literature)

Dimension	Description
Language and discourse	Language can be 'deeply political' in how it is used to contest meaning and is critical in shaping definitions of problems and, thereby, the policy agenda (Bessant, 2008). Language can be used to persuade policy communities, electorates and the general public to see a problem in a certain way and encourage them to support particular policies in overcoming that problem. One of the ways in which language is important is in the development of discourse. Discourse is essentially a system of meaning, 'an ensemble of ideas, concepts and categorisations through which meaning is allocated to social and physical phenomenon, and which is produced and reproduces in an identifiable set of practices' (Hajer, 2006: pg. 45). Discourse is important in the context of implementation in terms of the ways in which different social groups, events and types of information can be represented.
Political ideologies and orientations	The left-right political continuum is one of the strongest determinants of how people consider policy decisions should be made. For example, a leftist view corresponds with a more generous view of the welfare state (Stensota, 2012). Political orientations can affect policy at different governance levels. To illustrate, street-level bureaucrats are known to act as 'citizen agents', identifying with local community needs and political orientations, more so than central policy-makers. This alliance can cause policy outcomes to diverge from their stated goals (Stensota, 2012, Lipsky, 1980, Maynard-Moody and Musheno, 2000).
Coalitions and policy networks	Value-oriented approaches, including the advocacy coalition framework, can be used to understand the development of policy issues (Smith, 2013). The advocacy coalition framework, for example, suggests that 'networks' of actors who share a belief system (e.g. researchers, interest groups, journalists, policy-makers) compete with one another to influence policy with respect to particular issues, and aim to dominate 'policy subsystems' (Sabatier and Jenkins-Smith, 1993). The policy network literature explains that groups exist along a spectrum, with policy communities at one end of a spectrum (i.e. consensual relationship between government and a small number of groups) and issue networks at the other end (i.e. broad diversity of links between government and many groups) (Cairney, 2012, Heclo, 1978, Marsh and Rhodes, 1992).
Discretion	Discretion is the "latitude that frontline bureaucrats possess to interpret rules when implementing programs, making them de facto bureaucratic policymakers" (Stensota, 2012, p. 554). Discretion has several implications for administration. Discretion can be considered necessary to implement policy that is effective, flexible and responsive to the changing needs and circumstances of the individuals and groups (Stensota, 2012). When discretion is used inconsistently, however, implementation can be inequitable and cause outcomes to differ immensely from original policy intentions.
Accountability and legitimacy	Bourgon (2007) points to an increase in expectations of accountability and responsibility from public administrators. She identifies three conflicting forms of accountability: political accountability - public scrutiny of the advice and personal actions of public servants; parliamentary accountability - legislated mandate of public agencies and use of public funds; and hierarchical accountability - shared responsibility for results among departments or across partnerships.
Institutional arrangements	Institutions are considered to embody the rules of the political game and thus are a strong determinant of policy formulation and implementation (Peat et al., 2017). An area to explore then is on "recovering the intricacies, practices, knowledge, competencies, and worldviews tied to the particularities of the moment, evaluating the extent to which this web of interactions contributed to the enactment of the policies at hand, observed retrospectively" where "the state or government is a strategic actor that brings together in its internal structures—which are both differentiated and hierarchically unequal—the conflicts that permeate the relations among those interest groups or class segments" (Leite, 2016, p. 63).

It is clear from the literature that social processes are considered to shape the nature of policy implementation, in terms of who is affected and how, and how success and failure are defined. We suggest, therefore, that paying attention to these factors has potential to bring increased clarity to implementation research.

An analysis of Table 4 also reveals that understanding implementation by examining how government agencies operate is no longer sufficient (if it ever was); it is necessary to understand the operations and dynamics of other actors and their relationships, which introduces a myriad of possibilities and challenges (May, 2003, O'Toole Jr, 2004). Within a particular policy context, actors are defined as 'entities such as individuals, groups and governments with the means to consider information and make decisions' (Cairney, 2012, p. 63). In understanding implementation, it can be critical to determine who the actors are and what their involvement is in policy processes (Robichau and Lynn Jr, 2009). Public, private and non-governmental actors, for example, can take on different roles within a system, "crossing established administrative levels, providing expertise, securing legitimacy, and encouraging policy change" (Rykkja et al., 2014, p. 123). They can use instruments of the political environment, such as regulations and policies, to garner support and either prevent or affect change for a particular issue (May, 2003, Thomann, 2015).

One of the more prominent challenges in understanding social processes and actors is the 'multi-layer problem': the involvement of actors at different levels of governance, local, regional, state/province, federal/national (Hupe, 2014). The multi-layer problem throws up an endless number of complexities. For example, as the number of actors increases, the clarity of responsibility decreases. When power is shared among different governance levels, actors can become confused as to who is responsible for what, with some actors choosing to take advantage of the ambiguity (Niedzwiecki, 2016). Different actors pursue different objectives and priorities and face different constraints, so that policies developed in different parts of the institutional machinery will be the result of different interests, procedures and institutional arrangements (Grimm, 2011, Olsen, 2008, Söderberg, 2016).

A number of theories have emerged to deal with the challenges of understanding the roles and relationships between actors across levels: multi-level governance theory that examines actors at several tiers of decision-making (Robichau and Lynn Jr, 2009, Torevlied, 2000); network governance theory that defines a governance network as a "relatively stable horizontal articulation of interdependent, but operationally autonomous actors who interact through negotiations which take place within a regulative, normative, cognitive and imaginary framework [and ...] contribute to the production of public purpose" (Torfing, 2005); principal-agent theory that explains that actors at different levels can be causally important at different times (Blom-Hansen, 2005); game theory that analyses interaction processes between actors (Hermans et al., 2014); and the multi-actor implementation framework that examines "strategic networks of complex relationships involving inter-governmental cooperation among agencies with similar mandates from different levels of government, and state–society partnerships" (Conteh, 2011, p. 128).

Each theory adds some clarity in terms of who is involved, why they behave the way they do and how they affect implementation. Care should be taken, however, not to confound actors and activities, what Hill and Hupe (2003, p. 483) describe as the 'fallacy of the wrong layer', which occurs "when analytical levels (focus) and administrative layers (locus) are confused instead of distinguished. The fallacy means that implementation is looked for at the wrong layer, that is: one or more layers 'too high'. What is seen as 'implementation' of a policy may involve separate layers." This fallacy explains why it is not only the spatial dimension that is necessary to consider, but also the temporal dimension. For example, policies that are developed and implemented over longer time horizons are often characterised by repeated actions and patterns of interaction between actors. By observing these patterns over time, actors can learn how to 'game the system', complicating how we understand the outcomes of initial policy design (Grimm, 2011).

Our review shows that a wealth of literature examines politics, actors and social processes, but it also highlights that existing research is stereotypically used to explain events, rather than provide an analytical framework that enables successful policy development and implementation. By identifying this gap, we can start to think about a path for future research, in particular how to analyse the complex systems of social processes and actors in ways that offer predictive insights into implementation, including the systems levers.

FIGURING OUT WHAT IS MISSING

It becomes quickly apparent when reviewing the literature, that many elements of implementation are underestimated, implicit, or that their influence on the process or outcomes of implementation remains unclear. A number of problems arise here: what elements are important in terms of explaining implementation success or failure? How can we figure out which elements are most important to focus on? How do we find something that we do not know we need to be looking for?

From our analysis three main areas of implementation research emerge that we suggest deserve additional attention in terms of their capacity to both explain implementation success or failures to date, as well as provide research opportunities that will help frame and predict future implementation outcomes: context, behaviour and assumptions. Each area is already mentioned in the literature but often in terms of either being: (a) cited as important without strong analytical explanations as to why; or (b) described in unstructured ways that do not allow cross case comparison to build stronger implementation theory.

Context

Although context is acknowledged, and even studied, its real influence is often unrecognized or underappreciated. Johns (2006), for example, argues that context is most likely responsible for one of the biggest ongoing challenges in implementation research: variation in study-to-study research findings. Within public administration literature, context can be described as “situational opportunities and constraints that affect the occurrence and meaning of ... behavior as well as functional relationships between variables. Context can serve as a main effect or interact with personal variables ... to affect ... behavior” (Johns, 2006, p. 386).

Scale is just one aspect of context that, when examined even briefly, highlights how the complexity of context challenges implementation. Looking at context from a temporal perspective, we can see that context changes over time. For example, since the advent of online shopping, car sales people's ability to influence customers in person has been severely constrained (Barley, 2015). Events, while usually considered to occur at a particular time, can in fact evolve temporally, as described by 'event system theory' (Morgeson et al., 2015). This theory explains how events can create new behaviours, features or events, extend over time and influence people and organizations.

Looking at spatial scales (e.g. local, national, global), some researchers examine how these scales are socially constructed and, thereby, imbued with power. In these circumstances, context becomes a fluid concept for, and a product of, power relationships in a society (McCann, 2003). Here, politicians frame reality in terms of scale, shaping constituents' mental models of reality (i.e. their view of the world) and re-organizing scalar hierarchies with unpredictable consequences for associated politics. Essentially, this fluidity results in a "reshuffling of the locations of power among the institutions of the state, capital, and civil society" (McCann, 2003, p. 159). Context is thus implicated with power, which in turn is implicated with policy implementation.

In climate policy, analyses have been undertaken to look at how implementation can be successfully achieved when spatial and temporal scales are viewed as flexible features of context. Scale-related implementation options, such as joint implementation, supplementarity and inter-temporal trading can be used, at face value, to assist different jurisdictions in meeting their policy objectives (e.g. through the Kyoto Protocol). Perverse outcomes can arise, however, when the distribution of benefits reach their spatial limits, or inter-temporal trading is used to defer action. Examining the influence of spatial and temporal scales on policy implementation can therefore uncover unintended outcomes of well-meaning proposals (Stevens and Rose, 2002).

These few examples are used to highlight the potential that could be derived from a deeper understanding of the effect of specific contexts, both 'accepted as existing' and 'socially constructed' elements. Context is often conflated, however, with a description of a situation or a country, without real interrogation into what is specific about that particular context that will affect the implementation system. What emerges is that, in a literature focused strongly on exemplar cases with widespread recognition of the importance of context (Pollitt, 2013), few frameworks offer ways to systematically review context in a way that permits (a) a clear understanding of the effects of context; and (b) useful comparisons across multiple cases and contexts.

Behaviour

Successful policy implementation typically requires behaviour be modified, replaced or stopped in individuals and/or groups (deLeon and deLeon, 2002). Thus, studying implementation gives rise to a “most basic question about the relation between thought and action: how can ideas manifest themselves in a world of behavior?” (Pressman and Wildavsky, 1984, p. 163). Winter (2006) argues that policy makers should focus not only on ‘goal achievement’ (outcomes) but also on ‘implementation behaviour’ (i.e. outputs). He suggests that focusing on outcomes is problematic because it can be impossible to assess influences on behavior that are independent of policy implementation. If we assume that outputs represent the behaviours of implementers and outcomes represent the effects on target populations, it might be possible to identify “behavioral dimensions and classifications that are universally applicable in all policy areas”, overcoming the need to develop a generalised implementation theory (Winter, 2012, p. 247).

Despite the evidence of the potential effects of actor behaviour, policy-makers tend to be reluctant to map out exactly what or how behaviours need to change for a policy to be successful, thereby creating problems with respect to expectations and assessment (deLeon and deLeon, 2002). Problems are also created in terms of inappropriate instrument choice. When policy designers use backward mapping, for example, they often identify instruments that are more appropriate than those initially selected.

At least four main areas of theory development are available to examine the role of behaviour in implementation research. All of these theories stress the importance of behaviours in terms of their capacity to change the outcome of policy implementation:

- Third generation implementation research: attempts to explain “why behavior varies across time, across policies, and across units of government and by predicting the type of implementation behavior that is likely to occur in the future” (Goggin et al., 1990, p. 171)
- Backward mapping: involves “stating precisely the behavior to be changed at the lowest level, describing a set of operations that can insure the change, and repeating the procedure upwards by steps until the central level is reached” (Matland, 1995, p. 151)
- Network governance: “emerges through frequent, structured exchanges that develop network level values, norms, and trust, enabling social mechanisms to coordinate and monitor behaviour” (Bryson et al., 2006, p. 49)
- Game theory: seeks to understand “social decisions using tasks derived from a branch of experimental economics [that] though beguilingly simple, require sophisticated reasoning about the motivations of other players [...] It offers a rich source of both behavioral tasks and data, in addition to well-specified models for the investigation of social exchange” (Sanfey, 2007, p. 598-9; von Neumann et al. 1947)

As yet no one theory integrates these different facets in a complete sense. Of late, we have seen a great deal of interest in accommodating behavioural considerations into policy design, with the rise of behavioural economics and its influence through things like ‘nudge’ theory (Anderson et al., 2010). Expanding on this theory, and others, to accommodate behavioural dimensions in implementation research is also a critical area for future research.

Assumptions

Underlying assumptions, implicit or explicit, represent one of the fundamental elements of public policy theory and research. According to (O'Toole, 2004, p. 320), the most basic assumption of policy implementation is: "that public managers confront 'a messy reality' of data, observations, opinions, facts and, not to be missed, human beings. A manager's intellectual task is to understand or explain messy reality toward the goal of gaining sufficient control over events to influence the future intentionally". Agreeing to what assumptions can or should be included in policy design and implementation is fundamental to understanding implementation success or failure. As Schneider and Sidney (2009, p. 114) explain: "By guiding the policy analyst away from taking stated policy goals at their face value and toward examining the meanings and assumptions within policy designs as well as designs' impact on social, political, and economic life, policy design theory pushes policy evaluation toward engaging in social critique that gets at core problems."

Mumtaz et al.'s (2015) research on Pakistan's Community Midwife (CMW) program clearly illustrates the effects of assumptions on policy implementation. The authors aimed to "understand why skilled birth attendance—an acknowledged strategy for reducing maternal deaths—has been effective in some settings but is failing in Pakistan" (Mumtaz et al., 2015, p. 249). They identified a number of assumption, such as: "sufficient numbers of women who meet education and residency criteria will be recruited and successfully trained; once trained, CMWs will go back to their home villages and work as midwives; CMWs will be able to establish private practices and attract fee-paying clients" and they will work in co-operation with the public sector to receive and make referrals (Mumtaz et al., 2015, p. 252). Their research revealed gaps between the program theory, assumptions and reality on the ground. Notably, the design of the program failed to take into account: (1) the incongruity between roles, norms, responsibilities and culture; (2) market and consumer behaviour; (3) the complexity of public–private sector cooperation. This research demonstrates how unexplained or unexamined assumptions can influence policy and program design and evaluations of implementation. More generally, if policy assumptions are correct, then the policy might achieve its goals; if the assumptions are incorrect, not only is it unlikely to reach its goals but there may be unintended consequences, including perverse outcomes (Mumtaz et al., 2015); Moon and Cocklin, 2011).

If we want to improve our understanding of the 'why?' in policy implementation, it is critical to know what assumptions are made in policy processes. From our coding of the literature, we identified a number of different types of assumptions, from which we generated a typology of assumptions (Table 5). By seeking to identify assumptions made in policy processes, insights can be gleaned that might explain policy implementation outcomes; the more assumptions that are revealed or made explicit, the more certain we can be about outcomes.

By looking through Table 5 it becomes clear that if policy assumptions are unknown, then the anticipated outcomes are unlikely to be realistic. The same argument holds for theoretical assumptions: when underlying assumptions are incorrect or undefined, theories are unlikely to find empirical support (Mumtaz et al., 2015). When critical assumptions of theories or models are ignored or abandoned, the predictive capabilities of the theory or model are compromised and any expectations derived from it cannot be relied upon (Holzinger and Knill, 2004). When researchers combine theories but do not undertake a critical assessment of how the underlying assumptions of each theory will interact with one another to influence outcomes, theories will have a reduced capacity to inform policy implementation accurately (Forder, 2001).

Table 5: Typology of assumptions (developed from our coding of the implementation literature)

Main category	Minor category	Definition
Theoretical	Established theoretical	Stated assumptions of theoretical models that are necessary for the theory to function
	Inferred theoretical	Author infers assumptions of theory, empirical research or policy
	Implicit theoretical	Implied but not stated
Research	Explicit, made by the researcher/s about their research	Researcher clearly states assumptions of their research
	Explicit, made by the author/s about other research	Authors indicate that the assumptions are established (e.g. provide references)
	Implicit, made by the researcher/s	Authors do not clearly state what research assumptions are made and/or who made them
Policy	Explicit, stated in policy	Clearly stated in policy documents
	Implicit, inferred in policy	Meaning inferred in policy text
Hypothetical	Hypotheses	Assumptions of theory, empirical research or policy that are to be tested
	Forecasting/modeling	Assumptions built into theoretical models that are necessary for the model to function
Philosophical	Normative	How things should be
	Behavioural	How people are likely to behave
	Epistemological	Different philosophical positions that affect research design, analysis and interpretation
General	Assumptions of non-human entities	Contained within, for example, policy instruments
	General or widely-held <i>A priori</i>	General knowledge about how the world works Considered true (e.g. where I am, the sun will come up tomorrow)
	Unclaimed	Made without any indication as to whether they belong to the author or not, causes reader to ask, "assumed by who?"

For each case - context, behaviour and assumptions - we suggest that by analysing them in different ways including, potentially, how they work together, we will gain greater insights into what works and why. All three of these areas offer real research opportunities to develop greater insights into, not only explanations for what has happened previously, but also what is likely to happen to be able to develop improved implementation design.

DETERMINING WHAT WORKED AND WHY

Typically, people hear about one blunder, then another, then another, without realizing that there are far too many of them to be accounted for by random one-off sets of circumstances and that they may instead have common origins (King and Crewe, 2013, p. ix)

Providing analyses of previous practice to provide understandings and learning to build from is a common form of implementation research. However, a number of complexities and challenges confound our ability to determine what worked and why. Pressman and Wildavsky stated that “A verb like “implement” must have an object like policy” (Pressman and Wildavsky, 1973, p. xiii). But, they continue, “policies normally contain both goals and the means for achieving them. How, then, do we distinguish between a policy and its implementation?”. One of the complexities of the literature relates to whether evaluation is about policy outcomes, where implementation is seen as one of the variables itself, or whether implementation is a related, but separate element. What makes evaluation particularly challenging is that some researchers argue that evaluation cannot be reliably differentiated from implementation, or indeed other parts of the ‘policy cycle’ (Lindblom and Woodhouse, 1993). Others argue that things are measured but not always managed (Moynihan et al., 2011), and with so many different actors involved who have different objectives (Klijn and Koppenjan, 2000) it is typical that some aspects of the implementation process get overlooked. What is clear in the literature, is that evaluation tends to be an imprecise activity – rarely will one set of variables be decisive, making judgements of implementation success or failure challenging (Dickinson & O’Flynn, 2016). Although deLeon and deLeon (2002, p. 475) consider effective implementation evaluation to be “improbable at best, and illusionary at worst”, we sought themes in the literature that would indicate areas where research would provide clarity on how to evaluate implementation processes and outcomes.

The questions we discovered from our coding that require attention are:

1. Can we isolate and define implementation as a process to be evaluated in its own right?
2. Can we meaningfully identify and define ‘implementation variables’, both dependent and independent?
3. Can we assess the real effect of an intervention?

Differentiating phases of implementation

A range of models has been developed in the attempt to define implementation and assist with identifying ‘what’ to evaluate, typically dividing implementation into several phases. Different types of phases can be identified within the literature, including pre-implementation, implementation, and maintenance/enhancement (e.g. Chinman et al., 2004, Wandersman et al., 2000); exploration, installation, initial implementation, full implementation, innovation, and sustainability (Fixsen et al., 2009); and exploration, adoption decision/preparation, active implementation and sustainment phases (Proctor et al., 2011). In addition to phases, Aarons and colleagues offer implementation outcomes, as “the effects of deliberate and purposive actions to implement new treatments, practices, and services” (Proctor et al., 2011, p. 65). They identify eight types of outcomes, with different measures available to assess each outcome (Table 6).

Table 6: Taxonomy of implementation outcomes (adapted from Proctor et al., 2011)

Implementation outcome	Definition	Available measures
Acceptability	The perception among implementation stakeholders that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory	Survey; Qualitative or semi-structured; Interviews; Administrative data
Adoption	The intention, initial decision, or action to try or employ an innovation or evidence-based practice. Adoption also may be referred to as “uptake”	Administrative data; Observation; Qualitative or semi-structured; Interviews; Survey
Appropriateness	The perceived fit, relevance, or compatibility of the innovation or evidence based practice for a given practice setting, provider, or consumer; and/or perceived fit of the innovation to address a particular issue or problem. “Appropriateness” is conceptually similar to “acceptability”	Survey; Qualitative or semi-structured; Interviews; Focus groups
Feasibility	The extent to which a new treatment, or an innovation, can be successfully used or carried out within a given agency or setting	Survey; Administrative data
Fidelity	The degree to which an intervention was implemented as it was prescribed in the original protocol or as it was intended by the program developers	Observation; Checklists; Self-report
Implementation cost	The cost impact of an implementation effort	Administrative data
Penetration	The integration of a practice within a service setting and its subsystems	Case audit; Checklists
Sustainability	The extent to which a newly implemented treatment is maintained or institutionalized within a service setting's ongoing, stable operations	Case audit; Semi-structured interviews; Questionnaires; Checklists

It seems sensible to consider a range of implementation outcomes in evaluations. Measuring these outcomes, however, requires careful analysis of the causal patterns associated with outcomes, how often these patterns occur, the unique influence of independent variables (Goggin, 1986) and an ability to compare different variables in useful ways.

Relationships between dependent and independent variables

In many instances, the object of study in implementation research will be the dependent variable, defined as an object whose change is caused by another, or a phenomenon that can be explained (Cairney, 2012). Changes in dependent variables are explained by independent variables, that is, the source of explanation or the object or process that causes a change in the dependent variable (Cairney, 2012). To illustrate with a simple example, the dependent variable, pollution levels, can be explained by the independent variable, pollution legislation.

Despite a seemingly clear dichotomy between dependent and independent variables, they can be used interchangeably to measure policy outputs or outcomes, as well as implementation processes and outcomes. Often, the dependent variable will be the implementation process, but it can also be behaviours or outputs and even outcomes (Winter, 2012). Independent variables can be both the policy, as well as the policy setting (Goggin, 1986). Hill and Hupe (2005) wrap a number of these variables into what they call, “implementation processes and outcomes”, which include the policy characteristic, policy formation, vertical public administration, responses of implementation agencies, horizontal inter-organisational relationships, responses from those affected by the policy, and environment or policy context.

Clearly, ambiguity exists over what to measure and it has severely hampered theory development in implementation research (May, 1999 in Winter, 2012, see also Howlett and Cashore, 2009). This ambiguity is due, in large part, to the ‘dependent variable problem’, defined as the “the indistinctness of the phenomenon that is being measured, and disagreement on its scope and boundaries” (Dupuis and Biesbroek, 2013, p. 1476). This problem limits meaningful comparisons, learning and policy transfer, due to a lack of clarity and consistency of what is being compared, measured and described as an explanatory variable (Dupuis and Biesbroek, 2013). Thus, the key to usefully evaluating implementation outcomes is to determine what constitutes the object of study.

Winter (2012) offers an alternative discussion of policy implementation and the complexities of defining and researching dependent and independent variables. From his discussion, and our coding of the current literature, we developed a figure that illustrates some of the fluidity of the concepts of dependent and independent variables (Figure 2).

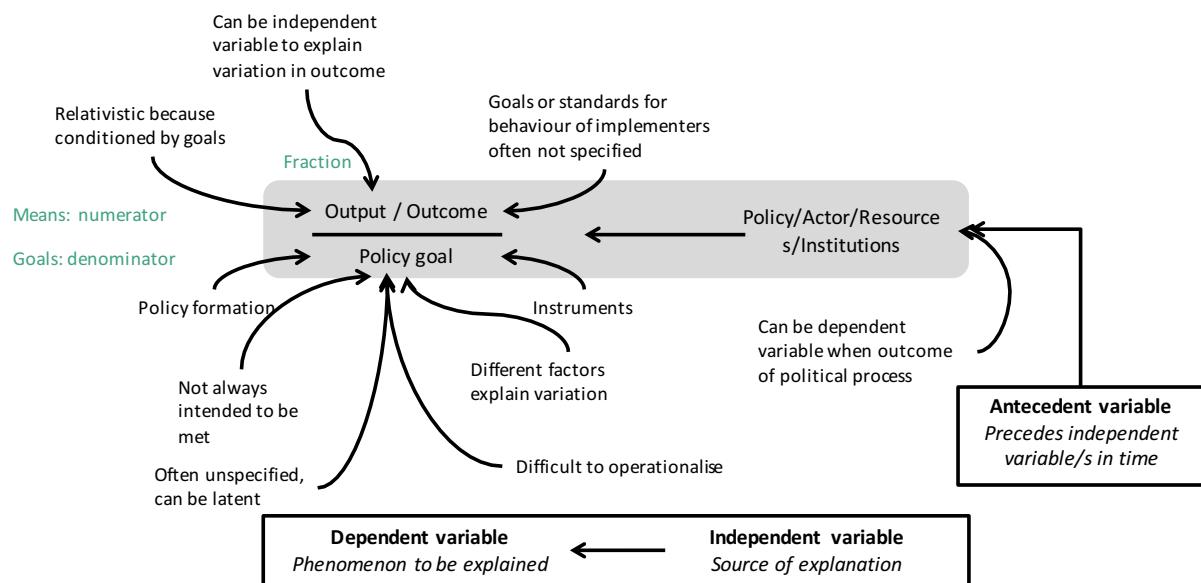


Figure 2: Relationships and complexities of studying the dependent and independent variables of policy implementation (developed from our coding of the implementation literature)

Beyond the challenges of defining dependent and independent variables, a number of additional problems confound evaluations.. First, “outcomes may be influenced by factors that have nothing to do with the policy intervention”; second, “judgement about outcome may be a judgement about the appropriateness of the policy not about its implementation”; and third, as discussed above, unambiguous and agreed outcome variables might not be able to be established (Winter, 2012, p. 274). As a consequence of these challenges, researchers might need to examine competing policy goals at the same time and possibly even decide ‘who’s side’ they are on.

Future research, we suggest, should focus on identifying implementation variables and explaining why and how they were evaluated. Post-hoc, researchers and practitioners can identify which variables were dependent and which were independent, by exploring the causal relationships between variables. This approach can provide insights into how the system is operating and enable comparisons within and between systems, processes and outcomes.

Assessing the ‘real’ effect of an intervention

Implementation could be assessed in terms of whether the outcome was that which was predicted; in other words what is the real effect? Fidelity “is a determination of how well [a] program is being implemented in comparison with [its] original program design” (Mihalic, 2004, p. 83). Carroll et al. (2007) argue that an evaluation of implementation fidelity is necessary to determine the true effect of an intervention. This argument is particularly relevant to evidence-based policies, which often assume that the intervention is being applied in accordance with published evidence. While argued to be under-researched (Blakely et al., 1987, Mihalic, 2004), measuring fidelity is an important aspect of policy evaluation, in particular because it provides opportunities to replicate policies successfully by understanding whether policies were implemented as intended (Carroll et al., 2007).

Three terms are commonly used within this literature. A pro-fidelity position assumes that when an outcome is different from the original intention of a policy, implementation has failed (Schofield, 2004). Within the pro-fidelity literature, when implementation moves away from stated policy goals, terms with negative connotations are used, such as ‘divergence’, ‘deviation’ and ‘non-compliance’ (Cartwright, 2016; Hupe, 2014). Adopting a pro-fidelity approach ensures that the challenges of applying data generated under experimental conditions in the ‘real world’ are not overlooked.

Pro-adaptation refers to modifications of policies that allow it to adapt to local or specific needs (Blakely et al., 1987). Pro-adaptation allows implementers to move beyond initial problem definitions or objectives and instead accommodate changing perceptions of problems and solutions (Klijn and Koppenjan, 2000). Proponents of pro-adaptation argue that policies tailored to local needs experience a higher likelihood of implementation success, in addition to longer commitments to policies through the creation of a sense of ownership (Blakely et al., 1987). One of the concerns around pro-adaptation is the extent to which changing or diluting a policy causes reduced effectiveness, with each modification potentially approaching a “point of drastic mutation”, rendering the policy ineffective (Blakely et al., 1987, Hall and Loucks, 1978, p. 18).

Policy durability is defined as the “sustainability of political commitments over time”, reflecting a political commitment to overcome a set of problems (May, 2015, p. 282). A policy can be both durable and adaptable, allowing evolution in response to learning, improved administration and new demands, while retaining the principal commitments and basic objectives (May, 2015, Patashnik, 2008). A lack of durability is characterised by altered objectives and political commitments.

Reflecting on our learning from the literature review we suggest that assessing fidelity in terms of pass/fail may lose sight of some important nuances and learning opportunities. A more valuable development might be to undertake evaluations and research that take a more pragmatic approach, reflecting other areas identified in this paper as needing greater development such as context, behaviours and assumptions. These considerations could offer more explanation as to how and where the policy adapted and whether the outcomes are perceived by policy-makers, or the public, as a good outcome.

HOW DO WE MOVE FORWARD IN IMPLEMENTATION RESEARCH?

The findings from our review and analysis indicate that the current state of implementation research is limited at best and unhelpful at worst. We acknowledge that researchers are a long way from a complete model of implementation, and question whether such an undertaking would be either achievable or desirable. Implementation itself is nebulous and hard to define, to the extent that the research team has likened it to slime: it can be recognised and described, but keeps morphing and changing shape. It is, therefore, difficult to get hold of and, indeed, this very act can serve to further change its shape. It could be argued that with the lack of clarity and the many variables involved, more implementation research is not the way forward. However, we disagree with this proposition and consider that our review has highlighted the potential for future research to add real value to the development of implementation that improves the potential of policy outcome effectiveness. Figure 3 depicts the relationships between the elements of implementation research as they have developed through this paper, highlighting areas where we anticipate future research efforts should concentrate to offer maximum value for practice.

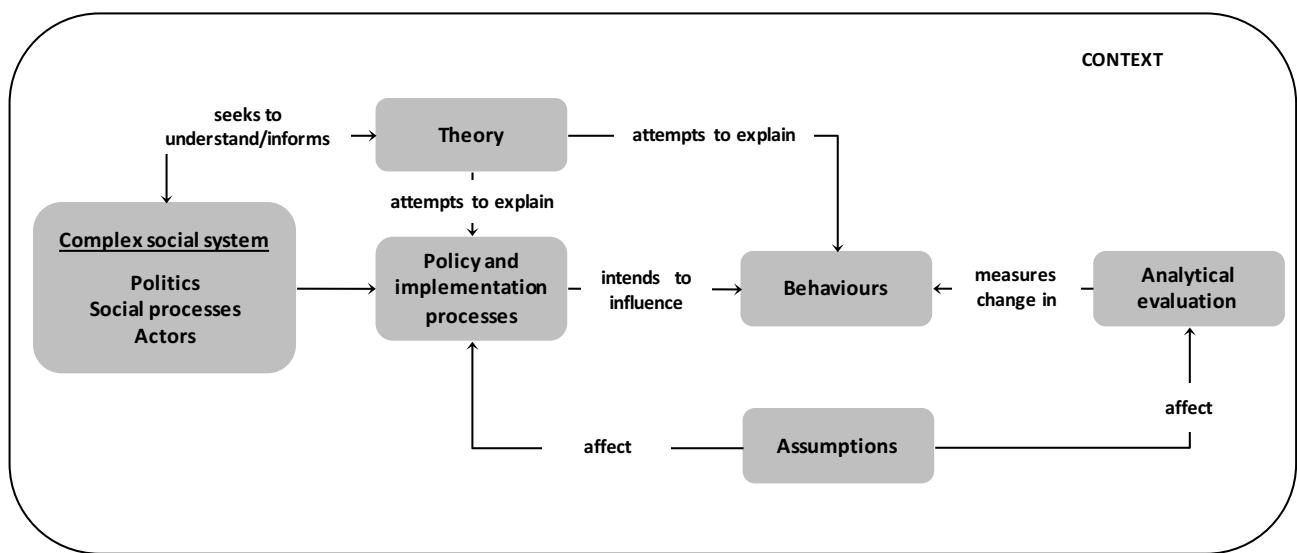


Figure 3: A tentative model of future implementation research (developed from our coding of the implementation literature)

Throughout our analysis we have identified a series of major research themes where we think current literature is either lacking or unclear (Table 7). In these cases we suggest more research might enable enhanced implementation design such that outcomes become, if not predictable, at least more understandable.

Table 7: Summary of suggested future research themes

Major theme	Future area for research
Theory	<ul style="list-style-type: none"> Research could make the theoretical assumptions clearer, work to establish theoretical power and develop more nuanced methodologies to enable more integrated theoretical work
Complex social system	<ul style="list-style-type: none"> Emerging research on complex systems is starting to focus on policy implementation, but a significant amount of research is still required to provide insight into the different implementation system levers Existing research is stereotypically used to explain events or to try to develop 'best practice, rather than provide an analytical framework that enables successful policy development and implementation. Future research could concentrate upon developing ways to analyse the complex systems of social processes and actors in ways that offer predictive insights into implementation, including the systems levers The political/implementation relationships are complex and we suggest that ignoring the political element of implementation could result in an inability to understand why a policy succeeded or failed. Thus specific contextual politics needs research into which aspects are the most critical and also need to be more clearly delineated and explained for any research case Future implementation research needs to consider the full range different actors for any particular policy or intervention and the potential impacts of their differing priorities, values and power
Policy and implementation processes	<ul style="list-style-type: none"> Future research could focus on understanding more about how decisions are framed as social processes. More specifically the elements and effect of policy development and implementation as a inherently social process, who actors are and the potential affect of their perspectives on the social system
Context	<ul style="list-style-type: none"> Future research could add value by systematically reviewing context in a way that permits (a) a clear understanding of the effects of context; and (b) useful comparisons across multiple cases and contexts
Behaviours	<ul style="list-style-type: none"> Research effort is required to map out exactly what or how behaviours need to change for a policy to be successful. Research into how to improve links between implementation, behaviours and outputs is recommended
Assumptions	<ul style="list-style-type: none"> A real opportunity exists to resolve the lack of clarity with respect to assumptions in implementation research and practice. This opportunity, if combined with context and behaviours, provides real promise for developing greater insights into, not only explanations for what has happened previously, but also what is likely to happen to be able develop improved implementation design
Analytical evaluation	<ul style="list-style-type: none"> Future research could focus on identifying post-hoc implementation variables in terms of scope and type (e.g. dependent, independent) that explain the extent to which, and why, implementation succeeded. This approach could provide insights into how the system is operating and enable comparisons within and between systems, processes and outcomes Evaluations and research should take a more pragmatic approach in explaining how and where a policy adapted from stated aims and whether this is, in fact, a good outcome

It should be clear that implementation is an area of public service research that is still in need of much effort in terms of defining what needs to be known and then how to know it. We suggest that, to date, much effort has been made in an attempt to find 'an answer'. Yet, the research objective appears to have been that, by clarifying the problems, implementers can avoid repeating such errors and a 'best practice' solution will emerge. Instead we suggest that we need to embrace the messiness and spend time analysing implementation in different ways. If there is to be a new research conversation we have to start to talk about different things. By analysing implementation in different ways including, how currently missing aspects interact both with each other and other parts of the implementation system, we will gain greater insights into what works and why. We suggest that this new research agenda will lead to more explanations for what has happened earlier, help us understand things that have previously surprised researchers and practitioners and, potentially, be able to develop advice for improved implementation design, enactment and evaluation.

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APPENDIX

Methods

To overcome the limitations of the implementation literature, as well as a lack of enough detail to be able repeat the review processes of existing review articles, we developed an iterative, systematic review framework that responded to the idiosyncrasies of the field. The iterative review process began with a scoping literature review, which was an adaptation of the methodology outlined by Arksey and O’Malley (2005). The purpose of the scoping review was to map the existing implementation literature, namely reviews and seminal pieces, since 2000, with a focus on identifying remaining gaps and future areas of research. The scoping review involved:

- Developing the primary research question
- Identifying relevant studies (34 reviewed in total)
- Selecting appropriate studies: Discipline: public administration, public policy, public service; Language: English; Years: 2000 to present; Databases: ProQuest; Document type: peer reviewed journal articles, book chapters; Search terms: implementation AND theory OR “implementation theory”.
- Coding the data: Performing initial and focused coding
- Identifying gaps in the literature

The systematic review involved generic search terms as well as specific research terms for each major theme. Across 10 major areas (identified in the scoping review), a total of 123 articles were reviewed (Table A1).

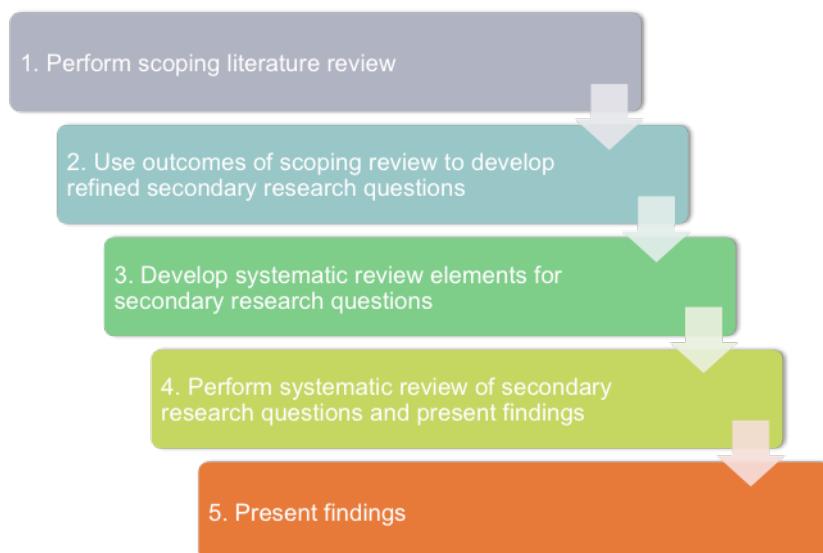


Figure A1: Iterative systematic review framework for implementation research

Table A1: Results from the systematic literature review for each subject area

Group and subject area	Search terms	Total returns	146Total min123us duplicates	Filtered articles (exclusion criteria)	Relevant articles (abstract)
Implementers and public administrators	Implementer* OR public administrator* OR micro-behavi* OR public servant*	93	62	20	11
Politics	ab(Politics)	94	61	26	26
Assumptions	assume* OR assumption*	72	53	27	27
Multi-governance systems	“multi-level” OR “multi-agency” OR “multi-actor” OR “governance level”	38	27	15	15
Temporality	temporal*	11	11	7	7
Multidiscipline research	multidisciplin* OR multi-disciplin* OR “multiple disciplines” OR disciplinary OR “inter-disciplin*” OR interdisciplin* OR “cross-disciplin*” OR crossdisciplin* OR “trans-disciplin*” OR transdisciplin*	36	28	11	11
Empirical testing	ab(empirical* OR test*) AND ti(theor*)	41	33	10	10
Success and failure	ab(success* OR fail* OR fidelity)	198	137	30	16
Total		583	412	146	123

Coding exemplar

- ▼ ● Codes for research gaps
 - ▼ ● Assessment_performance
 - Fidelity
 - How to actually achieve
 - Control vs autonomy
- ▼ ● Actors
 - Administrators
 - Bring politics back in
 - Accountability
 - Democratic orientation
 - Stakeholder perceptions
 - Allowable risk of policy implementation
 - Black box of street level
 - Collaborative governance
 - Global governance
 - Intermediaries
 - Responses of affected persons
 - Understand what-why decisions made
- ▼ ● Implicit elements
 - Context
 - Assumptions
 - Behaviour
 - Ethics
- ▼ ● Policy
 - Policy action relationship
 - Policy instruments
 - Prescriptions
- ▼ ● Research
 - Causal connections
 - Conceptual and empirical
 - Institutional theme
 - Multi-disciplinary
 - Social audit
 - Third generation research
- ▼ ● Theory
 - Lack of theory
 - Multilevel governance and impl theory
 - Organizational (learning) theory
 - Network theory
 - Goggin problems not resolved
 - Performance regimes

Figure A2: Screen shot of NVivo coding from analysis of gaps in research (scoping phase). Note that this example represents only one of the main themes identified in the scoping phase.



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1. We use a recognition of the messy reality of implementation to inform our choices of different knowledge and tools to create novel insights
2. We foster a holistic, system focused approach in all that we do, enabling a better understanding of the causes, rather than symptoms, of issues
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