Mind the gap

Mind the Gap: But does the gap matter in social science research?

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Abstract
This paper explores the issue of the 'gap' between research and practice in the social sciences with specific focus upon business and management domains. This is important and timely given the current interest by funding bodies in the impactful nature of research. However, it is also problematic since such research is frequently viewed as irrelevant by the practitioners it is intended to impact. On the one hand, there is a need to advance knowledge which is abstract and conceptual, though, not uncommonly, whilst empirically grounded, this is construed as being that which is interesting by the scholarly community, where the emphasis is upon developing the field. This is compounded by the need to consistently publish in 'quality' journals. On the other hand, are the requirements of practitioners which are driven by a solution provision and immediate relevance orientation, with scant regard for rigour. This emphasis upon results is to the detriment of theory and the needs of researchers for quality empirical data. This invites the question of how to bridge this gap in terms of what is construed by both academics and practitioner as relevant.

In response, attention is dawn to such approaches that attempt to bridge this gap, such as Pragmatism, Action Research, Constructive Research and Interventionist Research. Each claims to have their own orientation, with associated advantages - disadvantages. However, these, questionably fail to resolve complex situations characterised by multiple views as to what the problem is. This invites attention to Problem Structuring Methodologies (PSMs), in particular, the Cybernetic Methodology, which offer an approach to deal with such multi-perspective complex situations, and with the aim to effect change in the situation. This paper evaluates these different approaches and offers a reflective and collective auto-ethnographic view to surface the pragmatic challenges of this pressing 'value gap' and with the intent to stimulate dialogue as to what this means for advancing business and management research and what 'impact' should actually mean.

Keywords: Research Gap, Research, Reflection, Research methods

1. Introduction

The distinctive warning to be heard at UK train stations is to 'mind the gap' (Figure 1). The aim is to ensure the passengers' successful bridging between platform and train. However, unlike this gap, there appears to be a common perception of an unbridgeable gap between the 'ivory tower' worlds of academics and the reality of everyone else (THES, 2017). However, is this necessarily the case. There is no doubting that there is abstract work which has likeminded scholars as the intended audience – this being the mode 1 research espoused by Gibbons et al (1994). However, there is research which does interface between the world of ideas and that of practice. Indeed, some disciplines may be viewed as more applied that others (e.g. science versus humanities) and pure research may be required before applications can be considered. Indeed, what is the precise nature of this gap. It is proposed that the gap is that between theory and practice rather than a gap between academic- and practitioner. It is a gap in how knowledge is used.

Figure 1 The familiar 'Mind the Gap' warning to be heard and seen at UK railway stations

Within the social sciences, particularly within the business – management domain, this issue of gap is equally if not more applicable. For example, there is need to publish in top quality peer reviewed journals which might be read by only a few with a deep interest in the specialism. However, this work may be totally inaccessible to a practitioner. Nevertheless, there is an academic desire to encourage more impactful research, as evidenced with the UK's Research Excellence Framework which has 'impact beyond academia' as one of three assessment criteria (REF, 2018). This draws attention to two issues. First is the relevance of theory to practice – how does theory inform (describe, explain) about practice? Second is the effect of research upon practice – how can theory change (prescribe, predict) practice. There has been much discussion about this (e.g. Tranfield & Starkey, 1998; Grey, 2001; Kilduff & Kelemen, 2001; Kieser & Leiner, 2009; Birkinshaw, et al., 2016; Tkachenko et al., 2017). Moreover, this has can be elevated to questions about the role of Universities and specifically Business Schools and the purpose of research (e.g. Starkey & Maden, 2001; Starkey & Tempest, 2008; Wilson & Thomas, 2012). However, this perhaps detracts from the fundamental issues of how can researchers bridge the 'gap' and create a meaningful interplay between theory and practice.

The aim of this paper is to briefly examine how the gap can be methodologically bridged in the context of management research. It examines four different representative approaches: Pragmatism, Action Research, Interventionist Research and Constructive Research. These four approaches have emerged over the last century and illustrate different emphasises. Then an alternative approach is presented which is from drawn from the family of approaches referred to Problem Structuring Methods (PSMs). The approach selected (The Cybernetic Methodology) provides a systemic approach to bridging the gap.

2. Various approaches to closing the 'gap'

The desire for interplay between theory and practice manifests in approaches whereby the researcher attempts to either generate theory from engagement with practice or uses theory to change practice

2.1 Pragmatism

Pragmatism has its roots in the work of Charles Pierce and is enunciated in the statement "Consider what effects that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object" [Peirce, 1878; 5:402; also Peirce, 1905; 5:422]. This is later more clearly expressed: "Now quite the most striking feature of the new theory was its recognition of an inseparable connection between rational cognition and rational purpose; and that consideration it was which determined the preference for the name pragmatism" [Peirce, 1905; 5:412]. Simply put: "it is merely a method of ascertaining the meanings of hard words and of abstract concepts" [Peirce, 1903-07; 5: 464]. "There are two functions… that Pragmatism should perform;.. in the first place, to give us an

expeditious riddance of all ideas essentially unclear.. In the second… help to render distinct, ideas essentially clear" [Peirce, 1903; 5:205]. This is underpinned by the view that "all that we can anyway know relates to experience" [Peirce, 1908; 6:492], which Peirce clarifies includes "the entire mental product". For Pierce, pragmatism concerns the establishing of meaning of concepts by evaluating the practical nature of the implications of our reasoning.

However, commenting about the 'merciless way' that the word was being 'abused', "he begs to announce the birth of the word 'pragmaticism' which is ugly enough to be safe from kidnappers" [Peirce, 1905; 5:414]. Nevertheless, its meaning is unchanged: Pragmaticism "is a theory of logical analysis or true definition" [Peirce, 1908; 6: 490]; is a method which places emphasis upon a mode of reasoning whereby the practical consequences ("practical conduct" [Peirce, 1908; 6:490]) of this reasoning are evaluated.

Aside from this merciless abuse, both John Dewey and William James had embraced and written about 'pragmatism'. For John Dewey, perhaps the clearest insight into his view of pragmatism is provided in his preface to '*Logic: the theory of inquiry*' (1938). This views inquiry as the "determination of an indeterminate situation" (Dewey, 1938: iii) in which a coherent account can be made between observation and conceptualisation, invoking a pragmatic approach. However, in explaining this method Dewey explains:

> The word 'Pragmatism' does not, I think, occur in the text. Perhaps the word lends itself to misconception. At all events, so much misunderstanding and relatively futile controversy have gathered about the word that it seemed advisable to avoid its use. But in the proper interpretation of "pragmatic," namely the function of consequences as necessary test of the validity of propositions, *provided* these consequences are operationally instituted and are such as to resolve the specific problem evoking the operations, the text that follows is thoroughly pragmatic (ibid: iv).

Further, Dewey suggests that for readers for whom his discussion is too technical, that they:

> Interpret what is said by calling to mind what they themselves do, and the way they proceed in doing it, when they are confronted with some question or difficulty which they attempt to cope with in an intellectual way (ibid: iv).

Dewey's view of pragmatism is more concerned with how concepts give rise to operationised consequences, thereby dealing with problems.

However, William James was explicit in his account of pragmatism, though he did not like the name 'pragmatic' (James, 1907: vii). In a series of lectures published in 1907, which Dewey reviewed (Dewey, 1908), James explains that "The pragmatic method… is to try to interpret each notion by tracing its respective practical consequences" (James, 1907: 45). Moreover, theories have utility:

> *Theories thus become instruments, not answers to enigmas, in which we can rest*... Pragmatism unstiffens all our theories, limbers them up and sets each one at work (James, 1907: 53).

James shifts attention to how theories are instrumental in dealing with problems.

From an applied perspective, this has been picked up more recently as implying outcomes (solutions) are practical. The account provided by Saunders et al. (2016) highlights this practical orientation whereby the problem is clearly defined, permits mixed or multiple methods and converts into a practical outcome which can inform future practices. Knowledge has practical value / relevance.

In conclusion, pragmatism has evolved to become a vague concept, but is concerned with how concepts have application to problem situations.

2.2 Action Research

'Action Research' is attributed to Lewin (Adelman, 1993). Adelman presents a brief biography of Lewin's research approach, describing him as a 'scientific pragmatist' who was influenced by Charles Peirce. Lewin (1946) considered action research within the context of 'research for social practice', which he stated "can best be characterised as research for social management or social engineering… [this being] a type of action research," (ibid: 35) where action research is "research which will help the practitioner" (ibid: 34). However, it requires inclusion of "mathematical and conceptual problems of theoretical analysis… descriptive fact-finding… Above all it will have to include laboratory and field experiments in social change" (ibid: 36). In a subsequent paper, Lewin (1947) reveals that experiments allows assessment of how a change is brought about. However, Dash (1999) credits the Tavistock Institute for developing action research in the 1950s and 1960s.

Clark's (1972) seminal book "Action Research and Organisational Change" positions 'action research' as one of five types of research (Table 1). Their differences can be established based upon three critical dimensions: its orientation (theoretical question of practical problem) the dominant channel for diffusing research results (e.g. learned journals or reports) and the audience (single or multiple). Clark draws upon Rapoport's (1970) characterisation of action research, which:

> aims to contribute *both* to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework (Rapoport, 1970: 499).

Implicit is the generation of new knowledge for the social science community (Clark, 1972), however, this may create dual agendas in terms of servicing both sponsor and scholarly needs (Rapoport, 1970), since how knowledge is perceived by a practitioner and a behavioural scientist differs, as illustrated in the comparison of Table 2. For the scientist, knowledge is generated either by testing a theory about organisational change or by evaluating the nature of organisational change. Irrespective, there is a need for a 'infrastructure' to permit findings to be communicated and acted upon (Clark, 1972).

Research type	Problem orientation	Dominant diffusion channel	Single or mixed audience
pure basic	Address a theoretical question / problem related to discipline	Learned journals	Scientists (single)
basic objective	Explain a general practical problem that can arise in different contexts (non-prescriptive)	Learned and professional journals	Scientists and practicing scientists ('practitioners')
evaluation	Assess a situation of a practical nature (e.g. organisational performance)	Mainly the sponsoring enterprise	Sponsor (and practitioners) (mixed)
applied	Solve a practical problem within a sponsoring system (does not add new knowledge)	Only the sponsoring enterprise	Sponsor (single)
action	Practical problem with theoretical relevance	Reports to sponsor AND Learned and professional journals	Sponsors AND Scientists and practitioners (mixed)

Table 1 adapted from Clark (1972: table 2.1)

Practitioner knowledge	Behavioural scientist knowledge
An artist with knowledge through acquaintance	Emphasis is 'knowledge about' – 'theoretical explanation'
Diagnostic - Instrumental	Explorative
Happy with incomplete predictions and uninterested in knowledge sources and methodological rigour	Concerned with knowledge sources, prediction, hypothesis and verification
Manipulation and control of variables	Theoretical relevance of variables
Is an involved participant	Is a detached observer
Concerned with 'how' to solve problems in a timely manner	Concerned with explaining and understanding 'why' with rigour

Table 2 The underlying nature of a practitioner's and a behavioural scientist's knowledge (adapted from Clark, 1972)

Shani & Pasmore's (1985: 439) definition offers a perhaps clearer insight:

> Action research may be defined as an emergent inquiry process in which applied behavioral science knowledge is integrated with existing organizational knowledge and applied to solve real organizational problems. It is simultaneously concerned with bringing about change in organizations, in developing self-help competencies in organizational members and in adding to scientific knowledge. Finally it is an evolving process that is undertaken in a spirit of collaboration and co-inquiry.

It is an evolving, emergent collaborative process that integrates practitioner and scholarly knowledge with view to effecting change that deals with real problems.

Moreover, 'action research' has evolved into many variants as revealed by Dash (1999): action learning (emphasis upon the conceptualisation of everyday problems as a form of group management development), action science (to create novel responses, breaking from the routine), action inquiry (emphasis upon 'observing participants'), participatory action research (researcher facilitates practitioner problem solving, drawing upon their 'local knowledge' and emphasising emancipation or liberation) and co-operative enquiry ('professionals' engaged in improving practices). Underpinning these approaches is the bonding between research and action.

Nevertheless, the form of engagement draws attention to the ethical distinction between 'imposition' and 'facilitation' (Dash, 1999).

Further, action research is distinct from its close rival – consultancy. Unlike action research, consultancy does not aim to produce new theory, fails to explore failed projects, shares with the 'clients' goals, tends to be vague about approach, though these are likely to be established techniques, and works explicitly to a budget and time-scale (Westbrook, 1995).

A more recent evaluation of action research is exemplified by Zhang et al. (2015) Their definition of action research emphasises organisational change as an outcome of research activity, though is unclear about the contribution to knowledge:

> a research process that collaboratively involves the subjects under study with an objective of using the research results to influence organizational outcomes (ibid: 152)

Moreover, the authors highlight the 'what's in it for me' view of potential participant practitioners, for a collaboration to happen. The appeal to practitioners may be the rigour of the study as well as the ability to contextualise findings within a bigger picture.

In conclusion, action research is not a to-be-taken-for-granted approach. That it has evolved into different forms highlights that there are many issues.

2.3 Interventionist Research.

Bracci (2017), in his review of the 'interventionist' approach, attributes it to Argyris (1970). Argyris defines an intervention as "to enter into an ongoing system of relationships, to come between or among persons, groups or objects for the purpose of helping them" (Argyris, 1970: 15). However, there is a stipulation that the client system is independent of the intervenor, with the client maintaining its autonomy in the form of '*free, informed choice'* based on valid information, and commitment to the choice. This implies awareness of all the options. The intervenor is concerned with the system as a whole, though may only act through a few people. Moreover, the intervenor does not make recommendations or instructs what should be done.

This approach has evolved over time as revealed in the reviews by Baard (2010) and Bracci (2017). However, Baard (2010) reveals that research using an intervention approach was rare. Bracci (2017) reveals examples of application and draws attention to the contribution to both theory and practice through what is insinuated to be an 'abductive' approach, though the authors do not use this term. A five step approach is presented, which includes problem definition, collaboration potential, comprehensive understanding of the situation and a feasible innovative solution with its more general application. It is an ongoing learning process.

In conclusion, this is an approach where the researcher facilitates but attempts to avoid influencing decisions within the practitioner arena.

2.4 Constructive Research

Kasanen's (1993: 244) notion of a 'constructive' approach is a problem solving approach within management accounting. It is defined as a "research process for producing constructions" where constructions are "entities which produce solutions to explicit problems", whereby these entities take forms such as theories, models, and frameworks. It emphasises practical relevance and theoretical contribution. It invokes a learning process that includes problem definition, comprehensive understanding of the situation and a feasible innovative solution that is both 'relevant, simple and easy to use' and can have more general application (i.e. is generalizable).

A more recent evaluation of the constructive' approach is presented by Labro & Tuomela (2003). They demonstrate, using Kasanen's (1993) seven step approach for two contrasting case studies, how there can be implementation as well as a theoretical development, the former able to inform the latter.

In conclusion, this offers a similar approach to the 'interventionist' approach, but the emphasis is upon the conceptualisation of both the problems and solutions and is more immersive.

3. PSMs: The Cybernetic Methodology

The preceding approaches to research have focused upon engagement with view to some aspect of learning and change. However, one of the characteristics of social science research is that it deals with people. Thus, social phenomena, due to the multiplicity of viewpoints, are characterised by uncertainty and ambiguity and can be construed as 'messes' (Ackoff, 1974). This invites approaches such as PSMs, which aim to guide the handling of the problematic aspects of such complexity. This 'handling' is a non-linear and iterative process, with attention given to developing a deep understanding of the situation in terms of issues and stakeholders. It's aim, through careful definition of what is problematic within the situation, is to bring closure to the situation. Since social science research can be viewed as a form of complex problem solving, then a PSM is an appropriate approach to deal with the messiness of social science research.

The most prominent PSM is the 'Soft Systems Methodology' (Checkland, 1972, 1981, 1999). This is an empirically grounded methodology, with emphasis upon the learning process. An alternative methodology is offered which is conceptually grounded and is systemic in its approach, i.e. it embraces a systems thinking perspective to how to address a situation which is perceived as problematic. This is concerned not only with the learning process associated with making sense of the situation, establishing what is the problem and how to deal with it, but also with the process for creating conditions conducive for this to take place. This methodology, the 'Cybernetic Methodology' (Figure 2), was developed by Raul Espejo (1988), with subsequent accounts in Espejo, (1990, 1992, 2015a, 2015b), Bowling & Espejo (1992, 2000), Espejo et al. (1997) and Espejo & Reyes (2011). It was renamed the VIPLAN Methodology in Bowling & Espejo (2000). Applications have included facilitating operational change in a manufacturing context (Harwood, 2012) and the design of a research methods course (Harwood, 2016). It has been proposed as a systemic approach to deal with water-energy-food nexus issues, particularly at a community level (Harwood, 2018).

What distinguishes this methodology from others is its attention to the contextual aspects of a situation (i.e. its cybernetics). Moreover, it is systemic. It is conceptually grounded in the field of Cybernetics (Ashby, 1963; Beer, 1979, 1981, 1984) and specifically Second Order Cybernetics (von Foerster, 1979). It views a complex situation such as a mode of research inquiry as a problem system. This system comprises a learning element (the learning loop), which takes place in the information domain (Espejo, 1992) and relates to the content of conversations. This is perhaps not dissimilar to Dewey's (1933, 1938) discourse on the nature of inquiry. However, learning takes place in a context and it is the interplay between learning and context that establishes the boundaries of the system. This context is denoted by the stakeholders that enable learning to take place, each being observers of the reality that constitutes the inquiring system (hence, 2nd order cybernetics). This contextual domain is the operational domain which is concerned with how stakeholders are organised to enable learning, this constituting the cybernetic loop of the methodology.

The methodology comprises six activities. The first activity (#1) is concerned with developing a rich understanding of the situation that is of interest, so that its multi-faceted composition is revealed. From this, there is the challenge of establishing the focus of the study which leads to definitional statements about what the problem is (issues) and the pertinent stakeholders (organisations) (#3). This leads to a detailed evaluation of how stakeholders are to be organised (#3) in such a way that when implemented (#4), this organisation will be conducive for both establishing how to handle the situation (#5) and the actions that provide closure (#6). It offers an approach that is inclusive in terms of recognising the rights of those with a vested interest to be participatory. It is also iterative as illustrated with a reflective application to the PhD research experience (Table 3). This reveals the multifaceted nature of the research process in which stakeholders and their fit (relationship) within the research process is a shaping feature of whatever outcomes are achieved. Moreover, it renders the notion of gap irrelevant as the degree to which intervention happens is an outcome of what constitutes the research questions (#2).

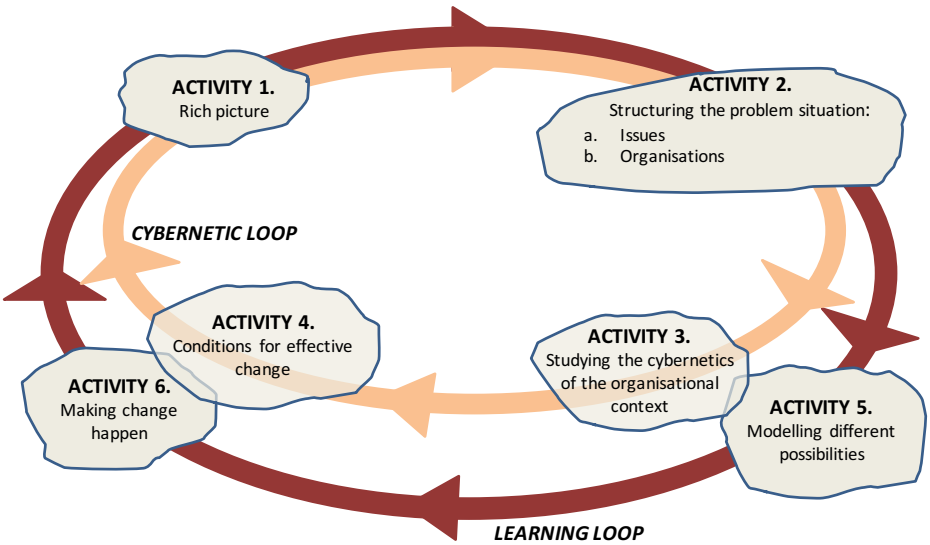

Figure 2 The Cybernetic Methodology [adapted from Harwood (2012) which is based on Espejo (1992)]

				CYBERNETIC LOOP		LEARNING LOOP	
STAGE	1 RICH PICTURE	2a NAMING ISSUES	2b NAMING ORGANISATION	3 ORGANISATIONAL IMPLICATIONS	4 CREATING ORGANISATIOAL CONDITIONS	5 MODELLING POSSIBLE ISSUES	6 ACTION
Awareness of desire to pursue PhD	Find out about topics of interest	Formulate possible research questions	Identify relevant institutions to host the study	Evaluate potential research participant to support the study (e.g. expertise, respondents, audience)	Contact the potential supervisor (also sound out potential respondents about participation)	Conceptualize the research – create a research proposal	Discuss the proposal and enrolment
Initial study	Develop a deeper understanding of topic (literature review, relevant courses, pilot, secondary data)	Refine research questions	Identify the system with an interest in the topic	Get to know who has interest in the domain of the topic; Examine methodological implications (research design)	Make contact with those who can inform about topic	Clarify the theoretical position of research – produce end of first year report	Defend end of first year report
Data collection		Refine research questions		Develop appropriate methods	Contact respondents; acquire database	Establish the content of - conversations with respondents or - interrogation of database	Collect data; Interrogate database; make change within participant organization
Data analysis				Identify analytical support (e.g, NVivo or SPSS	Enroll analytical support	Make sense of data using appropriate theories	Discuss findings with - participant organization - peers for feedback (e.g. conferences)
Closure				Identify relevant examiners	Enroll examiners	Draft argument of thesis	Defend thesis
External impact	Develop an understanding of possible participatory situations	Identify possible problem situations	Identify relevant stakeholders	Identify specific people	Enroll stakeholders	Establish possible content of conversations; discuss 'solutions'	Make change happen

Table 3 One possible unpacking of a PhD research experience using the Cybernetic Methodology

Approach	Emphasis
Pragmatism	To engage in practice and thereby establish conceptual understanding
Action Research	To make sense of organizational change in the problem situation, through collaboration and integration of scholarly and practitioner knowledge
Interventionist Research.	To facilitate and learn from the change that takes place (distant)
Constructive Research	To deal with a practitioner problem situation and create conceptual knowledge (immersive)
PSMs: The Cybernetic Methodology	To systemically engage in problem situations in order to bring about closure to the situation (inclusive).

Table 4 A synthesis of the five different approaches to conducting impactful research

4. Conclusion

This paper has presented a review, albeit cursory on basis of word-count limitations, of four approaches towards interventionist research. Each contributes towards an engaged intervention in the research domain. However, each has limitations. This suggests a systemic perspective towards research. Another approach is proposed that views research as a problem system – the Cybernetic Methodology. This systemic view is inclusive and offers a more critical approach to dealing with inquiry though its explicit distinctions, not privileging one over the other. Irrespective, as is critical in any interventionist research, any methodology is only as good as the quality of its collaboration with stakeholders. A synthesis of the five approaches is presented in Table 4. What can be concluded is that the Cybernetic Methodology offers a more powerful approach to interventionist research allowing the researcher to take control over the degree of intervention, but nevertheless facilitate change.

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