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Citation for published version:

Harwood, S 2019, 'Viewpoints: Whither is problem structuring methods (PSMs)?', *Journal of the Operational Research Society*. <https://doi.org/10.1080/01605682.2018.1502628>

Digital Object Identifier (DOI):

[10.1080/01605682.2018.1502628](https://doi.org/10.1080/01605682.2018.1502628)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

Journal of the Operational Research Society

Publisher Rights Statement:

This is an Accepted Manuscript of an article published by Taylor & Francis in the Journal of the Operational Research Society on 19/1/2019, available online:
<https://www.tandfonline.com/doi/full/10.1080/01605682.2018.1502628>

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Whither is Problem Structuring Methods (PSMs)?

A recent paper by Lowe *et al* (2016) presents an ‘innovative Problem Structuring Method to guide interventions’. However, when one looks at the references relating to the section on PSMs, then one is struck by the dates of the references, with the most recent being 2014. Likewise, in the literature review of Abuabara *et al* (2017), its most recent papers cited in the sections relating to SSM and SODA, are 2009. Indeed, a cursory scan of papers published in JORS over the last 10 years suggests that PSMs are of interest to fewer and fewer researchers. What is happening?

Has the complexity of real world situations evaporated, thereby making redundant the utility of PSMs? Has there been a renaming of PSMs as advocated by Eden & Ackermann (2006)? Have PSMs run their course in popularity and are no longer ‘fashionable’ in the sense explained by Abrahamson (1996)? Have alternative approaches been developed for handling social complexity? I freshly come to this debate with a growing interest in a specific PSM due to its utility for aiding me handle complex situations. As I look around me, I ask the more general question whither is Problem Structuring Methods in universities?

The collection of papers in the two issues (July 2006, May, 2007) that comprised the Special Edition of the *Journal of the Operational Research Society* (JORS) on PSMs, offered much promise as suggested in the title of its first editorial “Problem structuring methods: new directions in a problematic world”. They also drew attention to some of the challenges. Perhaps it is time to reflect upon just a few of the issues raised in this Special Edition.

Whilst PSMs have been around for over 3 decades, these tended to be associated with a few key gurus (Westcombe *et al*, 2006), who are ‘aging’ (Rosenhead, 2006). The introductory paper by Rosenhead (2006) revealed that PSMs “have been one of the growth points for operational research (OR), extending its fundamentally analytic approach into problem domains with which OR had previously failed to, or not purported to, engage” (ibid: 759). It permits engagement in situations with numerous actors, viewpoints as well as potentially conflicting interests. However, one threat to PSMs is if it fails “to map onto pivotal decision areas where current decision support is perceived as inadequate” (ibid: 763) (i.e. does it matter to decision making). As such, access to appropriate cases is important, but a challenge. There are also challenges in the evaluation of PSM applications (White, 2006). Moreover, there is concern about the rigour of PSM approaches, in contrast to what is more traditionally viewed as acceptable research practice, as PSMs tend to be take the form of ‘action research’ (Checkland, 2006). Further, this action orientation can create a tension for PSM users who can be acting as both researchers and consultants. Likewise, a deterrent for engagement is the nature and demands of research practice (e.g. RAE) and, in the face of this, how new researchers can engage and develop the requisite skills for PSMs (Westcombe *et al*, 2006). Further, the language and requisite skills are difficult to master (Rosenhead, 2006; Morrill, 2007). Perhaps consequently, the PSM community has tended to be small and there has been a lack of buy-in from outside this community (Morrill, 2007). Rather than PSMs being stretched and developed, there has been developmental stagnation (Morrill, 2007).

Since then has there been much change? Ackerman (2012) states that PSMs are being used in the public sector and large multinationals. However, the same issues appear to thwart academic take up. To add is the challenge of teaching PSMs.

I argue that PSMs, irrespectively of how inappropriately named (Eden & Ackermann, 2006), are as relevant today as they were in the past. They offer a powerful means to support researcher – practitioner collaborations, particularly in a climate where ‘impact’ is a research requirement. Specifically, they support the difficult task of trying to establish what is the problem

(Ackermann, 2012), with view to an intervention to deal with it. A regular academic example is that of the struggle of postgraduate Masters' dissertation students to establish their research topic.

I propose that well established developments such as SSM, SCA and SODA and, of course, the rest, offer the opportunity for a deeper understanding of the mixed methods implications when blending soft methods with 'hard modelling approaches' (cf. Checkland, 2006). PSMs such as the SSM, provide a methodological framework to accommodate specific methods and techniques, irrespective if construed as 'hard' or 'soft'. Hard modelling offers one way to understand social situations (e.g. logistics) and as such is commensurate with PSMs (Checkland and Howell, 2004). Moreover, that whilst PSMs tend to be associated with the 'learning process', second order cybernetics (Maturana, 1970; von Foerster, 1979) draws attention to the organisational context within which the 'learning process' takes place and complex problems are handled. To add are beliefs and trust which are intrinsic features of effective problem handling. By implication, these draw attention to the political and cultural features of such contexts in which models, 'hard' or 'soft', are applied; contexts are not neutral. Likewise, different organisational contexts (i.e. different mixes of organisational members) will give rise to different problem definitions and different solutions; will these be inclusive or exclusive, democratic or elitist? The call for more politically, socially and culturally integrative approaches, such as within the domain of sustainable development (e.g. 'water-energy-food nexus': ICIMOD, 2012), resurrects PSMs as an important research area. It also invites attention to more innovative thinking about PSMs.

PSMs offer much opportunity for further research whether in the context of strategy development, change management, sustainable development, social enterprise or the teaching of research methods, to name a few. Moreover, there is growing call by employers for students to develop skills for complex problem solving, these being among the top required skills (WEF, 2016). If PSMs have been intended to be the approaches for dealing with complex problems, then should they not be given more attention? How should this be embedded in university curricula? How does one teach this? Where is the research to develop a deeper understanding of PSMs? What can be transferred from-into other disciplines?

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