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Exploring perceptions of Lean in the public sector

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ABSTRACT

This paper explores discourses around Lean by examining the perceptions of new users of Lean in the public sector. The paper draws on actor–network theory as the basis for exploring what these new users think about Lean and uses data analysis tools to extrude concepts of significance. The data suggests that Lean continues to retain diverse, parallel and competing perspectives. The responses also signal that key concepts of Lean are missing from the discourses, and that this highlights a need to discuss Lean as a mindset—not just as a set of tools. The paper suggests future directions for research to further explore the issues emphasised by respondents.

IMPACT

This paper provides three major lessons for public managers and policy-makers who are in the process of introducing Lean to reduce costs and improve the quality of services. The first is the presence of diverse, parallel and competing discourses around Lean. Second, there is a missing awareness of central Lean concepts like quality, strategy and flow for managers and key personnel in public services for whom Lean is new. Finally, there is the need to emphasise Lean as a mindset in order to support a viable and coherent platform in public services. These lessons have implications for the objectives, perspectives and ways of organizing work associated with Lean initiatives. In particular, when communicating with new users of Lean, the mindset perspective of Lean must be emphasised, and the key concepts behind this mindset, such as quality, strategy and flow need to be developed and conveyed to new users. Clarity in communication of Lean concepts will increase the chances of setting realistic expectations for new users of Lean.

KEYWORDS

Actor–network theory; Lean; public services

Introduction

The rise of Lean has turned the concept into a buzzword and brought with it high expectations of its ability to improve public services. Success stories are often highlighted, and the potential is undeniably high, but so is the number of initiatives that have failed to deliver what has been promised. Bateman et al. describe the current state of Lean in public services thus: 'It is hard not to conclude that much of Lean's potential remains an unfulfilled promise' (Bateman et al., 2018, p. 3).

Lean has been criticized within public services. Its implementation in the public sector has led to claims that it has had a detrimental effect on employees, their working lives, and the services provided to the public (Carter et al., 2011; Martin, 2018). At the same time, one common observation is that Lean is often misinterpreted (Hines et al., 2004; Modig & Åhlström, 2018). This has led to a discussion in academia around whether Lean is a set of tools or a mindset. The academic literature suggests the existence of competing positions sharing the same concepts, labels and tools, but with different rationales, models and logic (Andersson, 2011). Further complicating the issue is the fact that Lean is implemented in

distinctive environments shaped by the political–economic architecture and production systems, that vary within countries and industries; making lessons learned difficult to generalize across these varying environments (Boyer & Freyssenet, 2000, 2002).

Lean in public services was (Radnor & Boaden, 2008) and still is (Bateman et al., 2018) tool oriented. This orientation places Lean in public services in a contested and problematic position, because of a missing awareness of Lean as a systemic (Bicheno & Holweg, 2016) change of mindset (Modig & Åhlström, 2018; Ohno, 2013). Reducing Lean to different tools can lead to practices that have the semblance of being Lean, but that represent other mindsets of how best to organize work. In short, Lean as a concept has split into competing factions (Hines et al., 2004).

If the field lacks consensus on the meaning of Lean, then it is likely that Lean will be miscommunicated, or at the very least that contradictory perspectives will be communicated to new users. Disappointment is to be expected when anticipated benefits do not align with the reality of what is delivered, and issues around the definition and communication of Lean are unresolved.

The discussion about whether Lean is tool based or mindset based is philosophical in nature and arguably

intractable, however, the issue of conceptualization raises the question of how Lean is perceived by actors for whom the concept is new. Lean is often presented as 'common sense in the workplace'. This is the perspective of someone looking back and for whom the controversies associated with Lean initiatives have been settled. Lean for those looking forward is less certain and more precarious (Andersson, 2011).

This paper explores how Lean is perceived by new public sector users and their expectations. We explain why it is important to map and understand the initial discourses to enable us to discuss, plan, assess and manoeuvre inside precarious Lean initiatives in public services. Our approach applies actor–network theory (ANT) as a theoretical lens to better understand how Lean is perceived by people being introduced to Lean. The aim is to contribute to an understanding of how Lean is perceived by new users, to expand on what implications this may have for how public services develop, and to suggest directions for future research.

Literature review

Lean in public services is part of an ongoing reinvention of Toyota's original concept (Andersson, 2011). What started out as a new way of looking and thinking about workplace management in automotive production (Cho, 2013) has evolved and translated to new locations, new industries, digitalization and globalization. Lean is not static but is constantly being reinvented through its application in both industry and public sector. Lean as a concept encompasses diverse, competing and parallel discourses. Within the literature, we find a wide-ranging conversation between factions who often talk across each other, using shared language but not shared definitions when discussing the topic of Lean (Andersson, 2015). We see this as problematic given that what is communicated to new users of Lean will contribute to setting their expectations of what the outcomes will be. If we as a field are split on what Lean is, then the result will be miscommunication to those we seek to serve. We turn to a brief summary of the main discourses on Lean.

Lean as a tool-based perspective

Many Lean initiatives in public services take a tool-based perspective (Bateman et al., 2017; Bateman et al., 2018; Radnor & Boaden, 2008). This perspective suggests that Lean is something we implement, adopt or use (as it is). This is illustrated in how we talk about the practices using distinctive words like 'Kaizen events', 'SMED', 'Kan-ban', 'Hoshin-kanri', and

publications providing detailed recipes for how to practice it (Akao, 2004; Productivity Press Development Team, 2002; Shingō, 1996). It is something that we bring in from the outside and adopt in our organizations on an operational level (Hines et al., 2004).

This tool-based, operational and generic perspective of Lean is widely accepted but, if we look to the history of Lean, it is not straightforward. Lean grew out of practices in a specific company, time and place. It is difficult to understand the development of the work practices without accepting it as embedded and entangled in this context. The tools and techniques of Lean are thus highly context dependent (Bateman et al., 2018) and have evolved through its application (Andersson, 2011) in both industry and the public sector.

Lean as a mindset

In this perspective on Lean, Lean is not discussed as a tool, or set of tools, but more as an overarching perspective in which key themes such as quality, reduction of waste, flow and empowerment of staff, take on the overriding goal of Lean implementation (Hines et al., 2004; Maarse et al., 2012).

Womack and Jones (2003) discuss the importance of 'thinking' in Lean production and summarise five points they state as being critical: the identification of customer value; management of the value stream; development of flow production; the use of mechanisms to support the flow of materials; and the pursuit of perfection through the reduction of all types of waste. Liker (2004) takes this a step further by suggesting that Lean requires a deeper transformation of culture that permeates the entire organization in order for Lean implementation to be successful. Hines et al. (2004) point out that one of the many challenges in early implementations of Lean was to get organizations to have a sufficient change in culture and mindset to supplement the tools of Lean they were attempting to implement. Liker (2004) criticises the perspective that Lean is simply a set of tools, and instead sets out 14 management principles that form the basis of Lean. A similar perspective comes from Drew et al. (2004), who suggest that it is tempting to turn Lean into a project plan or process; however, they describe Lean as more of a journey, and that there is no one right way to approach Lean (although presumably there are many wrong ways to approach it).

Little has been written about what constitutes a Lean mindset, other than discussing the outcomes that are expected from Lean. For this paper, we drew on an early definition of 'mindset' from outside the field of Lean, which defines mindset as the sum total of the cognitive processes activated to best solve the

task (Gollwitzer & Bayer, 1999). We suggest that this encompasses the underlying concepts of Lean, which is not about one right way but, rather, selecting the processes that are best suited to trying to solve the challenges faced within an organization. Experienced Lean operators have a multitude of tools at hand which they can use to assist them with their task and challenges. However, it is ultimately not these tools that make Lean successful, but the mindsets of the operators who know which tools to use, and when to use them (Yamamoto & Bellgran, 2010).

The original use of the word ‘mindset’ came from experiments where participants were given a task to solve and, as they became familiar with the task, the active thinking associated with the task slowly faded from consciousness (Humphrey, 1951). In this way, the ‘mind’ became ‘set’ on solving the task. Note that mindsets are different from habits. Habits are indifferent to outcomes—they persist in the face of negative outcomes. However, mindsets change tactics, try new solutions and update as new knowledge is gained (Gollwitzer, 2012; Lynch, 2020). This is synonymous with what seasoned practitioners of Lean experience, that they have multiple approaches, and are not indifferent to outcomes but, instead, try different methodologies until they get the required solution. Likewise, over time, their choice of tools and use of methods disappears from conscious choice as their mind begins to automatically and unconsciously select the most appropriate tool.

Lean in public services

From the outset, Lean has been entangled in the manufacturing industry in general and the automotive industry specifically. The results and interest created in these industries over many years produced expectations of its ability to improve public service delivery.

From around 2000 onwards, Lean became more prominent as a method for reducing costs and improving quality in the public sector. At the same time, Lean became visible on the political-administrative agenda—in all likelihood due to a period of financial austerity (Martin, 2018). Decentralization in the name of efficiency became the answer—challenging both the infrastructure and those working in the public services. As part of a modernization agenda, public sector organizations sought efficiency savings throughout state services. Many organizations identified Lean as having the potential to improve quality and reduce costs on the assumption that private sector methods were better and more responsive to public needs than the existing approaches to service delivery (Bach & Kessler, 2012; Martin, 2018).

The modernization agenda was part of wider trends throughout Western Europe and heralded a number of significant changes in public sector management in both infrastructure and people management policy and practice (Pollitt & Bouckaert, 2011). With an increasing emphasis on decentralization within the public sector, its management had greater freedom to use new approaches, such as Lean, to administer public services.

As Lean became popular within the public sector, the research began to focus on how it was being implemented. Research identified divergent approaches to Lean implementation. These approaches are classified into a typology to facilitate an evaluation of Lean implementation. The findings suggest that implementation tends to be piecemeal rather than system-wide (Burgess & Radnor, 2013).

A major challenge for the implementation of Lean in the public sector, particularly in the healthcare sector, is a lack of understanding regarding the concept (Drotz, 2014).

In line with various public services, healthcare struggles with multiple goals that sometimes can be in conflict (Glouberman & Mintzberg, 2001; Hood, 1991). For example, in hospitals and primary healthcare, the focus is on systematic quality improvement to organize the services in a beneficial way in order to remove bottlenecks and unnecessary steps in the patient’s journey through the healthcare system (Andersen & Røvik, 2015; Fineide & Ramsdal, 2014).

Similar to healthcare professionals, many of those employed in local municipalities derive their power from their expert knowledge (Abbott, 1988). Professions have the power to open doors to the goods and services that others need (Glouberman & Mintzberg, 2001; Terum, 2003), they have professional discretion which is the cornerstone of professional work (Freidson, 2001; Goodin, 1986; Grimen & Terum, 2009). Many professional individuals and groups believe that the knowledge they possess is essential for the work over which they wish to have jurisdiction (Abbott, 1988). Professional knowledge is a key factor and often Lean approaches in healthcare are tool based, for example measuring work tasks using statistical process control in order to organize the services in an effective manner. As the organization of work (especially in a hospital) is formed around medical professionals who are experts in their own medical field, these professionals often claim control and jurisdictional power over their work performance. Thus, introducing new tools and new ways of thinking can be seen as threats to their professional autonomy.

The emergence of such terms as ‘scientific-bureaucratic medicine’ (Dent, 2008; Harrison et al., 2002; Timmermans & Berg, 2003) support Muzio et al. (2008) in questioning whether sweeping structural

changes derived from a state-sponsored initiative have been a product of corporate usurpation of the healthcare system (Kipping & Kirkpatrick, 2008). There can, furthermore, be conflicts between individual professionals or groups of professions holding different positions, but also between managers and employees. Another issue is that Lean has shifted healthcare from the individual solutions (expert power) to a patient-pathway approach (Rees & Gauld, 2017). The issue of effective co-ordination of health services remains high on the political agenda.

Extant literature brings to the fore a lack of uniformity in the theoretical conceptualization of Lean, with many things being thought of as Lean. Lean is best understood as an approach to increasing productivity. However, managers and professionals still need to learn how to play a pivotal role for effective implementation of Lean in different health contexts.

Bateman et al. (2018) summarize 10 years of Lean in public services in two phases:

- An early phase characterized by local success, but also failures to embed the successes in a broader context.
- A more mature phase recognizing the potential of Lean, but also its contextual dependencies, tensions and contradictions.

Lean is not only about making services more efficient; rather, it is a new way of understanding efficiency (Modig & Åhlström, 2018). A central argument is how this new way of understanding efficiency represents a new subject, a new set of objectives and a new way of organizing work. The focus changes from the resource (in the healthcare sector represented by the doctors, nurses or technology) to the customer (in the healthcare sector represented by the patient). The objectives change from optimizing resource use (resource efficiency) to optimizing the customer experience (flow efficiency) with implications for how we organize the processes (for example a change from division of work to multidisciplinary teams). The gap between resource efficiency and flow efficiency is labelled as the 'efficiency paradox' and illustrates the differences between Lean understood as a set of tools or methods and Lean understood as a mindset.

Position

There are several possible approaches to explore how Lean is perceived by actors for whom the concept is new. We believe that the mindset concept and the history of Lean both suggest that Lean discourses are embedded and entangled practices. This paper thus proposes a distinctive ANT approach (Callon, 1986; Latour, 1988; Law, 1992, 1997), understanding Lean

discourses as socially- and materially-embedded networks of human and non-human actor relations (Andersson et al., 2018; Andersson & Hauge, 2016).

Methodology

This paper presents an anonymous survey of participants in a Lean module of a local municipality training programme. The Lean module was not compulsory and was the first centralized Lean initiative in the municipality. Some of the participants had prior experience with Lean and related approaches from local initiatives and earlier employment in other organizations. Most participants had very limited experience with Lean, and only a general understanding of the approach and tools. Both the Lean training and the survey were carried out in a context of deregulation and increased demand for efficiency, challenging those working in municipal public services.

The Lean module was run as four one-day courses with over 100 participants from December 2018 to January 2019. The survey was open in the same period, closing on 31 January 2019. The survey resulted in written feedback from 53 managers and key personnel in a wide range of services, including HR, education, health and civil services, part of the Lean training and representing the diversity of the programme.

The survey was carried out in Norwegian, as was the data analysis. The only translation was of the results included in this paper. These were translated by a single author (a native Norwegian speaker fluent in English), and then checked for accuracy by a secondary author (a native English speaker fluent in Norwegian).

The request to participate was sent out by email based on the participant list. The survey was organized around six questions based on the ANT theoretical model discussed earlier:

- Meaning—What is Lean?
- Behaviour—How do you do Lean?
- Membership—Who takes part in Lean activities?
- Artefacts—What objects and technologies are part of Lean activities?
- Facts—What facts and rationale motivate Lean initiatives?
- Relations—What external resources are important for Lean activities?

The open-ended rich text format allowed for respondents' reflections on the different questions. The study was submitted to the Norwegian Social Science Data Services (NSD), who assessed the project in relation to the provisions of the country's Personal Data Act 2018.

SurveyXact was used to collect data. SurveyXact is an online system allowing for anonymous respondents and rich text format narratives suitable for our research design. The complete database was exported as an XML dataset. The dataset is available on request.

The XML dataset was checked for anonymity issues and spelling before exported as a corpus of 53 Word documents. The corpus is available on request.

The corpus of documents was uploaded to the Voyant Tools web page. Voyant Tools is an experimental reading and analysis environment for digital texts allowing for a wide array of analysis.

The primary analysis was based on probabilistic topic models (Blei, 2012) that produce networks of words based on the dataset. Voyant Tools apply the latent Dirichlet allocation (LDA) topic model—a mathematical model that identifies groups or communities of words that are related and that illustrate the themes in the interviews: see Blei (2012) for an explanation of topic modeling and LDA. These communities of words were used to characterize themes, topics or what we call the ‘discourses of Lean’ found in the material. However, the list of words is insufficient in itself to explore the issue—a subsequent coding of the data was required in order to generate themes or topics (Charmaz, 2006). The coding attempts to interpret meanings and actions in the corpus of documents based on the words, phrases and topics identified. We used the Context tool in Voyant to get an overview of how the terms and phrases are used as a starting point and to provide direction for our interpretation. We went back and forth between the corpus and the results of the mathematical models, interpreting meanings and actions of relevance grounded in the data (Charmaz, 2006).

Results

Our goal was to use the data to portray the discourses of Lean among the participants. The Voyant Tools can carry out a number of different types of analysis to support this goal. Due to the limited space and explorative nature of our study, we included four types of analysis. The first was those ‘terms’ that stand out as being the most frequent words in the corpus. The second was ‘phrases’ repeated in the corpus. The third was the ‘correlation’ of terms, whose frequencies rise and fall together (correlate),

Table 1. The most frequently used terms.

#	Term	Count
1	Lean	N = 189
2	Should	N = 63
3	Get	N = 51
4	More	N = 46
5	Work	N = 44

with the concept of Lean. The analysis of most frequent words, phrases and correlations with the concept of Lean, represent a background for the fourth and primary analysis of the ‘topics’ or discourses represented in the corpus of documents.

Basic analysis

The most frequent words in the corpus are shown in Table 1.

Phrases were sorted by count and length. Table 2 presents the six most common phrases (count) with four or more words (length) found in the corpus. Our coding then attempted to interpret meanings and actions in the most common phrases found in the corpus.

Next we undertook a correlation analysis and extrapolated the words frequently used in conjunction with each other. Correlation was characterized by the correlation coefficient and the significance value. Table 3 shows the relative correlation coefficients for top five terms associated with the term ‘Lean’.

Table 3 lists top five terms (Term 1) with frequencies moving in similar patterns as the term ‘Lean’ (Term 2).

A more detailed account of the tools, mathematics and assumptions behind the coefficients and values used in the correlation analysis can be found at <https://voyant-tools.org>

Topics

Finally, and most importantly, we analysed topics. The topic tool identified groups or communities of words that were related and that illustrated themes in the dataset. We started with defining the conditions. Then we chose the number of topics, the number of terms describing each topic and the number of iterations in the analysis. The number of topics was thus a condition and not a product of the analysis. By the same token, the number of terms describing each topic was a condition and not a product. With an increasing number of iterations, the topics became more refined. Note that the themes (coded as discourses) were of interest to us, not the

Table 2. Phrases and interpretations.

#	Interpretation	Phrases
1	Separating own from other sectors	... for other sectors than ... (N = 4)
2	Recognizing an established model of work	... because we’ve always done it that way (N = 4)
3	Identifying improvement as an issue	... when it comes to improvements (N = 4)
4	Demonstrating willingness to ...	want to do a ... (N = 4)
5	Recognizing common Lean tools	5 whys and Fishbone diagram analysis (N = 3)
6	Subdividing services	... in two different departments (N = 3)

Table 3. Correlation analysis associated with the term 'Lean'.

Term 1	Term 2	Correlation coefficient
Should	Lean	0.08042972
Day	Lean	0.061630312
With	Lean	0.044771574
Use	Lean	0.03710008
Receive	Lean	0.036115915

numbers. Table 4 presents the results of choosing seven topics, each with six terms and 3300 iterations, as the initial conditions for the dataset.

The coding column in Table 4 interprets the meanings and actions in the seven topics of the dataset. As described earlier, we used the basic analysis, topics and context in the corpus to interpret meanings and actions of relevance as grounded in the data.

Topic #1 in Table 4 is a useful example to explain the coding process. The topics tool (Table 4) identifies 'Lean', 'knowledge', 'wishes', 'some', 'should' and 'use' as grouped terms. The correlation tool (Table 3) confirms the connectedness of the terms 'should', 'use' and 'Lean'. We interpret it as Lean as something the people in the organization have a duty to do in the context of improvements. Knowledge is further identified as the second element of the topic interpreted as a link between 'Lean' and 'knowledge'.

We explored how 'Lean' and 'knowledge' coupled by identifying statements like '*capable of acquiring knowledge and running the processes ourselves*' and '*can help disseminate knowledge about lean tools in the organization*' in the corpus.

These two statements found in the corpus embed the terms 'Lean' and 'knowledge' in the bigger discourses of *capability* and *knowledge dissemination* within an organization. Table 4 thus illustrates the result from going back and forth between the corpus and the models, interpreting meanings grounded in the data illustrated in the terms 'Lean', 'knowledge', 'wishes', 'some', 'should' and 'use' resulting in the meaning 'Improving knowledge management'.

Table 4. Coding and topics.

#	Coding (discourses)	Topic
1	Improving knowledge management	Lean, knowledge, wishes, some, should, use
2	Applying tools to improve public services	Lean, should, diverse, tool, day, municipality
3	Focusing on continuous improvement in the workplaces	Lean, more, employees, time, processes, focus
4	Developing a competency framework	Important, focus, common, processes, competences, development
5	Shifting to user-centric services	User, services, use, employees, tools, degree
6	Managing tasks and resources	Work, resources, tasks, Lean, possible, some
7	Questioning if it is really worth it	Lean, should, find, with, enough, work

Discussion

This paper has presented experimental results from a single organization and a limited number of interviews inviting both methodological, conceptual and analytical improvements, discussions and further exploration.

In interpreting the data, we acknowledge the subjectivity of any interpretation. We do not wish to pretend that these are concrete findings that unambiguously support or disprove a hypothesis. However, the themes brought up by the probabilistic tool represent a form of groupings or discourses that can be used to make sense of the large amount of data created through surveys. We focus here on the discourses from the interpretations of the themes and discuss their potential meaning and implications in connection with other discussions on Lean in public services.

Our study tried to answer how managers and key personnel in public services reflect on Lean in the making. We focused on how Lean is perceived from the expectations of new actors (who have participated in an introductory course about Lean), because we were interested in the perspective of someone looking forward. For those actors, Lean remains an indeterminate concept where the individuals concerned have still to wrestle with the potential controversies surrounding Lean.

Our findings describe meanings and actions in seven discourses of Lean in public services:

- Improving knowledge management.
- Applying tools to improve public services.
- Focusing on continuous improvement in the workplace.
- Developing a competency framework.
- Shifting to user-centric services.
- Managing tasks and resources.
- Questioning whether Lean is really worth it.

The diversity of topics in the corpus substantiates Lean as loosely defined (Modig & Åhlström, 2018) and with competing positions sharing the same concepts (Andersson, 2011).

Topic #2 confirms the tool orientation of Lean (Bateman et al., 2017; Radnor & Boaden, 2008). Topic #7 also reveals critical voices within public services regarding Lean (Carter et al., 2011). Is the public sector ethos lost in the adaptation of private sector approaches?

The findings describe Lean as an important part of how to manage (Topic #1) and support (Topic #4) knowledge and human resources in the organization. This is not surprising as the participants were part of an innovation programme and Lean training. The programme was within a context of efficiency,

challenging existing knowledge and competencies among those working in the public services. These topics also align with the legacy from Toyota and the automotive industry—most notably in the importance of institutionalizing training on the job and programmes of education and self-improvement for everyone (Deming, 1986). Three discourses further illustrate this legacy of Lean (Kumazawa, 1996; Modig & Åhlström, 2018; Ohno, 2013) including continuous improvement in the workplaces (Topic #3), a user/customer centric mindset (Topic #5) and a new approach to managing tasks and resources (Topic #6).

It is also important to consider what the participants were not talking about. In particular, three notable elements—quality, strategy and flow—are missing from the most frequent words (Table 1), the phrases most often repeated (Table 2), the top five terms associated with Lean (Table 3) and the groups of words that illustrate the topics in the dataset (Table 4). This finding may imply that participants were not consciously aware of the central Lean concepts.

Quality has taken on a central role in Lean and has been the basis around which traditional Lean production processes have been built (Bicheno & Holweg, 2016; Deming, 1986). Yet, in the coding, we found a complete absence of any discussions around quality. A second missing element was strategy (Akao, 2004) and the awareness of management commitment and strategic deployment. The third missing element was the principle of flow (Bicheno & Holweg, 2016). The latter is maybe not surprising seen in relation to the tool orientation described both in the literature (Bateman et al., 2017; Martin, 2018; Radnor & Boaden, 2008) and present in Topic #2 as a set of tools to improve public services.

Our managers and key personnel were new to Lean, and were at an early stage of understanding how Lean can be used as a mindset. Some of the participants probably intended to introduce Lean in their organizations. As for many organizations, process improvement activities (PIA) could constitute a fruitful starting point. This approach addresses the need to evolve from a tool-based orientation (Radnor & Osborne, 2013) and to consider the impact on the whole organization. Here, managers and key personnel could be supported by a decision-making model in the early stage of the Lean implementation (Bateman et al., 2018).

The findings illustrate how the principles of Lean, such as flow, are lost when Lean is reduced to discrete techniques and tools based on the rationale of reducing cost. However, competence in models, such as PIA, could be useful in an early stage of Lean implementation in order to consider the deeper scope of Lean.

Implications

Our findings, especially related to the diversity of discourses, resonate with historical challenges where Lean has been subject to some local successes within the public sector, but has failed to embed those successes in a broader context (Radnor & Boaden, 2008). Many initiatives have suffered from the tensions and contradictions found within Lean practices (Bateman et al., 2018). The discussion in the literature goes one step further, describing these discourses not as phases but as parallel understandings. Ohno warns us: 'Whatever name you may give our system, there are parts of it that are so far removed from generally accepted ideas (common sense) that if you do it only half way, it can actually make things worse' (Ohno, 2013). This emphasizes the need for an awareness of, and strategy for, manoeuvring within potential tensions and multiple mindsets sharing the same space.

The missing awareness of quality, strategy and flow suggests future dialogue around Lean in the public sector needs to place greater emphasis on the role of these concepts in planning new interventions. Strategy is also about objectives, expectations and time horizons of initiatives. Deming warns us that: 'people that expect quick results are doomed to disappointment' (Deming, 1986). We have to set realistic expectations early on, prepare for a contested venture and a programme over many years building Lean practices embedded in the people and nature of the services. Future research may also want to investigate the way in which Lean can be used as a tool for policy implementation, and the potential for Lean to be misused as a part of a power structure.

So does the field of Lean have the capacity to live up to the high expectations of its ability to improve public services? Topic #7 aligns with an editorial in *Public Money & Management* (Radnor & Boaden, 2008) asking whether Lean enhances public services and whether it is a panacea or a paradox. This implies a broader discussion: leaving workplaces and entering the societal arena. Public policy instruments may be seen as a deconstruction of policy pursued in this area. The policy goals that arise from these instruments are, for example, better healthcare and more responsive services and these are often framed in terms of the need to improve quality and reduce costs. They are not neutral tools: at times they produce effects consistent with the intended goal, or an instrument can simply follow its own logic (Lascoumes & Le Gales, 2007, p. 4). The object of these instruments is to guide public sector employees in a certain direction to make them think or act in a manner they would not otherwise have considered (Lascoumes & Le Gales, 2007; Salamon,

2001). In conjunction with legislation, these policy instruments constitute a governing framework which municipal employees and managers are required to abide by. However, these instruments not only reflect what policy-makers intend, but they are also interpreted by management who need to articulate them into some form of practical approach. In effect, there are several layers of interpretation and application, both subjectively and objectively as Lean practices are introduced.

Contributions and limitations

How does this paper contribute to the understanding of Lean in public services? Our first contribution is empirically-based knowledge about how Lean in public services is perceived from the perspective of someone new to the approach, looking forward, who is part of Lean in the making. The paper illuminates some elements of Lean that are blurred, or even missing, in the 'common sense in the workplace' approach associated with many studies on Lean in public services. It suggests a reality of parallel, precarious and fragmented discourses. The study has added pieces of fabric and materiality to the discussion of these topics illustrated in the different themes and meaning found in the data.

The second contribution is the rationale for mapping the initial discourses to enable us to discuss, plan, assess and manoeuvre inside precarious Lean initiatives in public services. It suggests the need for a greater emphasis on Lean as a mindset and the implications of applying this mindset to organizational objectives, perspective and ways of organizing work, for supporting a viable and coherent Lean discourse in the service sector.

This paper is exploratory—the intention is to guide potential areas of future research. With this in mind, we acknowledge a number of limitations. The study is of a single organization, and we do not wish to imply its generalizability. There is no base line for these reflections to establish how perceptions may have changed over time, or how these language patterns may compare to general patterns of text. The other danger with the method used is that the themes may simply reflect the questions asked by the interviewer, although we believe this not to be the case given the semi-structured nature of the surveys. None of these limitations invalidate the purpose of the study.

Future directions

The overall aim of this paper is to illuminate how managers and key personnel in public services reflect and act on Lean in the making. The informants had just finished a Lean programme in a municipality, and they were new users. Thus, the discourses that

emerged in the analysis demonstrated the diversity in expectations of what Lean is and is not. The exploration of Lean in public services from the perspective of new users is relatively unexplored. Therefore, we argue the importance of studying new users' perspectives on Lean in their early usage as a way to establish a baseline for analysing the development of discourses in the specific Lean programme in the municipality.

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References

- Abbott, A. D. (1988). *The system of professions: An essay on the division of expert labor*. University of Chicago Press.
- Akao, Y. (2004). *Hoshin kanri, policy deployment for successful TQM*. Productivity Press.
- Andersen, H., & Røvik, K. A. (2015). Lost in translation: A case-study of the travel of Lean thinking in a hospital. *BMC Health Services Research*, 15(1), 401. <https://doi.org/10.1186/s12913-015-1081-z>.
- Andersson, G. (2011). *The assembly of Lean production: An analysis of doing production improvements*.
- Andersson, G. (2015). Resisting organizational change. *International Journal of Advanced Corporate Learning*, 8(1), 48–51.
- Andersson, G., & Hauge, B. G. (2016). The political construction of inspira science center. *Systemic Practice and Action Research*, 29(6), 565–581. <https://doi.org/10.1007/s11213-016-9381-8>.
- Andersson, G., Lynch, M. P. J., Johansen, F. R., Nielsen, M., & Tangen, M. (2018). Coworking, collaborative capabilities and university-society collaboration. *Coworking, Collaborative Capabilities and University-Society Collaboration*, 2018, 9136–9143.
- Bach, S., & Kessler, I. (2012). *The modernisation of the public services and employee relations: Targeted change*. Palgrave Macmillan.
- Bateman, N., Chester, R., & Radnor, Z. (2017). *The status of continuous improvement in ICIPS members in 2015 (www.icips.org)*. ICIPS and Loughborough University.
- Bateman, N., Lethbridge, S., & Esain, A. (2018). Pillar or platform—A taxonomy for process improvement activities in public services. *Public Money & Management*, 38(1), 5–12. <https://doi.org/10.1080/09540962.2018.1389487>.
- Bateman, N., Radnor, Z., & Glennon, R. (2018). Editorial: The landscape of Lean across public services. *Public Money & Management*, 38(1), 1–4. <https://doi.org/10.1080/09540962.2018.1389482>.
- Bicheno, J., & Holweg, M. (2016). *The Lean toolbox: A handbook for Lean transformation (fifth edition)*. Piccie Books.
- Blei, D. M. (2012). Probabilistic topic models. *Communications of the ACM*, 55(4), 77. <https://doi.org/10.1145/2133806.2133826>.
- Boyer, R., & Freyssenet, M. (2000). A new approach of productive models. The world that changed the machine. *The German Journal of Industrial Relations*, 7(4), 385–412.

- Boyer, R., & Freyssenet, M. (2002). *The productive models: The conditions of profitability*. Palgrave/MacMillan in association with GERPISA.
- Burgess, N., & Radnor, Z. (2013). Evaluating Lean in healthcare. *International Journal of Health Care Quality Assurance*, 26(3), 220–235. <https://doi.org/10.1108/09526861311311418>.
- Callon, M. (1986). Some elements of a sociology of translation domestication of the scallops and the fishermen of St brieux Bay. In J. Law (Ed.), *Power, action and belief. A new sociology of knowledge?* (pp. 196–233). Routledge & Kegan Paul.
- Carter, B., Danford, A., Howcroft, D., Richardson, H., Smith, A., & Taylor, P. (2011). Lean and Lean in the civil service: The case of processing in HMRC. *Public Money & Management*, 31(2), 115–122. <https://doi.org/10.1080/09540962.2018.1389501>.
- Charmaz, K. (2006). *Constructing grounded theory—a practical guide through qualitative analysis*. Sage.
- Cho, F. (2013). Learn ways of looking at things and thinking about things. In T. Ohno (Ed.), *Taiichi ohno's workplace management (100th birthday edn)*. McGraw-Hill.
- Deming, W. E. (1986). *Out of the crisis: Quality, productivity, and competitive position*. Cambridge University Press; Massachusetts Institute of Technology, Center for Advanced Engineering Technology.
- Dent, M. (2008). Medicine, nursing and changing professional jurisdictions in the UK. In D. Muzio, S. Ackroyd, & J.-F. Chanlat (Eds.), *Redirections in the study of expert labour* (pp. 101–117). Palgrave Macmillan.
- Drew, J., McCallum, B., & Roggenhofer, S. (2004). *Journey to Lean; making operational change stick*. Palgrave Macmillan.
- Drotz, E. (2014). *Lean in the public sector: Possibilities and limitations*. Department of Management and Engineering, Linköping University. <http://urn.kb.se/resolve?urn=urn:nbn:se:liu:diva-110660>.
- Fineide, M. J., & Ramsdal, H. (2014). Prosesstenkning—utvikling av standardiserte pasientforløp og behandlingslinjer. In V. Mia, & S. I. Vabo (Eds.), *Velferdens organisering* (pp. 108–121). Universitetsforl.
- Freidson, E. (2001). *Professionalism: The third logic*. University of Chicago Press.
- Glouberman, S., & Mintzberg, H. (2001). Managing the care of health and the cure of disease—part i: Differentiation. *Health Care Management Review*, 26(1), 56–69. <https://doi.org/10.1097/00004010-200101000-00006>.
- Gollwitzer, P. (2012). *Mindset theory of action phases*.
- Gollwitzer, P. M., & Bayer, U. C. (1999). Deliberative versus implemental mindsets in the control of action. In S. Chaiken (Ed.), *Dual-process theories in social psychology* (pp. 403–422). Guilford Press.
- Goodin, R. E. (1986). Welfare, rights and discretion. *Oxford Journal of Legal Studies*, 6(2), 232–261. <https://doi.org/10.1093/ojls/6.2.232>.
- Grimen, H., & Terum, L. I. (2009). *Evidensbasert profesjonsutøvelse*. Abstrakt.
- Harrison, S., Moran, M., & Wood, B. (2002). Policy emergence and policy convergence: The case of 'scientific-bureaucratic medicine' in the United States and United Kingdom. *The British Journal of Politics and International Relations*, 4(1), 1–24. <https://doi.org/10.1111/1467-856X.41068>.
- Hines, P., Holweg, M., & Rich, N. (2004). Learning to evolve: A review of contemporary Lean thinking. *International Journal of Operations & Production Management*, 24(10), 994–1011.
- Hood, C. (1991). A public management for all seasons? *Public Administration*, 69(1), 3–19. <https://doi.org/10.1111/j.1467-9299.1991.tb00779.x>.
- Humphrey, G. (1951). *Thinking: An introduction to its experimental psychology*.
- Kipping, M., & Kirkpatrick, I. (2008). From Taylorism as product to Taylorism as process: Knowledge-intensive firms in a historical perspective. In D. Muzio, S. Ackroyd, & J.-F. Chanlat (Eds.), *Redirections in the study of expert labour* (pp. 163–182). Palgrave Macmillan.
- Kumazawa, M. (1996). *Portraits of the Japanese workplace: Labor movements, workers, and managers*. Westview Press.
- Lascoumes, P., & Le Gales, P. (2007). Introduction: Understanding public policy through its instruments? from the nature of instruments to the sociology of public policy instrumentation. *Governance*, 20(1), 1–21. <https://doi.org/10.1111/j.1468-0491.2007.00342.x>.
- Latour, B. (1988). *The pasteurization of France*. Harvard University Press.
- Law, J. (1992). *Notes on the theory of the actor network: Ordering, strategy and heterogeneity*. <http://www.comp.lancs.ac.uk/sociology/papers/Law-Notes-on-ANT.pdf>.
- Law, J. (1997, July). *Actor network and after*. Workshop.
- Liker, J. K. (2004). *The Toyota way: 14 management principles from the world's greatest manufacturer*. McGraw-Hill.
- Lynch, M. P. J. (2020). *Entrepreneurial mindset: Defining the concept, how to measure it, how to teach it and its role in the venture creation process: Vol. 2020:122*. Norges teknisk-naturvitenskapelige universitet, Fakultet for ingeniørvitenskap. Institutt for maskinteknikk og produksjon.
- Maarse, N., Janssen, M., et al. (2012). The need to adjust Lean to the public sector. In H. J. Scholl (Ed.), *Electronic government*. Springer.
- Martin, D. (2018). Lean in a cold fiscal climate: The public sector in an age of reduced resources. *Public Money & Management*, 38(1), 29–36. <https://doi.org/10.1080/09540962.2018.1389501>.
- Modig, N., & Åhlström, P. (2018). *This is Lean: Resolving the efficiency paradox*. Rheologica Publishing.
- Muzio, D., Ackroyd, S., & Chanlat, J.-F. (2008). *Medicine, nursing and changing professional jurisdictions in the UK*. Palgrave Macmillan.
- Ohno, T. (2013). *Taiichi ohno's workplace management (special 100th birthday ed)*. McGraw-Hill.
- Pollitt, C., & Bouckaert, G. (2011). *Public management reform: A comparative analysis (3rd ed)*. Oxford University Press.
- Productivity Press Development Team (Ed.). (2002). *Standard work for the shopfloor*. Productivity Press.
- Radnor, Z., & Boaden, R. (2008). Lean in public services—panacea or paradox? *Public Money & Management*, 28(1), 3–7.
- Radnor, Z., & Osborne, S. P. (2013). Lean: A failed theory for public services? *Public Management Review*, 15(2), 265–287. <https://doi.org/10.1080/14719037.2012.748820>.
- Rees, G. H., & Gauld, R. (2017). Can Lean contribute to work intensification in healthcare? *Journal of Health Organization and Management*, 31(3), 369–384. <https://doi.org/10.1108/JHOM-11-2016-0219>.
- Salamon, L. M. (2001). The new governance and the tools of public action. *Fordham Urban Law Journal*, 28(5), 1611–1674.
- Shingō, S. (ed.). (1996). *Quick changeover for operators: The SMED system*. The Press.
- Terum, L. I. (2003). *Portvakt i velferdsstaten om skjønn og beslutninger i sosialt arbeid*. Kommuneforl.
- Timmermans, S., & Berg, M. (2003). *The gold standard*. Temple University Press.
- Womack, J. P., & Jones, D. T. (2003). *Lean thinking: Banish waste and create wealth in your corporation*. Free Press.
- Yamamoto, Y., & Bellgran, M. (2010). Fundamental mindset that drives improvements towards Lean production. *Assembly Automation*, 30(2), 124–130.