
Book Section:
McCann, Leo (2024) Lean in Public Services:Promotion, Critique, and 'Alternative Facts'. In: Lapsley, Irvine and Miller, Peter, (eds.) The Resilience of New Public Management. Oxford University Press, Oxford, pp. 95-115.

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Lean in Public Services:

Promotion, Critique, and 'Alternative Facts'

Leo McCann, University of York

Chapter in Lapsley, I., and Miller, P., eds., (2024) *The Resilience of New Public Management.* Oxford: Oxford University Press, pp. 95-115.

https://global.oup.com/academic/product/the-resilience-of-new-public-management-9780198883814?lang=3n&cc=th#

Abstract

Most famous for its use in the global auto industry, lean manufacturing (or simply 'lean') has become a widely-adopted management system in public services. It promises to deliver world-class, customer-driven, flexible services while using resources more efficiently than in traditional forms of public administration. In an era where public services are under-funded through austerity measures and demands for greater value for money, lean can be an attractive proposition for governments and public sector managers. Lean connects to the NPM premise that 'private is better' and policymakers' desire to encourage the adoption of private sector 'best practice' and 'gold standards' from world-leading corporations such as Toyota or GE. This chapter comments on the emergence of lean as a public services technology and analyses the often-excited claims of its proponents. Research on lean in public services features fundamental disagreements about the nature, impact, and appropriateness of lean. There have been heated and ugly disagreements, mirroring current debates around 'post-truth' and 'alternative facts'. The chapter discusses the controversies that can erupt when heavily promoted managerial ideologies are challenged or resisted, linking the lean public services debate into broader 'post-truth' concerns around the fragmentation and politicisation of expert knowledge.

Keywords

ideology; lean; managerialism; public services; Toyota; work intensification

Introduction

Organisations involved in the commissioning and delivery of public services are exhorted to continually search for efficiency gains. But what is 'efficiency'? This chapter documents and explores a series of controversies relating to the promotion, adoption, and analysis of 'lean' operations in public service organisations. Lean is a management system that promises to provide a host of organisational improvements, such as eliminating waste, removing errors, continuously improving processes and redesigning service delivery around user need. Its origins lie in the automobile industry, where world-leading private corporations such as Toyota are widely praised for their efficiency, innovation and customer responsiveness (Womack et al., 2008/1990).

With taken-for-granted notions of efficiency in mind, it might appear that introducing ideas and concepts derived from private sector corporations such as lean into public services would be logical, uncontroversial, and even moral. Such thinking is very much in line with the traditions of NPM. But the promotion, adoption and operation of lean in public services has proven to be highly controversial (Waring and Bishop, 2010; Radnor and Osborne, 2012; Martin, 2018). Debates have featured the following bones of contention: Has lean delivered the promised quality improvements and waste reductions? Does lean lead to work intensification and the destruction of worker autonomy? Can the empirical examples of public sector lean adoption really be considered lean at all? Can manufacturing concepts such as lean ever make sense in professional public service organisations that feature discretion and judgement? When things have gone wrong in a lean public service organisation then is lean itself to blame, or are the failures a result of botched local adoption? Can we legitimately extract lean in theory from lean in practice? Is there even any agreement of what a 'true' version of lean really is?

Debates over lean public services reflect fundamental controversies about the nature of 'efficiency' itself, taking us into the territory of debates over power, autonomy, managerialism and ideology that feature heavily in the field of Critical Management Studies (Alvesson et al., 2009; Klikauer, 2013; McCann, 2016). Debates on lean public service often have an unpleasant tenor, perhaps increasingly reflecting wider climates of 'post-truth' and 'alternative facts' (Sismondo, 2017; Malpas, 2018; Farkas and Schou, 2019). Lean's proponents and critics rarely consider in any depth the evidence and argument provided by their opponents, often preferring instead to attack each other's viewpoints, positions, methods or presumed intentions.

As with any other pre-packaged management system (Mills et al., 2009), lean has been heavily promoted by its proponents in industry, government, consultancy, and academia. Many of the texts produced by these authors are technical in nature, using the lexicon of 'toolkits', 'excellence', and 'breakthroughs'. Some are evangelical about lean's eternal, progressive truths. These texts effectively take a political position shielded behind a rhetoric of 'efficiency', 'best practice', and 'gold standards'. When pro-lean writing is applied to public services, it sometimes takes on a moralistic hue. For its promoters, it is axiomatic that lean is a form of service improvement or 'improvement science'. Who would want to prevent the 'scientific' spread of 'improvement' into healthcare? Lean can save lives (Fillingham, 2007).

But this position is difficult to reconcile with those of others who approach lean from less optimistic standpoints, such as public sector professionals sceptical about assertions of efficiency and improvement. There is also a large literature from critically-minded academics who see in lean a form of fad-surfing or managerialist ideology. There are also internal debates within the lean domain. Some see lean primarily as a form of process standardisation and reduction of variation, emphasising the traditions of statistical process control and the more recent Six Sigma methodology. Such a

viewpoint usually restricts lean adoption to industrial or back office processes where complexities can be meaningfully and effectively reduced (Coffey, 2006). Others believe lean is capable of much more ambitious application, suggesting there are no compatibility problems when lean philosophies and technologies are applied to complex human services requiring professional judgement (Graban, 2008; Radnor and Boaden, 2008; Radnor and Walley, 2008; Radnor, 2010, 2011). There is a multitude of perspectives on lean, but the literatures promoting it into public services tend to avoid these debates. Rather than ignoring or silencing these multiple perspectives, if we are to get any closer to understanding the complex realities of lean public services then it is surely right in principle to acknowledge and engage with as many perspectives on lean as possible, whether these are managerial, technical, empirical, and conceptual.

This chapter begins by exploring the literature on management 'fads and fashions' to provide a conceptual backdrop for debates around lean public services. It then reflects on a heated academic conflict about lean adoption at Her Majesty's Revenue and Customs (Procter and Radnor, 2017; Carter et al., 2017), a major UK government department. It moves on to provide some personal reflection on being a lead author of a journal article about lean adoption in a UK National Health Service foundation trust hospital, which was critical about the 'adoption' of lean at that location, embedding the empirical story into a broader range of perspectives on management fashions. The reaction to this paper from various commentators has been instructive, especially as academic work is increasingly drawn into policy and comment spaces, partly driven by the 'impact' agenda, open access, social media, and citation tracking software such as Altmetrics. I note that the combative, fragmented, cliquey, and instantaneous nature of social media can have disturbing effects in structuring the ways in which academic 'impact' can occur. The chapter concludes by considering how to make sense of these lean-related 'science wars', drawing on the 'methodological anarchism' of Paul Feyerabend. In a world of increasingly complexity (Winkel, 2021), I suggest that we will never uncover a 'truthful' position about lean public services, and I end with a plea for more empiricism, pluralism, and tolerance, rather than polarisation and mud-slinging.

Fads, Fashions, Facts

The notion of 'fads and fashions' is a staple idea of Critical Management Studies. An influential literature (Abrahamson, 1991; Birnbaum, 2001; Furnham, 2004; Sturdy, 2004; Rovik, 2011; Spicer, 2017) fills the pages of academic journals and university module outlines. Like fashions in the culture industry, management fashions are depicted as superficial, with a limited shelf-life. Birnbaum (2001) introduced the concept of the 'life cycle' of a fad; management fads never fully die off, instead they get repackaged, updated, and rebooted, allowing fad life cycles to restart. This happens within individual workplaces as management continually tries to improve performance by introducing ineffective change programmes at depressingly regular intervals (McCann, 2020). The same dynamic pertains to fads more generally. A life cycle and rebirth seem to have happened on a grand scale with lean itself. It was heavily promoted as a solution for poor productivity and quality in private sector manufacturing during the 1980s and 1990s (Graham, 1995) but fell into disfavour as the Japanese economy struggled with prolonged recession (Endo et al., 2014). But lean has come full circle, once again becoming extremely influential as it is promoted into public service organisations and professions (Filser et al., 2017; Martin, 2018).

Proponents of management concepts such as lean or Six Sigma would dismiss the idea that these notions are fads. Some (such as Seddon, 2012) might argue that management ideas have the potential to be faddish when local management adopts them in simplistic and superficial ways. This is not to say that lean itself is a useless concept, but that local manifestations might become faddish due to ignorant adopters failing to understand lean's true meaning. Seddon's position holds out the

possibility that there is a one, true lean whose essence can be traced back to a Deming or an Ohno. Lean promoters such as Liker (2004) and Womack et al. (2008/1990) often heap praise on founding figures; 'great men of history' who established timeless forms of wisdom that can and should be understood and emulated. The idea that there is nothing wrong with lean itself, but plenty wrong with partial and mishandled adoption, is an important but empirically and conceptually problematic rhetorical move that I will return to later in the chapter.

As well as being adopted in weak or self-defeating ways, management fads can also be used in a Machiavellian fashion as an ideological shield intended to mask other realities and marginalise critical voices. For Klikauer (2013), all management innovations are a form of ideology designed to drive out workplace democracy and cement senior management's domination of the organisation or field. Lean is often packaged as a solution that will lead to gains for customers, operators, management, and shareholders. It's a gold standard—a cutting-edge system used by the world's most respected corporations. Why would anyone wish to block or deny progress? But workers often struggle to see these supposed benefits of managerial innovations. With lean, workers and professionals often view it as a powerful form of work intensification, resting on tight control and a reduction of autonomy and discretion, quite the opposite of what lean is supposed to promise, with its quality circles, suggestion boxes, autonomous teamwork, self-managed cells, and upskilling.

A great illustrator of this is Laurie Graham's book On the Line at Subaru-Isuzu (1995), which documents the mechanical and sometimes oddly superficial understanding of lean demonstrated by the supervisors, trainers and middle managers at a Japanese transplant in Indiana. They would use stereotypes (1995, pp. 48–49), fail to explain any of the myriad Japanese concepts in any depth and resort to doctrinaire bullet points. Their weak rhetoric was swamped by the very real demands of the organisation; extremely unforgiving cycle times, work intensification, dismissive and remote management, workplace injuries, exhaustion, accidents. The work of Kamata (1983), Fucini and Fucini (1992), Delbridge (1998), Danford (1998), Mehri (2006), and Stewart et al. (2009), for example, all provide similar pictures. This is what I have called the 'humanitarian critique' of lean (McCann et al., 2015, p. 1560).

Other perspectives are more subtle, such as Benders and van Veen (2001) or Brunsson (2006), suggesting there can never be a 'true' and faultless installation of any management system into specific, real-world organizations, and that management fads are deliberately vague to allow superficial 'adoption'. Gantman (2004) argues that management systems have become increasingly 'fictionalised' over time. Lean, Six Sigma, balanced scorecard, agile, holacracy, and zero-based budgeting are all examples of management 'dog and pony shows' designed to make management appear in charge, proactive, evidence-based, up-to-date and responsive. Bring in a bit of lean, do just enough to show that you've 'adopted' it, then move on to the next 'gold standard'. The buyers and sellers of a fad can both be unconvinced about the value of the system. Lean adoption becomes a sham in the grand tradition of Gouldner's 'mock bureaucracy' (Gouldner, 1954).

Yet others take a different view on lean itself, in terms of its basis as a process improvement technology. The concept's meaning has changed over time as it has moved from Deming, to Ohno and then back to the US. The Womack et al. picture of the Toyota Production System contained numerous exaggerations and extensions, especially its notion of customizability. Many authors in the TQM tradition argue openly that lean and TPS has never really been about customisability. Rather, the driving roots of Deming, Ohno and Toyota are standardisation, the removal of uncertainty and the reduction of variation and errors. It is 'corrected Taylorism' (Coffey, 2006; Tamura, 2006); functional, technical, and centralised with dominant standard operating procedures, tough discipline and little room for worker discretion or autonomy.

The foregoing discussion suggests radical uncertainty about what precisely lean is, with at least five intersecting positions identifiable; hard-nosed industrial true believers in a flexible, progressive lean system (Liker, 2004; Womack et al., 2008/1990; Seddon, 2012); public sector lean promoters (Graban, 2008; Radnor, 2010, 2011); humanitarian critics of lean as autocratic management and work intensification (Delbridge, 1998; Carter et al., 2013a, 2013b); those who regard lean as corrected Taylorism (Coffey, 2006; Tamura, 2006); and others who see lean as a managerialist ideological construct (Waring and Bishop, 2010; McCann et al., 2015).

The Science Wars go Lean: Radnor et al. versus Carter et al.

One particularly intense academic battle about the nature of lean in the public sector features Her Majesty's Revenue and Customs, where a major lean initiative known as 'Pacesetter' was introduced in 2004. HMRC is a troubled organisation which has faced years of criticism for its ineffectiveness, with lean adoption so far seeming to have done little to turn the organisation's performance around.

Radnor and her colleagues were involved in consultancy for the organisation, which developed into a stream of publications. Some of these papers take the form of academic research articles (Radnor and Walley, 2008). Some are short editorials; easy reads aimed at time-pressed public sector managers (Radnor and Boaden, 2008; Radnor, 2011). There is also the original consulting report (Radnor and Bucci, 2007). This is fairly typical of lean public sector writing in that it ranges over different formats aimed at various audiences. The consulting reports and short editorials typically provide didactic instruction: 'This is lean. It was created by this great historical innovator. It has universal application. Here's how you roll it out. This set of bullet points shows the powerful improvements that our lean intervention achieved in Case X. Here are the lessons learnt that you can apply from X and bring into your own organization.' Other lean public sector writings are rendered in more academic prose with reference to broader literature, research questions, methodology sections, analyses of empirical data and typically more tentative conclusions. This variety of formats, audiences and intentions captures the oddness of the business school world, always with one foot in the world of commerce and the other in the ivory tower. It needs to occupy both spaces at the expense of suffering from a schizoid, unclear identity (Khurana, 2007; Parker, 2018). Interestingly, Radnor has also worked on evaluation research about lean introduction into university business schools (Radnor and Bucci, 2011).

Radnor et al.'s work claims that the introduction of lean into HMRC provided a range of new insights and processes which benefited managers, workers, clients, and the government. Work tasks were 'unbundled', processes were made more explicit and data were improved upon, giving management a handle on the scale and timing of workflow. Employees claimed that visual aid innovations such as whiteboards helped them better understand their own duties within a larger framework of the organisation's complex demands and timings (Radnor, 2011; Procter and Radnor, 2014).

But Radnor et al.'s findings and interpretation of lean at HMRC differed completely from that of another research team studying the same organisation, namely that of Carter et al. (2011a, 2011b, 2013a, 2013b, 2017). Carter et al.'s work paints a damning picture of the effects of lean, in which professional discretion is destroyed, morale collapses, work intensification skyrockets, staff sickness and absence become serious issues, and efficiency deteriorates. Professional, complex problem-solving work is replaced with 'mind-numbing repetitive tasks' (Carter et al., 2013a, p. 759). Staff claimed in field interviews that lean was 'a smokescreen for cuts' and that HMRC had 'jumped on a buzzword bandwagon in a cynical attempt to hide understaffing' (Carter et al., 2013a, p. 764).

Imagine for a moment being on either the Radnor or the Carter et al. research team and reading peer-reviewed articles about the same restructuring programme at the same organisation. How could it be that business school researchers are discovering such polarised findings? I was reminded of an historical anecdote about two of President Kennedy's advisors going to South Vietnam on a 1963 fact-finding mission. They returned to Washington with completely contradictory evidence—one, relatively optimistic; the other, claiming the regime was about to collapse. A bemused JFK was reported to have asked 'you two did visit the same country, didn't you?' (Karnow, 1991, p. 309).

The degree of polarisation is so sharp that the only logical explanation must be a dramatic schism in perspective (Winkel, 2021). The obvious way to characterise the difference is to ascribe to Radnor et al. the position of managerialist consultants predisposed to lean as an effective system and looking for signs of progress, whereas Carter et al. are the leftwing labour process theorists, always sympathising with deskilled, stressed and harried workers.

For a time, the conflict bubbled along quietly in parallel. There were references and criticisms embedded in each of the two groups' extensive writings on HMRC, before breaking out into low-intensity warfare and tit-for-tat reprisals. A paper from Carter et al. (2017) in the International Journal of Human Resource Management presents an explicit attack on Radnor's research claims. They claim that Radnor's team went in to HMRC determined to find only positive outcomes of lean and neglected to include any focus on the shop-floor 'reality' of drastically degraded employment conditions. Procter and Radnor (2017) responded with a point-by-point rebuttal of Carter et al.'s claims. They pull no punches: 'rather than engage with the points we have made about their work … Carter et al. mount a full-scale defence of their position and a full-scale assault on ours'. (2017, p. 469) 'On some points, they are simply wrong; on others, they grossly misrepresent what our paper said; on still others, their interpretations are, at the very least, highly questionable'. They accuse Carter et al. of being 'very quick to take offence' suggesting their paper offers a 'detailed but very muddled and ill-tempered critique' (2017, p. 471), providing a 'straw-person argument of the crudest kind' (2017, p. 476).

Procter and Radnor defend themselves against the various charges laid out by Carter et al. The first of these is that is that Procter and Radnor 'neglect a body of largely well-known critical work on lean' (Carter et al., 2017, p. 452). Carter et al. claim that Procter and Radnor misinterpret Carter et al.'s work as emanating from an outlying 'crank' position that has an axe to grind about lean as work intensification, a viewpoint well beyond the range of the mainstream lean canon. Carter et al. probably have a point here. But their accusation of 'literature omission' in the 2017 paper is somewhat clumsy, allowing Procter and Radnor (2017, p. 469) to evade it by suggesting this 'body' of critical work is not 'cohesive' and that many other writers on lean have also failed to cite these critical writers (pp. 469–470). A passage on page 470 sees Procter and Radnor defending themselves by counting the rather pitiful number of citations of this supposed canon of 'missing literature', a move that is perhaps beside the point, partly because the 'missing literature' critical of lean is in fact, considerably larger than Carter et al.'s original suggestion of a 'body' of eight sources. Some very important critical work on lean is also not mentioned by Carter and colleagues! Procter and Radnor suggest that 'the choice of what literature to use—will depend on the questions to which the paper is attempting to provide answers' (2017, p. 470). That is an interesting claim. How exactly do we choose what goes into a literature review, or into any part of an academic paper (or consultancy report, for that matter)? Why do we cite papers? Certainly, it is done to help us to 'spot gaps' in the literature and to isolate a clear research question. But it is also about setting the parameters and focus of a piece of academic writing, essentially to set it up to contribute something to an existing

audience. Here Procter and Radnor open a potentially interesting counterattack around academic knowledge production but pursue it no further.

We perhaps get closer to the heart of the matter when Carter et al. claim on page 452 that 'Procter and Radnor imply that the "labour process" perspective … has dictated the nature of our evidence. Such an inference that questions our methodological rigour and research ethics is untenable … [O]ur evidence of lean and its effects on employees is consistent with a well-established body of critical work'. Back they go to their charge that the mainstream lean promoters decide to tactically ignore other existing critical work and falsely label critics as screwball outsiders coming in with a strange and politicised 'agenda' to trash lean. A reader of the publications from both studies gets a contradictory and confusing picture on the nature of lean in public services. One of the reasons for this could be a function of the wide range of competing elements in play. HMRC is a poorly-performing organisation under duress. To what extent were its struggles really anything to do with lean? Was Pacesetter really a lean initiative? Did lean do anything useful, or did it largely make matters worse? How could we know? Can we isolate lean from the general operational complexity and mess? The fog and friction of the lean science wars are difficult to make sense of.

As ever, there are other belligerents on the fringes of the fight. Organizational change consultant John Seddon has also been sharply critical of one of Radnor's short editorial pieces (Bateman et al., 2018; Radnor, 2011; Radnor and Osborne, 2012). In attacking Radnor's interpretation of HRMC in a short counterpoint of his own, he finds in favour of Carter et al., and berates certain forms of academic writing as unclear and sophistic. He argues that it is 'lamentable that an academic should avoid the most important perspective: the dependent variable. In lay terms: does it work – does Lean lead to better services to taxpayers and their intermediaries, and at lower costs?' (Seddon, 2012, p. 127). Quite how he can prove 'what works' and to show how much of an organisation's good or poor functioning can be ascribed to lean, or to other factors is not convincingly explained.

Re-casting the Lean Spell

My own research has also been caught up in a low-intensity skirmish of the lean science wars. The digitised, social media-enabled platforms upon which academic articles are now mounted enable broader international 'impact' but also open up the possibility of one's work being embroiled in debate beyond the confines of academic classrooms, journals, conferences, and seminars. The article, 'Casting the Lean Spell' (McCann et al., 2015), was part of a larger project with colleagues Paula Hyde, Edward Granter, and John Hassard, which culminated in the book Deconstructing the Welfare State (Hyde et al., 2016). Lean featured strongly in one of the four NHS case studies that we explored in that research project. At 'Milltown' Foundation Trust Hospital, management consultants had been brought in to stimulate a lean-based, hospital-wide efficiency improvement programme. The consultants held regular training roadshows, encouraging staff to 'map the value stream' of their various departments, such as maternity wards and x-ray departments. Our ethnographic research programme had given us wide access to the organisation, allowing us to observe training days, read the newsletters portraying lean-inspired innovations and improvements and discuss the impact of lean on professionals, patients, and departments. The article tracked how initial staff enthusiasm for lean eventually drained away to the point where lean seemed to be a rather superficial adoption. Anything became lean, such as tidying up some shelves or painting a line on a floor for patients to follow. It was pretty much a classic case of a fad life-cycle where lean eventually just drifted away over the course of our three years of research at the hospital.

On some level lean was useful in stimulating some basic improvements. NHS staff seemed to welcome being involved in processes where their inputs were at least being listened to. The lean

programme did enable some simple, quick fixes that could boost morale. But there was little or no fundamental change to the organisation, and chronic problems remained obvious: high costs and budget difficulties, huge patient demand and overcrowding, staff burnout, low morale, and problematic management structures. The case exposed basic confusions about lean healthcare, up to and including some strange and contradictory assertions of the lean trainers and promoters that elided lean/Toyota with Taylorism/Fordism. TQM, 5S, Deming, kaizen, Kanban—these things all floated about with no resolution. Overall, the paper argued that lean adoption at Milltown was faddish and, in important senses, not really an 'adoption' at all. We were pleased to see our paper published, partly because it was one of very few critical or even ambivalent pieces of work on lean healthcare (McCann et al., 2015). Once it was out, we thought little more of it and moved on to writing about other cases in the study.

But little did we know that 'Casting the Lean Spell' was about to make a bit of a splash in the lean healthcare social media clique. The day after the paper was published online on the Human Relations site, the paper was Tweeted by Andre Spicer of Cass Business School, City University. Spicer is a big name in CMS and has had considerable success with taking his work out into the public realm, especially his own work on management fads, or what he calls 'business bullshit' (Spicer, 2017). His pithy summary of our paper went as follows:

- @andre_spicer: 'What is the fate of lean in healthcare? First people are hopeful, then they get confused, then they stop caring' 9 April 2015

Five days later Mark Graban, a lean healthcare guru, had got wind of the paper and had started to Tweet it to his 19,000 followers. Not being on social media at all at this point, I was oblivious to all of this. One of his Tweets included a screenshot of a paragraph from the literature review section of the paper in which we discuss the existence of the 'humanitarian critique' of lean, in which many authors have described lean workplaces as authoritarian. He wrote:

- @MarkGraban: 'There are failures, but calling lean authoritarian is hard to justify. Do authoritarian companies use lean tools?' (14 April 2015)

A number of other experts on lean healthcare joined his discussion, with replies on the same day featuring the following:

- @joyfurnival: Lots of stuff branded lean in NHS … doesn't mean real lean, tho'
- @brucejgray: Cargo cult lean
- @MarkGraban: Finishing the article, it sounds like a lot of superficial #lean taught by non-experts

A colleague eventually emailed me about this timeline, suggesting I should take a look. With trepidation, I pointed my website towards Twitter. Upon reading the threads, my feelings of anxiety gave way to resigned frustration. Much like the Carter/Radnor conflict there was little engagement with what our paper actually argues. The medium of Twitter seemed to exacerbate this problem, as it seems primarily set up for those on the thread to continue to assert the truth of their position and to highlight and promote their other writings. Graban set a few other hares running:

- @MarkGraban: They are academics in Manchester, England who might have some sort of agenda (14 April 2015)
- @MarkGraban: That's why I wish the unions and academics realized the difference between real #lean and LAME

The latter Tweet also included a link to a blog post he had written on this subject eight years prior. What we saw at Milltown, evidently, was not lean, it was 'LAME'—'Lean As Misguidedly Executed'.

Here, Graban rehearses the idea that there is nothing wrong with lean, but plenty wrong with botched local implementation or 'LAME'. With this position installed, when a lean workplace is then criticised, the critics are shunted into a place from which they are not actually criticising lean at all, because they simply haven't seen it. It's a bit like when critics attack socialism by pointing to the example of the Soviet Union; defenders of socialism will respond by claiming that the USSR was totalitarian, not socialist. Graban claims a 'true' lean healthcare in which professionals and their judgment are respected, in which no-one is ever hurried by lean flow process, in which there are no useless performance measures and where everything is built around the patient. But where does this perfect, win-win version of lean exist? How would we know that lean was responsible for this utopian performance? Would this way of operating really need lean? Could this goal of effective, responsive, humane, discretionary organisation be pursued through other means, such as through traditional, professional bureaucratic principles? Why do the lean promoters pursue the problematic claim that lean never contains Taylorian principles and should never be equated with Ford? Why is Deming invoked like a god whose true insights are timeless and universal to all workplaces? Graban seems to suggest that if a clinician resists or questions the tenets of lean healthcare then he or she is slowing progress and potentially risking patients' lives.

Graban, Radnor, Seddon, and others (see Fournier and Jobin, 2018; Fournier et al. 2021) want to extract lean the idea from lean the practice, especially when the practice is poorly implemented by those who don't understand lean well and where the broader organisational climate is not supportive. But that is philosophically a lot harder than it sounds. Many of the criticisms made by workers, unionists and academics about lean being authoritarian, strict, Taylorian and pressuring are based on empirical examples of observing workplaces that claim to be lean. To some extent, therefore, lean is the empirical reality of what is being done in its name. Other contributions to this Twitter thread were more equivocal, noting that the NHS has been bad at understanding, teaching, and adopting lean. That is actually quite in keeping with what our paper claims:

- @brucejgray: NHS culture loves novelty = opposite of Deming's constancy of purpose
- @brucejgray: NHS culture loves novelty. Lean often seen as magic wand to deliver cost improvement targets
- @brucejgray: Almost never understood as an operating system. L'drship never see that they'll have to change too (15 April 2015)

But Graban suggests we go further in our paper by unfairly attacking lean itself. There are parts of the paper containing a critique of lean the theory, and certainly there's scepticism that it could ever work in environments characterised by professional judgement and complex human need, such as hospitals. But I would reject the claim that we 'set out to prove' that lean is nothing other than a fad. One could just as easily say that in his own writings Graban 'sets out to prove' that lean is a universal, progressive, effective quality improvement programme that—if applied properly—will lead to revolutionary improvements in all organisations. That claim is not going to be easy to prove empirically, and Twitter discussions are unlikely to bring us any deeper insights, as we can see from a further chain of suppositions and position statements. It was particularly amusing to read that our study was 'someone's PhD project':

- @MarkGraban: My sense is that these professors set out to prove their conclusion that #lean is bad and nothing other than a fad (15 April)

- @dumontis: Did they actually work in a Lean organization even once do you think?
- @MarkGraban: Of course not
- @AnthonyDecaria: Apparently problem solving is a fad! Who knew?!
- @MarkGraban: Lean is only a fad for organizations that are susceptible to fads
- @theageilepirate: Lean tools + Western org behaviour w/o adopting lean culture fundamentals = process fad. Is this what is happening?
- @MarkGraban: No, they are basically saying that lean is bad and it's a fad promoted by charlatans.
- @theageilepirate: Ouch. Although with so many systemic issues in UK NHS any poorly introduced change/process/culture would fail.
- @MarkGraban: That's true. But these academics are attacking #lean rather than criticizing NHS for not doing it well
- @theageilepirate: An N-year ethnographic study will be someone's PhD project. They're hard to do well

These criticisms are presumptuous and partial, springing from the architecture of Twitter, where the smallest snippets of knowledge are circulated, and where few participants read academic papers in their entirety. Instead, the followers tend to respond to the signals of the initial poster—if it comes from the account of an ally whom they know and respect, they might assume that he or she has read the paper fully and that their judgement will be accurate. This triggers the 'pile on' of 'likes', retweets, and supportive replies. There's no need to read the paper itself. And paywalls can make this difficult. Rather than reading it's easier just to continue commenting: boast about credentials, retweet one's own work, build followers and profile, and support like-minded friends and associates.

On the other hand, one helpful outcome of this Twitter episode was the spreading of the paper to others who would otherwise not have seen it. Other Twitter users (such as @JanDewing, 24 September 2015) suggested that it was 'Very interesting and refreshing' to read our study. I received a few emails from practitioners asking me to email the pdf of the paper. One of these came from a manager in a US hospital. He wrote back with a detailed response that suggested genuine engagement with the article. He noted that it was impossible to find similarly critical or even-handed analyses of lean healthcare, and expressed concerns over what he saw as lean creating more problems with administration and checklists which fell to already-overstretched nursing staff.

In this age of 'impact' and 'engagement', academics are increasingly encouraged to self-promote via blogging and social media. But to what extent can they (or should they) engage with the prolific output of the lean consultants? Lean gurus' social media and blog pages regularly contain criticism of observers who question the use of lean in healthcare. For example, Mark Graban has heavily criticised a paper written by US medical doctors Hartzband and Groopman in the New England Journal of Medicine (2016). The same time-honoured tactics are used. What went on at the hospital they describe can't have been really lean. The doctors see lean as Taylorism, which could only have happened if the lean transformation was carried out poorly by ignorant implementers. The clinicians, therefore, aren't criticising lean as they've not actually seen it. All they've seen so far of 'lean' is, in fact, 'LAME', so it's no surprise they don't like it. Besides, what do these doctors propose we do instead? Surely, they aren't happy with the chaotic, overcrowded, and underfunded status quo of US hospital medicine? He goes on to attack their methods, reasoning and writing style in the blog and in

responses to a torrent of readers' questions (all supportive of lean healthcare and equally nonplussed by the doctors' critical paper).

Where does lean public service go from these ugly quarrels? Seventy years on from the establishment of the Deming Prize with its roots in engineering, quality control and statistics, we're still mired in attacks, confusion and disagreement on matters of first principle.

Conclusion

In one sense, we are in uncharted territory. Social media and blogs can help to spread academic work far and wide. But they also make it easier to engage in ad hominem attacks and to dismiss evidence and arguments. Twitter seems a particularly problematic, politicised and potentially dangerous transmission belt for academic argument. Perhaps the lean science wars in this 'post-truth' environment reflects the accelerating de-privileging of expert 'science' and the solidification of clans and rigid positions (Nichols, 2017; Winkel, 2021). The decentring of expert knowledge might have partially emerged from the progressive intentions of postmodernism, but has now helped to open up dangerous political fissures in which expert, professional knowledge is now openly debunked without the need for evidence of any kind (Leicht, 2020). Social media activism has also played roles in recent campaigns where academics have asked journals to retract deliberately controversial and highly sensitive academic papers (see, for example, the Bruce Gilley controversy at Third World Quarterly).

On the other hand, the lean science wars are just the continuation in updated form of traditional academic 'spats' and disagreements. The academic world—even within the confines of the business school—contains a universe of opinion and wide variation in what qualifies as empirical inquiry and 'knowledge production' (Feyerebend, 1975). Allegations of science being distorted are far from new, whether drawn from undue ideological, political, or commercial influence, or from authors' ambition and arrogance (examples include T. D. Lysenko, Hans Eysenck, Phillip Zimbardo, and the Alan Sokal hoax). Outside of the ivory tower and in the 'real world' of workplaces and public bureaucracies, organisational changes are always political and controversial, however they might be constructed by management as independent, evidence-based and essential. Claims and counterclaims are fixtures of organisational life which will never be free of political interest.

In reporting a failed, feeble, and ultimately ineffective lean adoption, our work received heavy criticism from some members of the lean healthcare industry. We didn't promote lean healthcare and the article has a sceptical tone, suggesting lean is a fad like many others (McCann et al., 2015). But we never explicitly attacked lean itself, and at times even pointed to some small victories for this poorly thought-out version of lean (if it really can be called lean at all, which we question). Our paper included multiple voices and spoke to a lack of clarity born of a messy, untidy world. For all the systematic reviews and scientometric analysis of lean healthcare (D'Andrematteo et al., 2015; Costa and Filho, 2016; Moraros et al., 2016; Filser et al., 2017; Henrique and Filho, 2018), I remain sceptical that we will ever come to a position of absolute truth about whether or not lean is an effective and appropriate technology for public services. To some extent I agree with the Feyerabend position on multiple voices and methodological anarchism. When discussing human action in complex organisations an 'evidence-based' consensus about whether an innovation 'works' or not is very hard—often impossible—to reach. And how could we engage in academic debate and education if there was no disagreement around what 'efficiency' or 'quality' means, or whether an intervention can really be labelled lean, or who gains and loses from organisational change? There will always be multiple perspectives on any scenario that involves human action, power relations and professional discretion, especially when embedded into a broader context of public services attempting to

address the needs of humans and citizens. We have much more to think about as academic research moves out of the ivory tower and into the world of policy, consulting, and public comment, particularly when filtered through the hazy mechanisms of social media. Methodological, conceptual, and political pluralism are central to academic inquiry, but personal attacks, self-published blogs, Twitter pile-ons, and the publishing and retraction of 'controversial' papers designed to provoke and offend are not very sensible means for us to pursue our discussions.

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