We Need to Talk about Knowledge! Rethinking Management and Evidence-Based Practice in Welfare

Isabella Pistone[1], Thomas Andersson[2] and Morten Sager[3]

Abstract

New Public Management (NPM) and Evidence-Based Practice (EBP) are two fundamental concepts within welfare professions. Both NPM and EBP are central to many debates within welfare, and often criticised as posing simplified or positivist approaches to management and knowledge utilization. Epistemologically, both are manifestations of modernity, with its emphases on standardization, control, simple causality and measurability. These epistemological similarities have not been explored as potential doorways for making modifications to NPM and EBP. The purpose of this paper is to contribute to new ways of thinking and doing management and EBP of complex welfare issues by increasing the epistemological understanding of these concepts. NPM and EBP are taken here as subjects for joint conceptual analysis. The paper is guided by the following question: What is an appropriate epistemology for professionals involved in EBP and managing? Literature on NPM and EBP are analyzed together with theoretical insights from scholarship on *formalization* and *heterogeneity of expertise,* and analyzed in light of empirical examples taken from a case of a subregional social sustainability/public health initiative. Drawing on the development of post-NPM and more complex versions of EBP, the paper ends by introducing the notion *post-EBP,* and concludes by outlining some implications of this concept for the working professions.

[1]*Corresponding author:* **Isabella Pistone** is a doctoral student at the Department of Philosophy, Linguistics and Theory of Science, University of Gothenburg. Her research interests include evidence-basing, quality improvement and informative governance in welfare. She is currently working in a project that explores the potential shapes of evidence-basing and improvement work within disability care practice at a social care provider in Sweden.

E-mail: isabella.pistone@gu.se

[2]**Thomas Andersson** is professor at the School of Business, University of Skövde, where he is leading the research group Followership and Organizational resilience. He has published in journals such as *Public Management Review*, *Journal of Professions and Organization*, *Scandinavian Journal of Management*, *Personnel Review* and *Qualitative Research in Accounting and Management*.

[3]**Morten Sager** is senior lecturer in theory of science and research. He is the founder and director of the master's program in evidence-basing at the Department of Philosophy, Linguistics and Theory of Science, University of Gothenburg. Together with a group of several doctoral students and senior researchers, he combines the production of evidence in the form of systematic reviews with epistemological analyses of evidence-based practices in health care, social work, and education.

Introduction

New Public Management (NPM) and Evidence-Based Practice (EBP) in healthcare, education, public health and social services constitute fundamental, institutionalized changes in the welfare sector. Professionals at various levels within welfare are affected in their daily work by both of these paradigms. Certainly, both paradigms have noble aims: ensuring and contributing to high and sustainable quality in the welfare system. Both, however, have been subjected to similar critiques, that they involve simplified or positivistic approaches to research and management (Jacobsson and Meeuwisse 2020). NPM and EBP have produced unintended effects that have created new problems (Hood and Peters 2004) – these have been addressed in analyses and critique by various scholars, professionals and citizen groups. In welfare, NPM and EBP constitute two important concepts that, taken together, are of crucial importance when understanding the last decades' institutional changes within welfare.

NPM is a concept used by researchers, but also the relevant working professions, to describe changes in the welfare sector that can be recognized as a

push towards making the management of the welfare sector similar to management of the private sector (Pérez-López et al. 2015), thereby making it more efficient (Alonso et al. 2015). Hood (1991) identified seven doctrines of NPM. These doctrines suggest two central ambitions: to reduce the difference between public and private sectors and to move focus from processual responsibility towards accountability of results (Hood 1995). A part of the NPM ideology is that practices can be managed by generalizable methods, independent of the characteristics of the practices (Hall 2012). NPM has been widely questioned and criticized for its lack of resources in handling complex issues or 'wicked' problems within welfare (Osborne 2006; Torfing and Triantafillou 2013). Critics have also pointed to the problems associated with mono-professionalism in NPM (Andersson and Liff 2012; Liff and Andersson 2012) and the lack of resources to deal with today's plurality of voices. As a response to the observed problems associated with NPM, the notion of *post-NPM* has become an umbrella term that captures how actors deal with institutionalized NPM (Lindberg, Czarniawska and Solli 2015). Post-NPM is simultaneously an extension of NPM, a critique of NPM, and a set of suggestions for how to move NPM on (Andersson and Liff 2012). The focus is on preserving the beneficial effects of NPM while dealing with new problems created by NPM.

EBP constitutes another important change affecting the welfare sector. The initial definition of EBP de-emphasized intuition, unsystematic clinical experience and pathophysiological rationales in clinical decision-making (The evidence-based working group 1992). Imported from the medical field, EBP is now widely adopted, or at least a cherished goal, in almost all corners of welfare. While few object to the need for gaining knowledge via research, one main concern with how EBP has been operationalized within many welfare practices is that it has been implemented as a top-down, centralized bureaucratic project, based on standardized procedures produced by governance agencies that do not encompass the complexity and unpredictability of welfare service practices (Otto and Ziegler 2008; Johansson 2019). The appropriateness of standardized interventions based on knowledge from randomized controlled trials (RCT) have been vigorously criticized. Scholars and professionals have repeatedly emphasized that knowledge from RCTs is not enough for handling complex issues in practice (Greenhalgh and Papoutsi 2018; Petersén and Olsson 2015), and that centrally-initiated standardized interventions result in a devaluation of patients' knowledge, needs and values (Johansson, Denvall and Vedung 2015; Jacobsson and Meeuwisse 2020). As with post-NPM, there are now many modifications of EBP suggested by several actors within EBP. These modifications could be seen as an extension, or broadening, of EBP in light of the critiques of EBP. Such attempts to develop newer EBP models are often concerned with how to balance the different knowledge sources coming from professionals, patients and research evidence while avoiding the pitfalls of linear implementation of evidence-based methods (Andrews et al. 2020). These developments are all concerned with seeking to broaden the EBP models.

The comprehensive work that has been put into building infrastructures for management according to models of NPM and EBP is permeated with assumptions about what good knowledge is constituted in and how knowledge is translated and utilized within and between practices. These epistemological assumptions, explicitly or implicitly underpin different welfare actors' valuation of which methods and formats should be used, of which systems and infrastructures should be built, and what decisions should be made. One distinct example of such epistemological assumptions is the hierarchical system of classifying evidence that stresses the crucial role for RCTs and systematic reviews. This hierarchical system offers clear criteria for what constitutes credible knowledge and which methods one should use to obtain good knowledge. It thus builds on very specific epistemological ideals. In the case of NPM and EBP, the strong assumptions about what constitutes good knowledge are usually only formulated in the forms of methods, such as the systematic review method in EBP. Often, discussions about different epistemological valuations are lacking (Sager and Pistone 2019a).

One basic assumption in this paper is that understanding the underlying epistemological assumptions constitutes an important part of the work with knowledge management and EBP in welfare. Further, a lack of conscious reflection regarding these assumptions poses the risk that ambitious attempts to modify infrastructures in welfare according to post-NPM strategies (and more complex versions of EBP) get caught in the same epistemological trap as earlier versions.

In that case, there is the risk that advanced versions of NPM and EBP might simply reproduce the same problems over again.

On that basis, the overall purpose of this paper is to contribute to new ways of thinking and doing management and EBP of complex welfare issues by increasing the epistemological understanding of these concepts. The paper is guided by one main question: What is an appropriate epistemology for professionals involved in EBP and managing? In light of the recent developments of post-NPM and more complex versions of EBP, an answer to that question will also involve reconceptualization of what management and EBP could be and how they should be pursued in the context of complex welfare issues. To anticipate one of the key arguments, while post-NPM is already an established concept in the scholarly literature, the developments of EBP models have, to the authors' knowledge, not been subject to a joint conceptual analysis. In this paper, we draw on theories about formalization and expertise to develop a two-dimensional analytical model. We use this model to launch the concept of *post-EBP*. Through the notion of post-EBP, the paper summarizes and constructively develops a critique of EBP while drawing on the parallels with work on post-NPM. By applying the analytical model on an empirical case, we illustrate the application of this model and at the same time show some preliminary results of an interesting covariance between managing and EBP.

Theoretical Resources

The paper draws on theoretical resources from two main fields of scholarship within Science and Technology Studies (STS): First, sociology of standards, and, second, heterogeneity of expertise. In this section, these two theoretical resources are briefly presented.

Sociology of standards

Standardization is one of the defining aspects of modernity (Lampland and Star 2009). The fundamental purpose of formalization is to streamline procedures and regulate behaviors. The presence of these standards in everyday life is often taken for granted. However, scholars within social science have put a focus on examining the origins and effects of different standards that are part of everyday life and how these formalizations are established and used (Lampland and Star 2009; Timmermans and Epstein 2010). A central insight here is recognition of the amount of human judgment and expertise that it takes to make standards work in practice (Sismondo 2010; Collins 2010). Such studies show how formalizations mix with humans' reflective work (Timmermans and Epstein 2010). They also show that formal rules, in themselves, are insufficient to create social order, and they acknowledge the need to situate standards in local practices (Timmermans and Berg 1997; Zuiderent-Jerak 2007). A number of case studies have also suggested that formalizations embody particular epistemologies that have shaped the possible applications of those standards (Lagerlöf, Zuiderent-Jerak and Sager 2021; Timmermans and Berg 2003; Lampland and Star 2009). Within this scholarship, EBP has been studied with reference to the interplay between formalization and professional judgement (Timmermans and Berg 1997; Zuiderent-Jerak 2015; Sager and Pistone 2019b). Within the models of EBP, formalised knowledge tends to be highly valued and studies have shown that these formalisations are sometimes in conflict with professional judgement in local care practices (Mann 2021).

Heterogeneity of expertise

Another important focus in STS is the attention to heterogeneity. A common trait in both EBP and NPM is the modernist drive after homogeneity. As Bruno Latour claimed (1993), belief in a kind of purification is an inherent characteristic of modernity. However, Latour suggests, we have never really been modern. Our problems and solutions have always been heterogeneous. Developments within STS that capture the need to attend to heterogeneity are visible in the literature on "post-normal science" (Funtowicz and Jerome 1993a, 1993b; Turnpenny, Jones and Lorenzoni 2011; Sager and Eriksson 2015; Kastenhofer 2010). According to Silvio Funtowicz and Jerome Ravetz (1993b), a number of high-stakes societal problems of great uncertainty and urgency cannot be handled with disciplinary knowledge (i.e., normal science),

but are "post-normal" in kind. Belief in purity of methods and expertise offers suboptimal solutions in the face of society's post-normal problems (Funtowicz and Ravetz 1993b). Funtowicz and Ravetz (1993b), whose interest is in policy processes, acknowledge that post-normal situations seem to require more open-ended solutions with the involvement of broader groups of actors and thus a broader definition of expertise than acknowledged in "normal science". They conceptualize this widening of expertise as an "extended peer community" (EPC) which transcends the concept of scientific peer community by recognizing that more than one scientific community is assumed to have potential expertise relevant for any given post-normal problem. The scientific community is also extended by including lay actors as stakeholders too.

EPC could be seen as an ethical or political act, a "democratization of science", and Funtowicz and Ravitz argue that EPC could 'positively enrich the processes of scientific investigation' (1993b, 753). While they recognize that knowledge from "extended facts" such as anecdotes or informal surveys can lack theoretical knowledge and risk being biased by self-interest, they counter that 'equally well [it] could be argued that scientific experts lack practical knowledge and have their own unselfconscious forms of bias' (1993b, 753).

Methods

The approach taken in this study is a joint conceptual analysis of NPM and EBP. A conceptual analysis involves distinguishing the relevant phenomena involved, analyzing the epistemological assumptions that underpin these phenomena, and representing this in a way that improves or advances perspectives relating to the understanding of these phenomena (Myburgh and Tammaro 2013). The phenomena explored in this study are NPM and EBP understood as important institutional changes for the working professions, the shortcomings observed with the two concepts, and the recent move towards more complex versions that acknowledge these problems. The analytical process in this case involved: 1) Close reading of scholarly literature on EBP and NPM, 2) Categorization of findings in order to gain an overview of the two concepts, 3) Epistemological analysis using conceptual resources from theories on formalization and heterogeneity of expertise. By reading and thematizing the scholarly literature on EBP and NPM in relation to the theoretical insights about formalizations and heterogeneity of expertise in an iterative process, the analysis resulted in the development of a two-dimensional analytical model, 4) the model is further explored through the context of a concrete empirical case. This is for two purposes: First, to demonstrate how the analytical model could be applied to provide increased understanding of the epistemological underpinnings of management and EBP for welfare issues. Second, the aim is to provide an example of how initiatives within welfare can be realized by dealing with components of post-NPM and post-EBP (Table 1).

The empirical case that is drawn on here consists in a social sustainable/public health initiative in a subregion of Western Sweden. Its aim was defined by government and endorsed by the region: to increase the number of pupils in school that complete their studies, or, to use the name of the project, the number of "completed studies". The subregion made a concerted effort to take on this aim from 2013 after applying for regional funds devoted to projects on completed studies. Key actors included heads at the municipal association and the subregional health and medical board. After two years of exploration, they settled for an approach suggested by research and pursued by a teacher in one of the subregion's municipalities. It focused on prevention of bullying in schools, thus resulting in a particular version of the general national and regional aim, "increasing completed studies *through safety and a calm study environment*". The empirical case was chosen since it contains interesting components of post-NPM and post-EBP and can therefore be considered to be a "critical case" (Flyvbjerg 2001).

The data used from this empirical case were derived from ethnographic observations, interviews and documents. The data were collected from 2018-2021 by all three authors as a part of a combined research and evaluation project initiated by the subregion. Interviews were recorded and transcribed. Observations from meetings and daily practices were documented in field notes. The focus has been to provide a detailed description of how the subregional initiative was realized with a specific focus on management and knowledge use. The empirical case is

used here as an illustrative example to enrich the conceptual analysis. Therefore, no specific methods for analyzing data have been applied. This has obvious limitations concerning what conclusions could be drawn from the analysis of the empirical case in this study. However, the concrete grounding provided by the empirical case provides some clear initial indications for the epistemological and empirical covariance of post-NPM and post-EBP.

Table 1. The analytical process

	Step 1: **Close reading of the literature**	Step 2: **Categorization of findings**	Step 3: **Epistemological analysis**	Step 4: **Applying analytical model**
Purpose	Understanding the problems, critique, and suggestions for modifications of EBP and NPM	Collate the reviewed literature into categories to get an overview of the findings and increased understanding	Using the theoretical resources to interpret underlying logics and assumptions visible in the literature and representing these in theoretical terms. This is done in order to add perspectives to discussions about EBP and NPM.	Demonstrate how the analytical model could be applied by using an empirical case. Provide an example of how initiatives within welfare can be realized by dealing with components of post-NPM and post-EBP

Conceptual Analysis: Balancing Formalizations and Expertise in NPM and EBP

In the sections that follow, the conceptual analysis will be outlined. The section starts by describing common critiques of EBP and NPM and connects these critiques with some of the epistemological assumptions underpinning the concepts. Second, literature on post-NPM and more complex versions of EBP are analyzed together with theoretical insights from the STS field. Finally, an analytical model based on the epistemological analysis is presented. Inspired by the development of post-NPM, the section ends by proposing the concept of *post-EBP*.

Formalization and the centralization of agency in EBP and NPM

A common critique of EBP and NPM concerns excessive top-down standardization. In EBP, the common techniques for standardization are methodological tools that presuppose high internal validity such as systematic reviews, guidelines and manuals. Ironically, one of the main policies NPM is associated with is decentralization (Alonso et al. 2015). However, this decentralization is mainly administrative, implying increased space for maneuver for managers and organizational units (Hood 1991). However, for the welfare professions themselves, which are the focus of this paper, the administrative decentralization has meant centralization caused by increased pressures for accountability (Alvehus and Andersson 2018). In NPM, the technologies have been methodologically less sophisticated than those used within EBP, and include indicators, documentation requirements or even legal requirements (Andersson and Liff 2012). Paradoxically, these tools add a centralizing dimension to the intended decentralization implied in NPM (Alvehus and Andersson 2018). As a result, although decentralization is a common NPM component at some levels of management, the consequences for the working professions are instead that their work become more centrally-managed by standardized tools such as indicators.

In both EBP and NPM, high fidelity is required of providers and professionals. Critics have suggested that these developments risk de-professionalizing welfare services (Bergmark and Lundström 2011; Biesta 2007; Johansson 2019; Johansson, Dellgran and Höjer 2015; Lambert 2006; Martinell Barfoed 2018). Some scholars argue that EBP and NPM are interconnected in their goal to control local practices and that EBP can be seen as an NPM-strategy (Johansson, Denvall and Vedung 2015). Pease (2007) criticizes EBP for its "hidden managerialist agenda"

(p 10) which is consistent with a search for greater efficiency and improved accountability. Dustin (2016) suggests that this overemphasis risks a "McDonaldization of welfare" consisting of mechanistic "tick box" packages of care. This is also in line with critique of societal trends related to NPM such as the creation of an "audit society" (Hanberger and Lindgren 2019; Power 1997).

The problems of NPM and EBP set out by these scholars are closely connected to the strong formalization that is used to centralize processes of problem selection and the execution of solutions. Formalization here concerns how agency is distributed between agents vertically, e.g., through top-down standardization. Visible in the critique of this strong formalization is the concern that the distribution of agency from de-centralization of problems and solutions to more centralized formalizations risks distributing too much agency towards centralized solutions. This distribution removes agency from situated knowledges in local practices as well as diminishing the discretion of the working professions.

A narrow view on validity and expertise in NPM and EBP

Critics of NPM and EBP point to the problems associated with mono-professionalism in NPM (Andersson and Liff 2012; Liff and Andersson 2012) and the lack of resources to deal with today's plurality of voices (Osborne 2006; Torfing and Triantafillou 2013). Likewise, several scholars have pointed to the problems of a narrow epistemic ideal of homogeneity within EBP (Lambert 2013; Lavis et al. 2006; Petersén and Olsson 2015; Wieringa et al. 2018a). The critique often points to the preferred study design in EBP: RCTs. Such studies are most easily done when there are clearly definable conditions and interventions. Of greatest value in the evidence hierarchy are also systematic reviews in "Cochrane style", i.e., with a clearly delineated problem, intervention and outcome (Higgins and Thomas 2022). Both RCTs and systematic reviews work well with problems that face one-purpose silos, that are less multi-disciplinary and that involve less collaborative operations tackling emergent phenomena with unclear outcomes. However, when dealing with problems of high uncertainty and values which are in dispute, how can pure RCT-evidence be expected (Sager and Eriksson 2015; Greenhalgh and Papoutsi 2018)? Thus, the development of welfare practices in silos favored in NPM both reinforces and maintains the infrastructures of EBP, and vice versa: the nature of EBP evidence strengthens organization in separate single-purpose entities. Thereby, EBP as well as the NPM-influenced organizing of practices form two independent but interacting and mutually reinforcing infrastructures – a kind of double helix. If we are to understand the problems with EBP it is necessary to look at organizing as a parallel process (Sager and Pistone 2019a).

NPM and EBP both thrive in professional sub-specialization. When selection and execution of welfare interventions are based on narrow definitions of validity, are mono-professional and strictly rely on disciplinary knowledge within single-purpose organizations (silos), then problems and solutions are preferably formulated and handled narrowly. This homogeneity is possible through specialization and sub-specialization and often results in horizontal separation and collaborative breakdown in welfare services (Eriksson et al. 2020). As a consequence, multimorbidity or wicked problems, although common in today's society, become organizational anomalies or require extraordinary efforts of collaboration.

As such, both NPM and EBP can, according to the above critique, be understood as being too characterized by epistemic homogeneity, or purity, that encompasses which kinds of expertise and which kinds of methodological validity are accepted in the formulation of problems and possible solutions.

Post-NPM and towards post-EBP?

Alongside the voices critical of NPM and EBP, there have been several developments that have tried to tackle the problems elaborated above. To mitigate the problems of formalization and narrow views on expertise in NPM, there have been suggestions for "post-NPM" (Christensen and Lægreid 2007). Organizational literature on how decisions are made has pointed to the difficulties of assuming the possibility and appropriateness of linear top-down governance in welfare sectors (Lindblom 1959; Lipsky 1980; March 1991). Instead of a purely rational and planned processes, selection of problems and solutions happen seemingly haphazardly in

dynamics that have been termed "garbage can decision-making" (Cohen, March and Olsen 1972). Other post-NPM developments that acknowledge the problems of formalization and centralized agency are the diverse approaches of network organizations (e.g. Emerson, Nabatchi and Balogh 2012; Sørensen and Torfing 2009; Ferlie et al. 2013). Explicitly post-NPM approaches address the problems of silos and mono-professionalism by exploring multi-professional teams (Andersson and Liff 2012; Liff and Andersson 2012). The intention is to take a more holistic view of the organization's purpose instead of the 'single-purpose' silos approach typically assumed by NPM reforms (Andersson and Liff 2012). Another post-NPM strand that claims the need for more heterogeneity comes from New Public Governance (NPG) (Osborne 2006; Torfing and Triantafillou 2013). Literature on NPG points to the needs for more pluralist governance and increased arenas for stakeholder involvement.
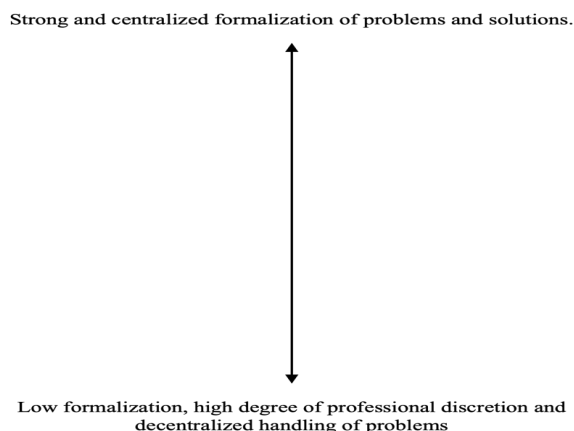
A similar movement as found in post-NPM can be observed within EBP. Scholars describe several developments where the shortcomings of the traditional model of EBP are acknowledged and worked around in ways that could be interpreted as post-EBP. Below, we structure these insights into two categorize: balancing formalization and widening epistemic ideals.

Balancing formalization and expertise

When defining good research, good synthesis of research and effective translations of research results, formalizations play an indispensable role in EBP. This trust in standardization upended decades of philosophical and sociological research that has displayed how formalizations are never sufficient. Methods, protocols and rules need human deliberation to work (Collins 1985; Shapin and Schaffer 1985). Recently, similar findings have been shown in relation to EBP. Timmermans and Berg have analyzed how the use of formalizations as decision-supports are not self-sufficient but need to be complemented with clinical judgment (Berg 1997; Timmermans and Berg 1997; Timmermans and Berg 2003). Likewise the production of knowledge through RCTs and systematic reviews presuppose competency (Helgesson 2010; Sager and Pistone, 2019b). Pistone et al. (2022) use the insights about the insufficiency of formalizations to show how formalized treatment manuals need to be balanced with professional judgements in a dialectical interplay. Researchers working within EBP, such as Pawson (2006), Cartwright and Hardie (2012), Hasson and von Thiele Schwarz (2017) and Gough, Oliver, and Thomas (2017) all concur with the basic intentions of the evidence movement, but try to balance reliance on formal tools with a respect for professional experience and judgements.

The conclusion that could be drawn from these insights is that the strong emphasis on centralized formalization such as manuals, systematic reviews and guidelines within traditional EBP is hazardous since it tends to conceal the amount of professional expertise needed to get the formalizations to actually work. The solutions provided by researchers in EBP all include a more nuanced and explicit role for professional expertise. This could be interpreted as an attempt to make visible the need to balance use of formalizations. Such balance might be visualized in terms of the formalization spectrum in figure 1.
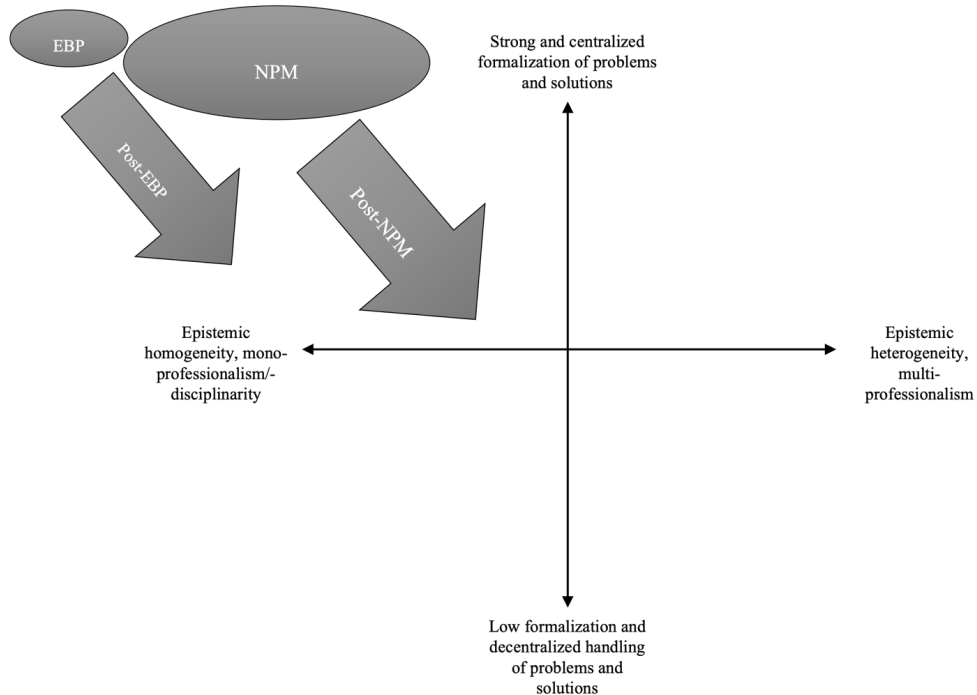
Figure 1. Formalization spectrum in EBP

Strong and centralized formalization of problems and solutions.

Low formalization, high degree of professional discretion and decentralized handling of problems

Widening epistemic ideals of expertise

Following Funtowicz and Ravetz's (1993a) work on post-normal science, confidence in homogenous methods and expertise in EBP is not sufficient when handling complex problems often faced by the working professionals. In work on post-normal science, a key strategy for dealing with 'wicked problems' is the development of an extended peer community. The idea with EPC is to transcend disciplinary boundaries and include multiple stakeholders as well. Scholars have developed different approaches that seek to broaden the methods of EBP and their scope. Metz et al. (2019) propose a 'co-creative' approach that focuses on including knowledge from both professionals and patients in the implementation of EBP. Other scholars propose modifications of the research methods involved in EBP so as to include and give more weight to expertise coming from service users (Braye and Preston-Shoot 2005; Stewart et al. 2020).

While the main discussions in the literature have focused on methodological and technical developments of EBP, scholars have also highlighted problems relating to the epistemological assumptions underpinning the methods and techniques of EBP (Goldenberg 2009; Lambert 2013; Sayer 2020; Wieringa et al. 2018b). It is important to note that a salient strand of the critique does not propose a wholesale dismissal of the current way of reasoning within EBP. Instead, the core of these scholars' suggestions is a widening of those narrow ideals by introducing other ways of reasoning and other ways of being scientific – namely: arguing that the evidence movement needs to acknowledge the plurality of perspectives that exists in order to better tackle the many different issues that exist in practice (Goldenberg 2009; Greenhalgh and Papoutsi 2018; Wieringa et al. 2018a). These developments put focus on a horizontalization of knowledges in EBP that moves EBP from a narrow methodological focus towards including heterogeneous expertise and accepting methodological pluralism (figure 2).

Figure 2. A spectrum of epistemic homogeneity in EBP

Narrow methodological focus on internal validity and homogeneous and mono-professional expertise

Heterogeneous expertise, multiple stakeholders, methodological pluralism

Two-dimensional analytical model: Broadening the epistemological map

The critics of the traditional models of EBP share their understanding of the telos of EBP and do not question the need for high-quality knowledge. However, they do see a dire need for modification that has implications for the very epistemological underpinnings of EBP. We suggest that these developments, taken together, constitute an attempt to transform current EBP methodologies and infrastructures into what could be termed *post-EBP*. EBP and NPM presume an epistemological ideal where there is one right way: epistemic homogeneity. By applying the literature from studies on formalization and expertise to the problems and suggested modifications of the EBP models, the conceptual analysis shows how attempts to formulate and solve problems are located along an axis of formalization and epistemic homogeneity (figure 3). By widening the concept *both vertically and horizontally*, the analytical model that is presented in figure 3 makes visible a whole spectrum of variation that EBP could take on. This analysis suggests that an epistemology appropriate for post-EBP involves recognizing the whole playground that opens up by acknowledging the spectrum of variation. Stressing that there is not one right way to organize, manage and evidence-base welfare, solutions will have to depend on the character of the problem instead.

In sum, post-EBP implies freeing EBP from a methodological straitjacket and allowing for less strict formalization and more epistemic heterogeneity. In practice, this means softening the compulsory character of standards, guidelines, and broadening the possible sources of knowledge and the range of experts involved. Interestingly, this post-EBP critique is, in many ways, parallel to post-NPM's critique of NPM. Both post-NPM and post-EBP locate NPM and EBP in the upper left corner (per figure 3), and they propose solutions that increase the presence of different forms of expertise. Except for the need to acknowledge the collective post-EBP

developments, this highlights a second salient feature of the analytic model: the interesting covariance between post-NPM and post-EBP.

Figure 3. Formalization and epistemic homogeneity in, and beyond, EBP and NPM

Applying the Analytical Model to an Empirical Case: Managing and Evidence-Basing Practices in Complexity

In this section, we will present and analyze three phases in the development of the subregional initiative on "completed studies" (i.e., to increase the number of pupils in school that complete their studies) from 2013–2020. First, we look at how completed studies came to be selected as a problem from national to subregional level; secondly, we describe how the handling of the problem emerged, as well as looking at the selection of a solution; and thirdly, we look at how the solution has been implemented in local schools. The purpose of the analysis is to illustrate what a broadening of EBP towards post-EBP could imply in practice and also how components of both post-NPM and post-EBP manifest together in the specific case.

1. Selection of problem

The government aim of increasing the proportion of completed studies was supported by a number of scientific and political reports that showed the proportion of pupils that finished elementary school without passing grades and the adverse social consequences and risks of this outcome (Dale 2010; Gladh and Sjödin 2013; SALAR 2012, 2013; SNAE 2011; NBHW 2010). In this sense, the aim was evidence-based, and a number of methods to fulfil the aim are mentioned in the literature. However, the aim was not coupled with any specific mandatory methods. In contrast to many aims in healthcare where levels of compliance to specific methods are enforced, sometimes even with economic incentives (Lagerlöf, Zuiderent-Jerak and Sager 2021; Sager and Erikson 2015), completed studies are an unspecified, open-ended aim. Different Swedish regions are free to prioritize and interpret the aim differently. The funding that was made available from the region in 2012-2013 did not prescribe how subregions or municipalities were to approach the problem. This was also true for the operationalization in the subregion we followed. The choice to adopt completed studies as a problem to focus on in the subregion was made within a labyrinthic model characterized by collaboration between politicians, civil

servants, managers and professionals of municipal and regional operations. The "collaboration model" was developed jointly by the two key political bodies, the municipal association and the subregional health and medical board, in order to handle social sustainability and public health problems that are hard to handle as a single actor within one silo.

We will describe the model in some detail in order to show the structure through which the aim of completed studies was selected. Figure illustrates the structure of the collaboration model. It shows how the 15 municipalities in the subregion can cooperate around questions concerning social sustainability and public health by the municipal association on the one side and the subregional health and medical board on the other side. The reason for the creation of this collaboration model was that the heads of the two key bodies deemed it necessary for combining different competences and jurisdictions. On the one hand, the subregion is responsible for social sustainability and public health. It holds the general expertise and conducts external monitoring around these questions. On the other hand, the municipalities are most often the ones that operationalize the decisions that are made in this area. The coordinating structures consist of the three bodies in the middle: the political steering group, the strategy group and process leader and the working groups.

Figure 4. Illustration of the collaboration model
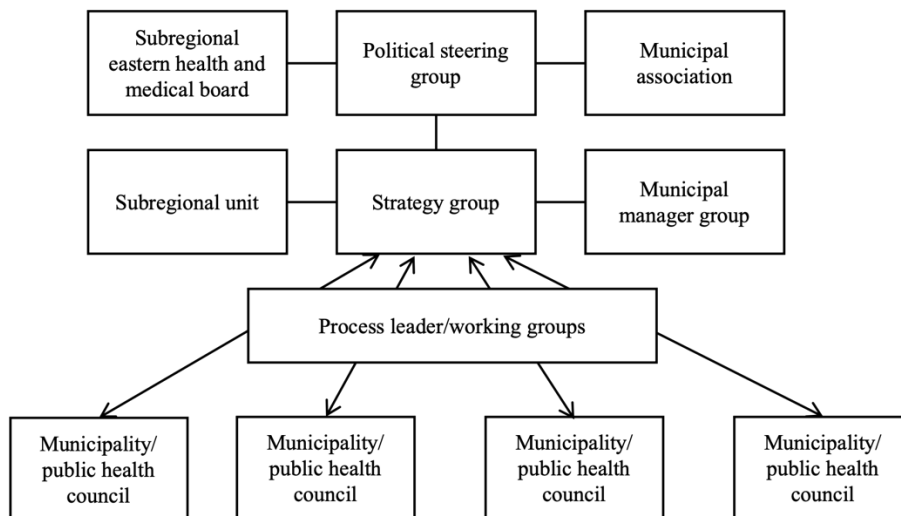
There are many levels of the different actors involved, these range from: the highest political board in the municipal association and the subregional board, from managers at the highest municipal level to heads of operations, to first line managers such as principals, to operative staff such as teachers, health care staff, etc. The collaboration model itself does not have any clear provider, instead they work through others. In other words, no staff within the collaboration model have decision-making power over those doing the actual operative work. In order to center the time and energy of professionals engaged in public health in the subregion, the political steering group and the strategy group decided that completed studies would be selected as one of four focus areas within the subregion's program on public health and social sustainability. This was decided through discussions between the departments of social sustainability and public health in the subregional unit and the municipalities, where both citizens and staff were asked to voice their concerns.

Analysis

It is beyond the scope of this article to explore how the agendas of all of these actors were negotiated in the particular case. In terms of the analytic dimensions of post-NPM and post-EBP, formalization and epistemic homogeneity, however, there are some striking observations.

The aim itself reflects both political concerns and a wide spectrum of research: studies from the disciplinary field of education on early school leaving (Dale 2010; Gladh and Sjödin 2013)

as well as government reports with statistical data on completed studies on a national level (NBHW 2010; SALAR 2013) and qualitative studies exploring outcomes of different interventions to prevent early school leaving in Swedish schools (SALAR 2012; SNAE 2011). The aim is thus based on epistemic heterogeneity rather than homogeneity. It is not a result of any distinct intervention being propelled by narrow disciplinary research. There was, furthermore, aspects of centralized governance regarding the aim of completed studies: it was promoted as an urgent aim that regions should focus on by a number of national agencies, such as SALAR and the National Board of Health and Welfare (NBHW). Nevertheless, the aim was still characterized by a relatively low degree of formalization: it was not mandatory. On a regional level, there were economic incentives but this amounted to an encouragement rather than enforcement.

In this case, the aim of increasing completed studies was managed by an organizational structure prepared for open-ended public health and social sustainability aims. On a subregional level, completed studies was picked up and chosen as a focus area through the collaboration model with broad participation horizontally where no perspective was favored beforehand through the organizational structure. The collaboration model included a combination of distinct coordinative leadership without decision-making power, broad participation from many levels and types of operations in a formal structure for collaborative management. This meant that no single organization was fully in control. The selection of completed studies was thus made by a broad participation from many levels and types of organizations. Vertically, the aim was at this point still open-ended and comprised of a low degree of formalization: it was not mandatory for the schools in the subregion to be a part of the aim. The setting and mediation of the aim is clearly more post-NPM and post-EBP than NPM/EBP (see figure 5).

Figure 5. Selection of problem
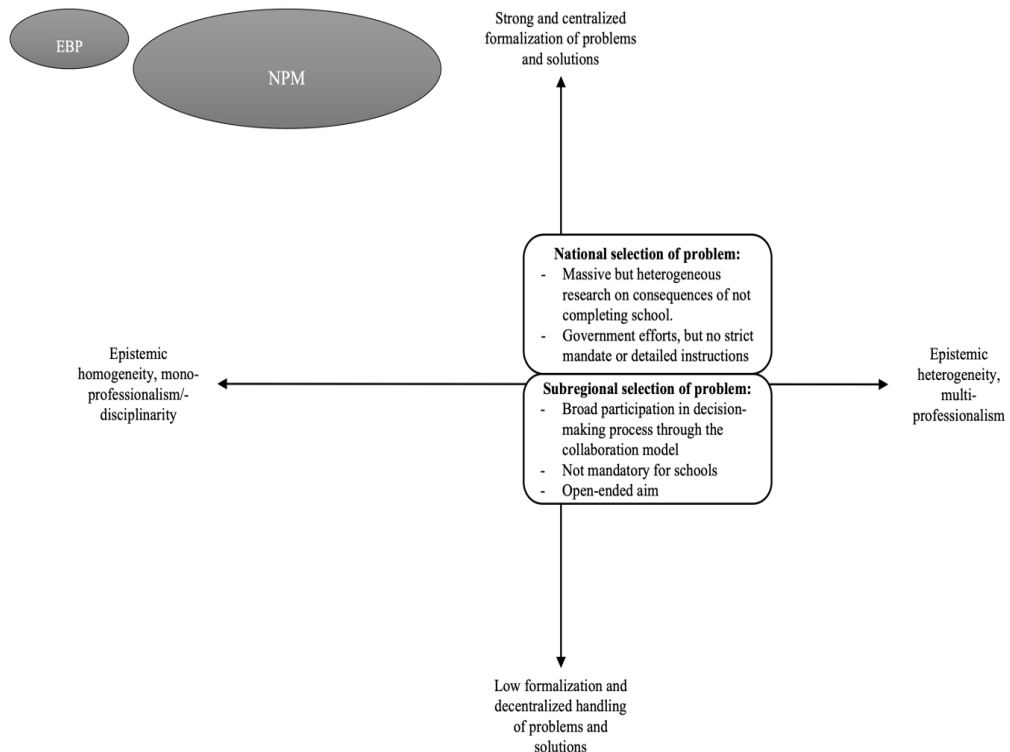
2. Selection of solution

The selection process did not, however, include a ready-made solution to the problem. After the decision to adopt completed studies, the aim had to be operationalized, which was managed by the working group dedicated to the focus area of completed studies. The working group

continued to operate within the collaborative model and now started to collect experience and expertise from pupils, teachers, principals, social workers and other staff in the 15 municipalities. This was done partly through regional funding. While the overall problem was accepted, the interpretation of it was not. The process leader started a collaboration with a pedagogical researcher (Researcher 1), from a neighboring university to explore whether a focus on participation could offer a path to fulfil the aim of completed studies. Over the course of nine months, the process leader and the researcher mapped current practices on participation in the 15 municipalities, searched for best practices and explored possible collaborations between schools and social services. The scope of Researcher 1's investigations was broader than analysis of the completed studies, and was more broadly concerned with participatory pedagogics. The results of the mapping were published in a research article.

However, the working group did not fully accept the direction of Researcher 1's research commitments. Instead, they took the view that the main drivers of pupils' non-completion of elementary studies were bullying and insecure conditions in schools, as was highlighted by some of the data from the mapping in municipalities. Serendipitously, Researcher 1 had met a teacher who was working on a dissertation in one of the municipalities on how to prevent bullying. By using action research methods, Researcher 2, who was both a teacher and a researcher, was investigating how teachers could understand exposed pupils' feelings of powerlessness. For the working group, Researcher 2 and her research became a natural nexus for the meandering search for an approach to increasing completed studies. The working group met with Researcher 2 in 2015 and started to develop an approach to completed studies with an emphasis on the social issues of safety and a calm study environment for pupils. The aim of completed studies was thus interpreted as a social problem, not foremost a pedagogical one, as had been assumed by Researcher 1.

Analysis

Some aspects of this problem selection process are of special interest in relation to an analysis of post-EBP and post-NPM (see figure 6). Low formalization was, again, combined with epistemic impurity. The choice of a social version of completed studies through safety and a calm study environment did not arise by reading up on a curriculum from the Swedish National Agency for Education or a systematic review from the newly founded government agency, the Swedish Institute for Educational Research. That would have been the traditional EBP path, relying on formalizations based on the epistemological ideals of homogeneity and purity. Instead, the working group started a meandering and iterative process of involving a multitude of local voices, experiences and stakeholders. One must be careful in drawing counterfactual conclusions, but it is plausible that the iterative and broad epistemic process would have been much more difficult without the collaboration model. Through this organization, the process leader met all relevant subregional and municipal actors regularly. This broad process did not have to involve research. Here, however, the working group did reach out to research and continually sought for relevant knowledge. Even if it is not an example of classic EBP, it is not a case of ignoring all research completely.

Three aspects of this organization of epistemic decision-making are of importance for the analysis. Firstly, knowledge claims were not included in correspondence with the traditional EBP criterion of internal validity minimizing bias. Knowledge about local experiences was collected systematically and published, but without creating control groups. The final selection of solution was based on research involving four teachers and 24 pupils. While these research efforts can be seen as mono-disciplinary (pedagogical research) and characterized by a certain kind of epistemic homogeneity, none of these findings would qualify as strong evidence according to the hierarchy of evidence – the methods are too impure. Secondly, the iterative matching of problems and solutions (enabled by the collaboration model and the confidence in the process leader and the working group) was not linear or predictable, but involved an element of serendipity. Although the matching involved management drawing on knowledge, it was far from the ideal of centralized state management by knowledge. The collaboration model in itself does not have to imply a low degree of formalization, but in this case it gave place and time for problems and solutions to find each other. Thirdly, when drawing on research, the working

group did not claim that the voice of the evidence was unequivocal or universal and it was not used for centralized formalizations. Instead, results from research were balanced with other types of expertise from the subregion in the deliberation of the working group. During this process, the working group tried to involve all the relevant stakeholders. The process of selecting a social interpretation of completed studies can thus be seen as characterized by epistemic heterogeneity and a low degree of formalization. However, the product of this process also bears traits of centralized formalization: the social interpretation of completed studies was decided on a subregional level, meaning that it was not up to the individual municipalities or schools to choose their own interpretation. The selection of approach also shifts the open-ended aim of completed studies from a multi-professional and potentially epistemic heterogenous aim (see figure 5) towards being interpreted as a social problem in schools, thus narrowing it down to a more mono-professional problem characterized by a higher degree of epistemic homogeneity (see figure 6).

Figure 6. Selection of solution
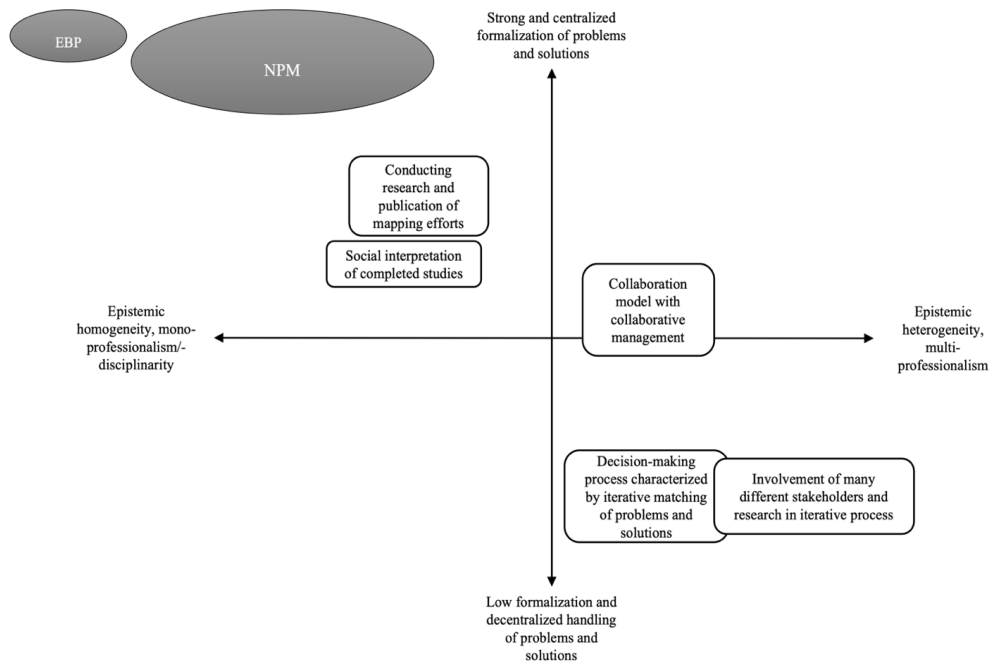
3. Implementation and execution

In 2015, it was decided researcher 2 should be a part of the working group. She would work with developing the findings of her research into concepts and tools that could be used to educate and achieve change in schools in the collaborating municipalities. Since each of the municipalities, as well as each of the individual schools, are autonomous they were not forced to be a part of this initiative. Because of this voluntariness, coordinating schools' and municipalities' problems with the solutions offered through the completed studies initiative became a key activity. The process of selecting problems and interventions now continued on a more local scale.

In order to understand this particular mode of implementation, the parts of the process need to be introduced. The work, taken up with the schools in the completed studies project, was launched through a presentation at an annual school management conference in the subregion. This conference came to function as the catalyst for the implementation efforts led by the working group. During the conference, researcher 2 presented her work together with a principal that had been a part of developing the concepts at one school. The conference made it possible to reach many schools that could be interested in being a part of the subregional completed studies project. During interviews conducted with principals, it became clear that an important

reason for joining was tied to a version of EBP: The project connected to demands that school interventions should be based on scientific research.

Since the completed studies project builds on voluntary participation from the municipalities and their schools it was important to connect to pre-existing problems in the local schools. In order to enroll new principals, the schools had to feel that the project solved the problems that they had to deal with anyway. They had to see how the new concepts or tools could be more or less easily integrated into their current practices. While there were tools that could be used directly in the schools, the model of implementation that emerged consisted of one semester devoted to educating school staff about the need to understand pupils' feeling of powerlessness and the social mechanisms of exclusion. In this first semester, three ground rules, or values, were introduced. These three rules constituted the value base for all included schools. But how these rules (or "frameworks", as some of the schools chose to call them) were operationalized were to a high degree dependent on the local context in the schools. For the second semester, the ground rules were adapted and adopted together with a number of "tools". In this work, researcher 2 played a crucial role in working together with the principals and other key actors in the schools in order to create the right kind of interventions for each individual school. This meant that, in practice, the concepts could look very different on an operational level depending on each individual school – as one principal put it: *'The model should challenge us to think, it is not there to think for us'* [interview with a principal, 30 Nov 2018].

Analysis

In the implementation and execution of the intervention, two noteworthy yet paradoxical features emerged in relation to formalization and epistemic purity.

Firstly, researcher 2's and the principals' references to the importance of scientific research for school interventions are in line with EBP. However, as noted in the section on selection of solution, this scientific research is not qualified by epistemic purity (at least, as defined in the evidence hierarchy). This reliance on research, without demanding a specific version of purity, is more indicative of post-EBP than EBP. It is worth recalling from the previous section that it was not Researcher 2's research per se that facilitated her access to the schools. Instead, the choice to include her and her approach was due to a heterogenous decision-making process with iterative matching of problems and solutions where other (including scientific) versions of completed studies, were rejected. So, in spite of the authoritative reference to scientific research, there were in fact other equally scientific alternatives that would have suggested other ways to take on completed studies aim in the school.

Secondly, one of the most salient features of implementation within EBP is the call for fidelity: Fidelity to the evidence in the form of programs, protocols, manuals, guidelines or concepts. This implies a high degree of formalization. In this case, no school was forced to adopt the subregional version of completed studies through safety in a calm study environment. However, the nature of the intervention demanded full compliance for schools who joined the project. This was an issue that the researcher and principals devoted significant time and effort to ensuring. However, it was not solved by the typical NPM indicators tracking documentation of routines or other box-ticking means. Moreover, the issue was not solved by looking to an instruction manual. The purpose of the intervention was to help the staff to "think for themselves" by educating them in understanding pupils´ feelings of powerlessness and the role of mechanisms for exclusion combined with using concepts and tools. This indicates a less formalized and less epistemically pure intervention than within traditional EBP efforts (but still with formalized and mono-disciplinary elements). The concepts and tools were developed through continuous and iterative ground-level work by researcher 2 in close collaboration with the staff, thus resulting in a low-formalized and epistemic heterogenous implementation approach. It does not look like some of the more NPM-inspired attempts to ensure fidelity by monitoring quantitative indicators combined with monetary incentives. Taken together, these features of the implementation processes end up in quite different places in the analytical map (see figure 7).

Figure 7. Implementation and execution
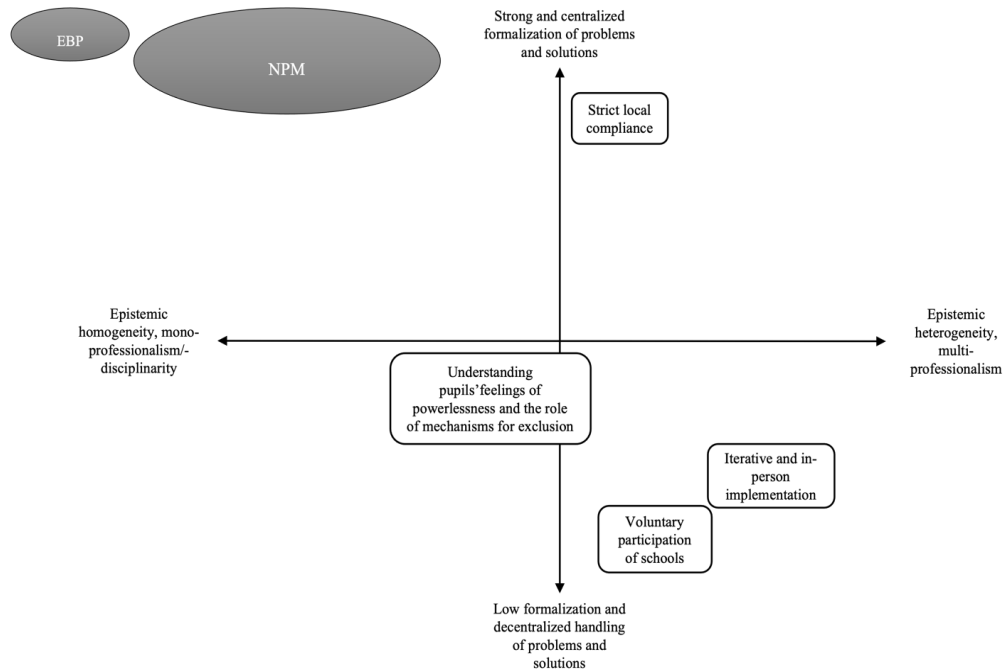
Concluding Remarks

In this paper we have approached the problems and recent developments of NPM and EBP through an epistemological lens. The overall purpose has been to contribute to new ways of thinking and doing management and EBP of complex welfare issues by increasing the epistemological understanding of these concepts. The paper has been guided by the question: What is an appropriate epistemology for professionals involved in EBP and managing? Visible in the conceptual analysis of NPM and EBP are their epistemological similarities. They both encompass ideals of strong formalization that are realized primarily by standardized interventions and quality indicators. They also hold homogenous views on expertise that have consequences for what gets to count as valid knowledge. These ideals about strong formalization, and their homogenous views on expertise and methodology constitute epistemological assumptions that are often taken for granted. In spite of these similarities, there are important differences between NPM and EBP. Whereas EBP has emphasized rigor and internal validity, NPM has emphasized non-controlled data from simpler measurements, often from basic quantitative indicators. Still, the epistemological similarities previously mentioned suggest common roots. With respect to the ideals of formalization and narrow methodological views, they are both children of the same modernity project that has been reproduced in welfare services through NPM and EBP (Bornemark 2018).

In the conceptual analysis of NPM and EBP, we drew on post-NPM to suggest the notion of post-EBP – thus hoping to capture the development of more complex versions of EBP in welfare. The analytical model illustrates how managing and EBP can be realized in many different ways that exceed usual understandings of NPM and EBP. The model also makes visible the epistemological extension of post-NPM and also post-EBP from the upper-left hand corner (figure 3), towards acknowledging and taking to account the whole spectrum of possible variation of formalization and expertise. For the working professions within welfare dealing with today's "post-normal problems" there is a demand for "post-normal solutions" (Funtowicz and Ravitz 1993b). By attending to literature on NPM and EBP, taken together with insights from theories on formalization and heterogeneity of expertise, this paper has tried to visualize a broader epistemological map beyond the narrow knowledge ideals in NPM and EBP. We do not suggest that post-NPM and post-EBP should consist in merely bottom-up changes, collaboration instead of silos and shunning of RCTs. These modes of managing and using evidence would

turn EBP and NPM upside down, and risk just creating an alternative and contrary set of problems – before the return swing of the pendulum to silos and RCTs. What we suggest as a possible answer to the guiding question of the paper is that an appropriate epistemology for professionals involved in EBP and managing could be to recognize the whole spectrum of epistemic combinations that are possible when handling welfare issues, beyond one-size-fits-all definitions of problems and solutions.

The purpose of including the empirical case in the analysis has been to show how welfare practices could work with components of post-NPM and post-EBP. By placing the components identified in the subregional initiative in the analytical model, the paper illustrates the variation of different epistemic combinations manifested in the empirical case. The versatile utilization of mapping of multiple stakeholders' views, matching of problems and solutions, results from a dissertation based on action research, from a pedagogical to a social interpretation of completed studies, iterative and personal implementation, voluntary school involvement and strict compliance, conveying understanding and using tools; these are all features that indicate an *epistemological elasticity*, not a new dogma. An interesting finding in this joint analysis of managing and EBP is the epistemological and empirical covariance of post-NPM and post-EBP in how they are manifested together in the empirical case. This observation, though preliminary, provides a germane starting point for a broader investigation of potential relationships and covariance between post-NPM and the more advanced post-EBP seen to emerge, in practice, during the course of this empirical case. Our joint experiences from researching EBM and EBP in health care, social care and education suggest that many professionals do possess extensive amounts of epistemological elasticity. The subregional case is not unique in that sense. However, contrary to this case, many bear witness to a system that is skewed towards formalization and mono-professional knowledge in the upper left corner in the analytical model (figure 3). Modernity's epistemological heritage seems hardwired into the infrastructure of welfare organizations (Bornemark 2018). We suggest that a reason for the post-EBP features that were observed in the empirical case is the persistence of post-NPM structures. If so, analyses, such as ours, will not suffice without being paired with infrastructures. Epistemological elasticity on the part of professionals will not survive without elasticity of infrastructures. Post-EBP needs post-NPM, and vice versa.

Acknowledgements

References

Alvehus, Johan & Thomas Andersson (2018) A New Professional Landscape: Entangled Institutional Logics in Two Swedish Welfare Professions, *Nordic Journal of Working Life Studies,* 8 (3): 91–109, https://doi.org/10.18291/njwls.v8i3.109542.

Alonso, José M., Judith Clifton & Daniel Díaz-Fuentes (2015) Did new public management matter? An empirical analysis of the outsourcing and decentralization effects on public sector size, *Public Management Review*, 17 (5), 643–660 https://doi.org/10.1080/14719037.2013.822532.

Andersson, Thomas & Roy Liff (2012) Multiprofessional Cooperation and Accountability Pressures: Consequences of a post-new public management concept in a new public management context, *Public management review*, 14 (6): 835–855, https://doi.org/10.1080/14719037.2011.650053.

Andrews, Nick, John Gabbay, Andreé Le-May, Emma Miller, Alison Petch and Martin O'Neill (2020) Story, Dialogue and Caring about What Matters to People: Progress towards Evidence-enriched Policy and Practice." *Evidence & Policy* 16 (4): 597–618, https://doi.org/10.1332/174426420X15825349063428

Berg, Marc (1997) *Rationalizing Medical Work: Decision-Support Techniques and Medical Practices*. Cambridge, Mass., MIT Press.

Bergmark, Anders, & Lundström, Tommy (2011) 'Evidensbaserad praktik i socialt arbete. Om ett programs mottagande, förändring och möjligheter i en ny omgivning' in Ingemar Bohlin & Morten Sager (eds.), *Evidensens många ansikten: evidensbaserad praktik i praktiken* (pp. 163–184), Arkiv Förlag, Lund.

Biesta, Gert (2007), Why "What Works" Won't Work: Evidence-Based Practice and the Democratic Deficit in Educational Research, *Educational Theory,* 57 (1): 1–22, https://doi.org/10.1111/j.1741-5446.2006.00241.x

Bornemark, Jonna (2018) *Det omätbaras renässans. En uppgörelse med pedanternas världsherravälde* Volante, Stockholm.

Braye, Suzy and Michael Preston-Shoot (2005) Emerging out of the Shadows? Service User and Carer Involvement in Systematic Reviews. *Evidence & Policy* (1)2: 173–93, https://doi.org/10.1332/1744264053730743.

Cartwright, Nancy & Jeremy Hardie (2012) *Evidence-based policy: a practical guide to doing it better*, New York, Oxford University Press.

Christensen, Tom & Per Lægreid (2007) The Whole-of-Government Approach to Public Sector Reform, *Public Administration Review*, 67 (6): 1059–1066, https://doi.org/10.1111/j.1540-6210.2007.00797.x.

Cohen, Michael, James March & Johan Olsen (1972) A garbage can model of organizational choice, *Administrative Science Quarterly,* 17 (1): 1–25, https://doi.org/10.2307/2392088.

Collins, Harry (1985) *Changing Order: Replication and Induction in Scientific Practice*, Sage, London.

Collins, Harry (2010) *Tacit and Explicit Knowledge*, University of Chicago Press, Chicago.

Dale, Roger (2010) *Early school leaving: Lessons from research for policy makers. An independent expert report submitted to the european commision*, European Commission.

Dustin, Donna (2016) *The Mcdonaldization of Social work,* Routhledge, London.

Emerson, Kirk, Tina Nabatchi & Steven Balogh (2012) An integrative framework for collaborative governance. *Journal of public administration research and theory*, 22 (1): 1–29, https://doi.org/10.1093/jopart/mur011.

Eriksson, Erik, Thomas Andersson, Andreas Hellström, Christian Gadolin & Svante (2020) Collaborative public management: coordinated value propositions among public service organizations. *Public Management Review*, 22 (6): 791–812, http://dx.doi.org/10.1080/14719037.2019.1604793.

Ferlie, Ewan, Chris Bennett, Sue Dopson, Luise Fitzgerald, Gerry Mcgivern (2013). *Making Wicked Problems Governable?: the case of managed networks in health care.* OUP, Oxford.

Flyvbjerg, Bent (2001) *Making Social Science Matter: Why Social Inquiry Fails and How it Can Succeed Again*. Cambridge University Press: Cambridge.

Funtowicz, Silvio & Jerome Ravetz (1993a) 'The emergence of post-Normal science' , in Rene von Schomberg (ed), *Science, politics and morality: Scientific Uncertainty and Decision Making*, (pp. 85–122) Springer Science+Business media, Dodrecht.

Funtowicz, Silvio & Jerome Ravetz (1993b) Science for the post-normal age, *Futures,* 25 (7), 739–755, https://doi.org/10.1016/0016-3287(93)90022-L.

Gladh, Marie & Krysmyntha Sjödin (2013) *Tillbaka till skolan. Metodhandbok i arbetet med hemmasittande barn och unga*, Gothia Fortbildning, Stockholm.

Goldenberg, Maja (2009) Iconoclast or creed? Objectivism, pragmatism, and the hierarchy of evidence, *Perspectives in Biology and Medicine*, 52 (2): 168–187, https://doi.org/10.1353/pbm.0.0080.

Gough, David, Sandy Oliver & James Thomas (2017) *An introduction to systematic reviews* (2nd edition), SAGE, Los Angeles.

Greenhalgh, Trisha & Chrysanti Papoutsi (2018) Studying complexity in health services research: desperately seeking an overdue paradigm shift, *BMC Medicine,* 16 (1), https://doi.org/10.1186/s12916-018-1089-4.

Hall, Patrik (2012) *Managementbyråkrati: organisationspolitisk makt i svensk offentlig förvaltning*, Liber, Malmö.

Hanberger, Anders & Lena Lindgren (2019) Evaluation systems in local eldercare governance, *Journal of Social Work*, 19 (2): 233–252. https://doi.org/10.1177/1468017318760788.

Hasson, Henna & Ulrica von Thiele Schwarz (2017) *Användbar evidens: om följsamhet och anpassningar*, Natur & Kultur, Stockholm

Helgesson, Carl-Fredrik (2010) 'Avstånd och datatvätt: Två viktiga företeelser som bidrar till att öka trovärdigheten hos resultaten från stora kliniska läkemedelsprövningar' in Ingemar Bohlin & Morten Sager (eds.), *Evidensens många ansikten*, Arkiv förlag, Linköping.

Higgins, Julian & James Thomas (2022) (eds.) Cochrane handbook for systematic reviews of interventions Version 6.3. Available from: http://handbook.cochrane.org

Hood, Christoffer (1991) A public management for all seasons?, *Public Administration,* 69 (1): 3–19, https://doi.org/10.1111/j.1467-9299.1991.tb00779.x.

Hood, Christoffer (1995) The "new public management" in the 1980s: variations on a theme, *Accounting, organizations and society*, 20 (2-3): 93–110, https://doi.org/10.1016/0361-3682(93)E0001-W.

Hood, Christoffer & Guy Peters (2004) The Middle Aging of New Public Management: Into the Age of Paradox? *Journal of Public Administration Research and Theory*, 14 (3): 267–282, https://doi.org/10.1093/jopart/muh019.

Jacobsson, Katarina & Anna Meeuwisse (2020) 'State governing of knowledge' – constraining social work research and practice, *European Journal of Social Work,* 23 (2): 277–289, https://doi.org/10.1080/13691457.2018.1530642.

Johansson, Kerstin (2019) Evidence-based social service in Sweden: a long and winding road from policy to local practice, *Evidence & Policy,* 15 (1): 85–102, https://doi.org/10.1332/174426417X15123846324591.

Johansson, Kerstin, Verner Denvall & Evert Vedung (2015) After the NPM wave. Evidence-Based practice and the vanishing client, *Scandinavian Journal Of Public Administration*, 19 (2): 69–88, https://doi.org/10.58235/sjpa.v19i2.15613.

Johansson, Staffan, Peter Dellgran & Staffan Höjer (2015) *Människobehandlande organisationer: villkor för ledning, styrning och professionellt välfärdsarbete*, Natur & kultur, Stockholm

Kastenhofer, Karen (2010) Risk assessment of emerging technologies and post-normal science. *Science, technology and human values* 36 (3): 307–333, https://doi.org/10.1177/0162243910385787.

Lagerlöf, Helena, Teun Zuiderent-Jerak & Morten Sager (2021). Epistemological deliberation: the challenges of producing evidence-based guidelines on lifestyle habits. *Evidence & Policy: A journal of Research, debate and practice,* 17 (4), 709–727, https://doi.org/10.1332/174426421X16149619907286.

Lambert, Helen (2006) Accounting for EBM: Notions of evidence in medicine, *Social Science & Medicine*, 62 (11): 2633–2645, https://doi.org/10.1016/j.socscimed.2005.11.023.

Lambert, Helen (2013) Plural forms of evidence in public health: tolerating epistemological and methodological diversity, *Evidence & Policy: A Journal of Research, debate and practice,* 9 (1), 43–48, https://doi.org/10.1332/174426413X662518.

Lampland, Martha & Susan Leigh Star (2009) *Standards and Their Stories: How Quantifying, Classifying, and Formalizing Practices Shape Everyday Life*, Ithaca, NY: Cornell University Press.

Latour, Bruno (1993) *We Have Never Been Modern*, Harvard University Press: Cambridge, Mass.

Lavis, John, Huw Davies, Russel Gruen, Kieran Walshe & Cynthia Farquhar (2006) Working within and beyond the Cochrane Collaboration to make systematic reviews more useful to healthcare managers and policy makers, *Healthcare policy = Politiques de sante,* 1 (2): 21, https://doi.org/10.12927/hcpol.2006.17872.

Liff, Roy & Thomas Andersson (2012) The multi-professional team as a post-NPM control regime - Can it integrate competing control regimes in healthcare? *Scandinavian Journal of Public Administration,* 16 (2): 45–67.

Lindberg, Kajsa, Barbara Czarniawska & Rolf Solli (2015) After NPM? *Scandinavian Journal Of Public Administration,* 19 (2): 3-6. https://doi.org/10.58235/sjpa.v19i2.15601

Lindblom, Charles (1959). The Science of "Muddling" Through. *Public Administration Review,* 19 (2): 79–88, https://doi.org/10.2307/973677.

Lipsky, Michael (1980) *Street-level bureaucracy: dilemmas of the individual in public services*, Russell Sage Foundation, New York.

Mann, Anna (2021) Abandoning questionnaires: Improving quality of life in daily nephrology practice. *Nordic Journal of Science and Technology Studies*, 9 (1): 53–64, https://doi.org/10.5324/njsts.v9i1.3545.

March, James (1991) How Decisions Happen in Organizations, *Human-computer interaction,* 6 (2): 95–117, https://doi.org/10.1207/s15327051hci0602_1.

Martinell Barfoed, Elizabeth (2018) From stories to standardised interaction: changing conversational formats in social work. *Nordic social work research,* 8 (1): 36–49, https://doi.org/10.1080/2156857X.2017.1417154.

Metz, Allison, Annette Boaz and Glenn Robert (2019) Co-creative Approaches to Knowledge Production: What next for Bridging the Research to Practice Gap? *Evidence & Policy* 15 (3): 331–37, https://doi.org/10.1332/174426419X15623193264226.

Myburgh, Susan and Anna Maria Tammaro (2013) 'Constructing a theoretical framework' In: Susan Myburgh and Anna Maria Tammaro (eds.) *Exploring education for digital librarians* (pp 133-172), Chandos Publishing.

National board of health and welfare [NBHW] (2010) *Social rapport. Skolbetyg, utbildning och risker för ogynnsam utveckling för barn.* NBHW, Stockholm.

Osborne, Stephen (2006) The New Public Governance? *Public Management Review,* 8 (3): 377–387, https://doi.org/10.1080/14719030600853022.

Otto, Hans-Uwe & Holger Ziegler (2008) The Notion of Causal Impact in Evidence-Based Social Work: An Introduction to the Special Issue on What Works? *Research on Social Work Practice* 18 (4): 273–77, https://doi.org/10.1177/1049731507313997.

Pawson, Ray (2006) *Evidence-based policy: a realist perspective*, SAGE, London.

Pease, Bob (2007) 'Critical social work theory meets evidence-based practice in Australia: Towards critical knowledge informed practice in social work' in Ko Yokota (ed.), *Empowering people through emancipatory social work* (pp. 103-138). Sekai Shisou-sya, Kyoto.

Petersén, Anna & Jan Olsson (2015) Calling Evidence-Based Practice into Question: Acknowledging Phronetic Knowledge in Social Work. *The British Journal of Social Work,* 45 (5): 1581–1597, https://doi.org/10.1093/bjsw/bcu020.

Pérez-López, Gemma, Diego Prior & José Zafra-Gómez (2015). Rethinking new public management delivery forms and efficiency: Long-term effects in Spanish local government. *Journal of public administration research and theory*, 25 (4), 1157–1183, https://doi.org/10.1093/jopart/muu088.

Pistone, Isabella, Allan Lidström & Morten Sager (2022) Formaliseringar och bedömningar i manualbaserade metoder: en symmetrisk vetenskapsteoretisk analys, *Fokus på familien* 50 (2): 91–112, https://doi.org/10.18261/fokus.50.2.2.

Power, Michael. (1997). *The Audit Society: Rituals of Verification*, Oxford University Press, Oxford.

Sager, Morten & Lena Eriksson (2015) Objectivities of a Post-Normal Guideline Project: The Introduction of a Guideline for Sick-Listing Practices in Sweden, *Evidence & Policy,* 11 (3), 351–376, https://doi.org/10.1332/174426415X14353278940785.

Sager, Morten & Isabella Pistone (2019a) 'Kunskap' in Anna Krohwinkel & Unni Mannerheim (eds.) *Moderna policies: inspel för en framtidsinriktad hälso- och sjukvård* (pp. 80–107), Stiftelsen Leading Health Care: Stockholm.

Sager, Morten & Pistone, Isabella (2019b) Mismatches in the production of a scoping review: Highlighting the interplay of (in)formalities, *Journal of Evaluation in Clinical Practice,* 25 (6): 930–937, https://doi.org/10.1111/jep.13251.

Sayer, Philip (2020) A new epistemology of evidence-based policy, *Policy and Politics,* 48 (2): 241–258, https://doi.org/10.1332/030557319X15657389008311.

Shapin, Steven & Simon Schaffer (1985) *Leviathan and the Air Pump*, Princeton University Press, Princeton

Sismondo, Sergio (2010) *An introduction to science and technology studies*, 2nd ed. Chichester: John Wiley & Sons, Ltd.

Swedish Association of Local Authorities and Regions [SALAR] (2012) *Motverka studieavbrott - gymnasieskolans utmaning att få alla elever att fullfölja sin utbildning*, SALAR, Stockholm.

Swedish Association of Local Authorities and Regions [SALAR] (2013) *Öppna jämförelser - gymnasieskola 2013*. SALAR, Stockholm.

Swedish National Agency for Education [SNAE] (2011) *Vad gör kommunerna för ungdomar som inte går i gymnasiet?* Swedish National Agency for Education, Stockholm.

Stewart, Ellen, Jennifer Smith-Merry, Marc Geddes and Justyna Bandola-Gill (2020) Opening up Evidence-based Policy: Exploring Citizen and Service User Expertise. *Evidence & Policy* 16 (2): 199–208, https://doi.org/10.1332/174426420X15838217456181.

Sørensen, Eva & Jacob Torfing (2009) Making governance networks effective and democratic through metagovernance, *Public administration*, 87 (2): 234–258, https://doi.org/10.1111/j.1467-9299.2009.01753.x.

The evidence-based working group (1992) Evidence-based medicine: A new approach to teaching the practice of medicine, *JAMA,* 268 (17), 2420–2425, https://doi.org/10.1001/jama.1992.03490170092032.

Timmermans, Stefan & Marc Berg (1997) Standardization in action: Achieving local universality through medical protocols, *Social Studies of Science,* 27 (2): 273–305, https://doi.org/10.1177/030631297027002003.

Timmermans, Stefan & Marc Berg (2003) *The Gold Standard: The Challenge of Evidence-Based Medicine and Standardization in Health Care*, Temple University Press, Philadelphia.

Timmermans, Stefan & Steven Epstein (2010) A World of Standards but Not a Standard World: Toward a Sociology of Standards and Standardization. *Annual Review of Sociology* (36): 69–89, https://doi.org/10.1146/annurev.soc.012809.102629.

Torfing, Jacob & Peter Triantafillou (2013) What's in a name? grasping new public governance as a political-administrative system, *International Review of Public Administration,* 18 (2): 9–25, https://doi.org/10.1080/12294659.2013.10805250.

Turnpenny, John, Mavis Jones and Irene Lorenzoni (2011) Where Now for Post-Normal Science?: A Critical Review of Its Development, Definitions, and Uses. *Science, Technology, & Human Values* (36) 3: 287–306, https://doi.org/10.1177/0162243910385789.

Wieringa, Sietse, Dunja Dreesens, Frode Forland et al. (2018a) Different knowledge, different styles of reasoning: a challenge for guideline development, *BMJ Evidence-Based Medicine,* 23 (3), https://doi.org/10.1136/bmjebm-2017-110844.

Wieringa, Sietse, Eivind Engebretsen, Kristin Heggen & Trisha Greenhalgh (2018b) Rethinking bias and truth in evidence-based health care, *Journal of Evaluation in Clinical Practice,* 24 (5): 930–938, https://doi.org/10.1111/jep.13010.

Zuiderent-Jerak, Teun (2015) *Situated Intervention: Sociological Experiments in Healthcare*, MIT Press: Cambridge, Mass.

Zuiderent-Jerak, Teun (2007) Preventing Implementation: Exploring Intervention with Standardization in Healthcare, *Science as Culture,* 16 (3): 311–329, https://doi.org/10.1080/09505430701568719.