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Engaging with theory: From theoretically informed to theoretically informative improvement research

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Repeated calls have been made for the increased use of theory in designing and evaluating improvement and implementation interventions.[1-4] The benefits are argued to include identifying contextual influences on quality improvement (QI), supporting the generalisability of findings, and anticipating how future phenomena might unfold.[2 5] Most importantly, the ability of theories to provide robust explanations is invaluable for understanding how, why and in what circumstances interventions work (or do not work),[6] thus addressing crucial questions relating, for example, to variation in improvement outcomes.[4 7]

Although the use of theory in improvement and implementation research appears to be increasing over time,[8] the emphasis largely remains on adopting a *theoretically informed* approach, i.e. applying theory to design an intervention or to systematise and explain evaluation findings. Despite the recognised need to 'test' theories by scrutinising their assumptions in the light of empirical findings,[9] improvement researchers are often inclined to treat existing theoretical knowledge as received wisdom which is rarely critiqued and hardly ever moved forward. This often results in a one-way relationship, whereby theory shapes data collection and analysis, but little effort is made to explain what the resulting empirical findings mean for theory.

Part of the problem is that theories may be reduced to lists of 'contextual factors' rather than providing explanations that would uncover causal relationships between them.[10] This is in contrast to other social science fields, such as organisation and management studies, where theories are seen as 'examined sets of concepts' aiming to reveal previously hidden mechanisms underpinning the development of social phenomena.[11] Rather than producing exhaustive lists of variables, the aim here is to focus on a relatively limited number of key concepts but explore complex relationships between them in depth. Capturing this complexity in the constantly changing social word requires, however, that theory should be constantly refined.[11 12]

This editorial aims to contribute to this debate by advocating *theoretically informative* improvement research which, although guided by existing theory, would be able to yield new theoretical insights applicable to a broader range of settings.[11] This approach implies *a dialogue* between the theoretical and the empirical, whereby the researcher uses a *particular* case or set of cases as an opportunity for further refining previous conceptualisations of the *general* processes contained in the earlier theoretical accounts.[12] I will use the Jones et al.[13] paper in this issue as an example of successfully deployed theoretically informative approach, highlighting some practical tips for researchers who aspire to move from merely applying theory towards entering into dialogue with it and, through doing so, refining its assumptions.

First, it is important to find a balance between the empirical question *'What is going on here?'* and the theoretical question *'What is this a case of?'*[12] Jones et al. make it clear at the outset that they aim to understand 'the response of healthcare provider organisations to a board-level QI intervention', which involved the use of a research-based guide for senior hospital leaders to develop and implement organisation-wide QI strategies.[14] This sets their study in a novel *empirical* context. However, they do not stop here, but position their study *theoretically* as a case of 'corruption of managerial techniques', a notion first introduced by Lozeau, Langley and Denis.[15] Jones and colleagues make a theoretical claim that the diversity of QI outcomes can be explained by different ways of closing the 'compatibility gap' between the assumptions underpinning the proposed board-level intervention (e.g. an assumption

that there is a functional board) and the characteristics of the adopting organisation (e.g. the actual configuration of the board). An examination of this claim sets in motion a fruitful dialogue between the theoretical and the empirical.

The next step involves positioning the empirical case under investigation against earlier studies that have contributed to the formulation and development of the relevant theory. Since theorising is an iterative and recursive process,[12][16] it is important to consider previous empirical studies building on the relevant theory rather than solely rely on the original theoretical account.[16] Whether the theoretical approach is chosen prospectively (prior to data collection) or retrospectively (at the data analysis stage, as is the case in the Jones et al. paper), this enables the researcher to paint the state-of-the art picture of what is already known, identify gaps in theoretical knowledge and, subsequently, focus on addressing them. Not only do Jones et al. draw on the original Lozeau et al. paper, they also find valuable insights in subsequent studies exploring the distortion of managerial techniques in organisations. For instance, they engage with such ideas as the possibility of top-down distortion described by Addicott, McGivern and Ferlie in their study of healthcare networks[17] and the erosion of staff engagement over time highlighted by Kislov, Humphreys and Harvey in their longitudinal study of facilitation in a collaborative research partnership.[18]

Third, when analysing empirical data in a theoretically informative way, it is crucial to move beyond simply cataloguing different contextual factors towards exploring how these factors work together, mediating QI outcomes.[3][7] This often involves mining and reducing the data in a search for more general patterns.[19] As a result, broader categories or themes are identified, bringing together multiple contextual factors and highlighting generative mechanisms through which improvement interventions lead (or do not lead) to intended outcomes. For instance, Jones and colleagues' use of the notion of 'organisational slack' reflects the complex interrelationship between contextual factors both external to the organisation (e.g. its regulatory environment) and internal to it (e.g. the organisation's own performance or its approaches to constructing the portfolios of improvement projects). Exploring connections between these factors across different cases advances our understanding of mechanisms underpinning the implementation of organisational QI interventions.

Finally, analysis and interpretation of findings should not be limited to finding similarities between the empirical case and extant theory, but aim to identify and explicate the differences, thus moving theory forward.[12] The key task here is to explain what these differences mean for our understanding of theory and in what way, no matter how minor, this understanding is expanded, clarified or amended by the empirical case under investigation. Jones and colleagues accomplish this by identifying a new mechanism underpinning the phenomenon of 'loose coupling', which is usually seen as superficial or ritualistic participation in the intervention. They interpret loose coupling as inaction or 'stalling' induced by external regulatory environment, whereby hospitals become overburdened by multiple improvement initiatives operating at the same time and therefore have to prioritise their improvement efforts. Another theoretical contribution of their paper lies in highlighting the importance of collective change agency (here in the form of a well-functioning board, in which stable, coherent and collegiate leadership leads to 'mature' QI governance) in closing the 'compatibility gap'. This is an important finding that does not feature as prominently in the original formulation of the theory.

The approach taken by Jones and colleagues represents one of the multiple ways of entering into dialogue with theory. Prospective use of theory to identify relevant research gaps and to guide data collection offers a potentially valuable alternative to post-hoc theorising deployed at the data analysis stage. It is also important to remember that every theory is inherently selective and one-sided, guiding its users towards certain aspects of the phenomenon at the expense of others.[11] Jones et al.'s

conclusions might well have been quite different had they engaged with another theory, for instance absorptive capacity,[7] to analyse their findings. Finally, since the process of theorising is always incomplete,[12] in many cases it may be perfectly legitimate to adopt an even more critical stance towards existing theories, whereby the empirical researcher draws 'ever finer distinctions'[20] and thus helps build a cumulative understanding of the general processes and mechanisms of change.

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