

The dual strategic and change role of IT: A critique of business process reengineering

Craig & Yetton's article proposes that in a dynamic world where firms have to effectively engage change, Business Process Reengineering (BPR) has been touted as the method for achieving that goal. Through a systematic review of the key drivers and assumptions of BPR, the article concludes that BPR is a deficient framework, and proposes an alternative approach that covers the deficiencies in BPR.

The authors' eloquence and use of diagrams make the article very readable and the visual reader quickly comes to an understanding of the conflicts in BPR design and implementation. Unfortunately the article comes across as a medium for promoting the authors' alternative approach. This manifests itself in the lack of supportive evidence at critical points of the article's argument development. The article often appeals to the readers intuitive agreement with the elegance in analysis and the force of history. In this regard, Matthew Jones' *"Don't emancipate, exaggerate: rhetoric, reality and reengineering"* has more credibility, although it presents no alternative approach for the reader.

This paper will summarise the article's analysis and subsequent proposal.

Introduction

"The dual strategic and change role of IT: A critique of business process reengineering" analyses BPR literature using the MIT90s framework and by extending, reorganising the MIT90s model to provide visual insight. By reorganising the MIT90s framework the article displays the central role IT plays and the disparity between BPR's focus (strategy, structure) and where implementation occurs (Management processes, skills and roles). This paper will reiterate the article's viewpoint on BPR, its foundation, its definition, summarise the authors proposed alternative and provide a critique of critical areas where this reader believes the article loses credibility.

The article and this paper follow the below structure in its analysis:

- 1) Theories applied in BPR
- 2) Major deficiencies in BPR
- 3) An alternative approach

BPR in Perspective - The theories behind BPR

MIT90s. Before delving into BPR itself, the article reviews the underlying concepts behind BPR by using the MIT90s framework. The MIT90s framework is used to analyse BPR literature because of the framework's general recognition in IT Management literature and, the authors argue, the model addresses the elements identified as relevant for BPR (strategy as a determinant, IT, and human resources). Second, the MIT90s framework is used to visually display the BPR approach and the article's proposal.

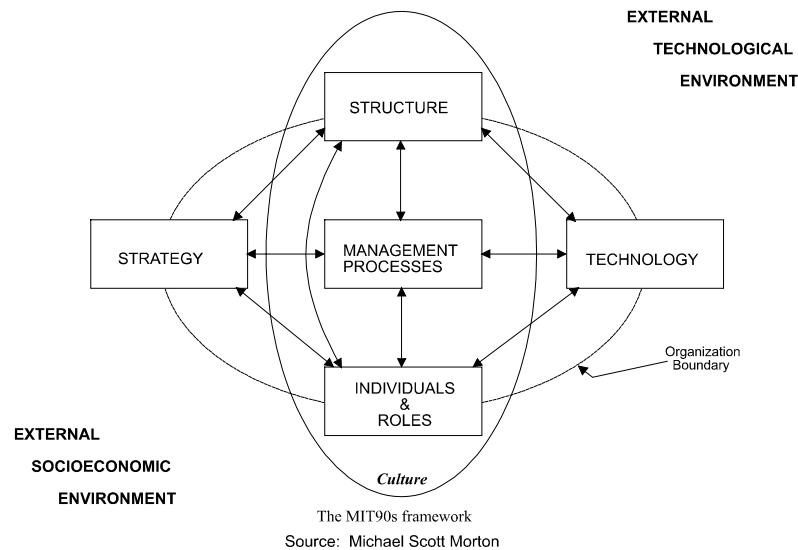


Figure 1 The MIT90s framework

Underlying Drivers

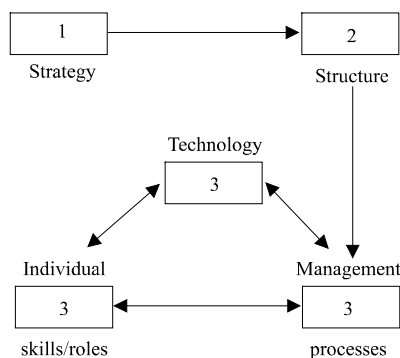
Drawing on the authors' joint experience and understanding of BPR, the article identifies three implicit theories and two explicit theories driving BPR. The implicit theories underlying BPR are:

- 1) Fit contributes to superior performance therefore optimal performance will only be possible if there is a fit between the organisation's strategy, structure, management processes, individual roles and skills, and IT.
- 2) Following the conventional approach to strategy, fit is achieved through an orderly procedure of:

- i) defining the strategy,
- ii) structuring the organisation to achieve the strategy, and
- iii) implementing it.

This is clearly seen in the article's modified view of the MIT90s model given in the article.

Conventional Model of Strategic Dynamics



Source: Craig & Yetton 1994

Figure 2 The Conventional Model of Strategic Dynamics

- 3) Positioning strategy, a controlled, cognitive process to involve, commit senior management to a fully operational strategy is self sufficient.

MIT90s, capturing the explicit BPR

The explicit theories in BPR literature are to develop a radically different idea and implement it.

- 1) Radical redesign of processes is required for rapid, high order of magnitude change.
- 2) Structural, planned, rational project management is the tool for managing, coordinating the changes determined in the above process redesign.

To clearly identify the dilemma, high failure rates in BPR implementation, the authors draw triangles around the conventional approach to strategy development applied by BPR. This configuration signifies BPR's explicit focus, as opposed to where BPR is actually implemented.

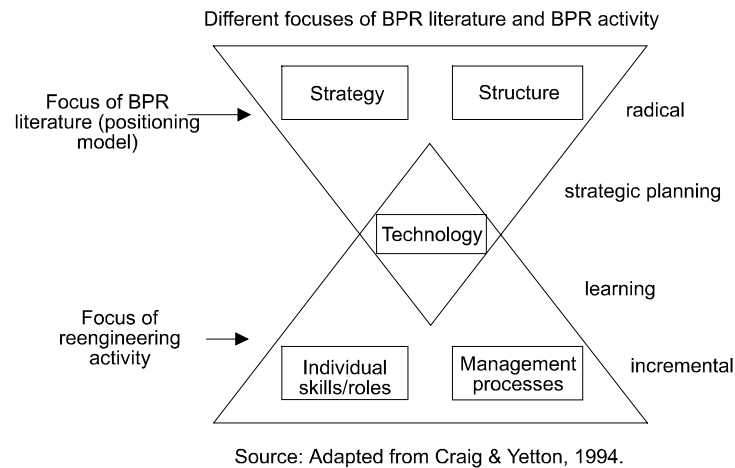


Figure 3 Different focuses of BPR literature and BPR activity

The article suggests that the inability of BPR to resolve implementation problems derives from the implicit frames of reference (described earlier) underpinning its faith in design. By redesigning the firm, BPR involves altering the competencies of the firm (the lower triangle) which is inadequately addressed by BPR literature.

BPR - the major deficiencies

BPR brings together concepts previously developed in management science such as the competence capability approach to strategy (Hammel & Prahalad, 1990; Stalk, Evans & Shulman, 1992) and quality programs (Eagleson & Sheather, 1993). The article argues that the dynamic and positioning models, the foundation for BPR's design process, is inappropriate as it was developed in an era ('seventies' and 'eighties') where large organisation changes did not always require changes in the firm's competencies. Appealing to history for corroboration, the authors conclude firms that undertook top down design changes and did not require new competencies, minimal reconfiguration of the bottom triangle (Figure 3), performed well. By contrast, firms that required new competencies, substantial reconfiguration of the bottom triangle, did not perform as well.

The creation of new core competencies is an integral part of BPR and Figure 3 highlights the dichotomy between BPR's focus (top triangle) and where the failure in creating competencies occur (the bottom triangle). To resolve the competency creation problems, BPR has focused on improving the top triangle, which may not be helpful.

Radical Change

Radical change is a major emphasis of BPR, reinforcing its positioning framework. The problems with BPR's radical change are:

- 1)** BPR does not adequately address the risk associated with dramatic, discontinuous change. Ignoring the present is no guarantee of success.
- 2)** BPR literature does not critically evaluate its premise that radical change is the solution. This inherently devalues, ignores incremental/continuous improvements that may provide significant value at lower risk.

Radical positioning, radical change, as seen previously, requires major upheavals, uncoupling and reconfiguring the firm's management processes, IT, roles and skills. By contrast, incremental, continuous improvements work with existing management processes, IT, roles and skills to minimise risk while creating new competencies.

Aligning IT

Although IT is an important part of BPR, how it is used during implementation is vague. The problem with IT is the lack of an adequate framework to determine where IT should sit within the firm. Playing a dual strategic and change role, how IT is structured and viewed can damage its effectiveness. A centralised IT structure will reap cost benefits at the expense of responsiveness required by SBUs. Unconstrained decentralisation leads to cost escalation and possible damage to the integrity of the systems platform and architecture. Even the federal solution, a mix of centralisation and decentralisation, the current elegant approach, is in practise difficult to sustain.

An Alternative Approach, The “Dynamic Improvement” model

To resolve the deficiencies in BPR, the article recommends the ‘dynamic improvement’ model. The dynamic improvement model replaces the positioning framework currently used with the emergent framework. By applying an emergent approach to strategy development the model gives equal weighting to both strategic development and implementation. This implicitly accepts strategic intent for strategy development and quality theory for implementation.

Radical Change

The problems of radical change are resolved because the emergent framework implicitly uses continuous, incremental improvements instead of the riskier discontinuous change. Implementation prescriptions of the new emergent, learning model are outlined in Table 1.

Table 1 Prescriptions and expected Outcomes

BPR prescriptions

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| <ol style="list-style-type: none"> 1. Minimise the number of boundaries any one project crosses. 2. Separate projects are supervised from a senior level. | <p>Projects take place within one functional area, or across two, and are managed within functions at a relatively junior level.</p> <p>Separate projects being run in parallel are supervised at a sufficiently senior level to have the experience, capacity and clout to resolve issues of turf.</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Outcomes?

1. Each project builds on existing skills and competencies
2. By starting where people are, BPR avoids deskilling and devaluing existing staff, and does not have to deal with defensive behaviour which impedes learning.
3. Managers at even the lowest levels are learning to think differently about their work, and to work across functions, because each piece of learning is only one more managerial step.
4. Because the individual's existing expertise provides a firm base, the only new element is managing a project, or cooperatively working and coordinating an activity with someone from a different area.
5. Over time the firm accumulates a deep stock of expertise in project management and cross functional work behaviours that is a prerequisite for survival in dynamic competitive markets.
6. The firm develops alternative skills, options.

Strategic intent balances the incremental improvements in quality theory by determining the radical changes, situation, competence the firm needs to achieve.

IT alignment

IT becomes an enabling tool as its design and implementation is now effected by both the user and strategy developers. IT's location in the corporate structure now depends on the organisation as a whole and how it best understands the value and use for its goal. In an environment like this, the authors find it unlikely for line managers to define a problem and send, leave the development of solutions to the IT specialists.

Critique

"Even before Plato, Parmenides had seen that between knowledge and reality are the appearance of reality, which might be different from reality itself." Robert C. Solomon.

Frame Blindness

By insisting the importance of a theoretical framework from which to identify the central issues of a work, the article unnecessarily constrains its analysis to the simplified 'adapted' MIT90s framework. Unlike Jones who seems to ramble by following BPR's diverse dialogues, Craig & Yetton enforce their structured framework analysis, aggregating, ignoring issues that do not neatly fit the framework. In the end, the reader is convinced of plausible justification of the authors' proposed alternative, but is left with a lot of questions about the cohesion between the article's implied definition of BPR and what Hammer & Champy [93], Davenport [93], Jones [94] and others have written on BPR.

An example of seeming divergence between the article's arguments and its aggregation of BPR literature is the argument against radical change. The article implies that 5% or 10% annual, incremental improvements is unnecessarily discredited, ignored by BPR. Hammer & Champy already agree with the article's conclusion.

"that company does not need reengineering. More conventional methods, from exhorting the troops to establishing incremental quality programs. . . .Reengineering should be brought in only when a need exists for heavy blasting." Hammer & Champy [93]

By concluding their proposed alternative with checklists of prepared solutions and outcomes the reader is lead to believe that BPR authors have not made similar recommendations. It is hard to believe that conservative companies such as IBM, Ford and Kodak (case examples in Hammer & Champy) did not have similar checklists. Otherwise one would be lead to believe these organisations drastically sacked staff, threw away old technology.

Appeals to greater authority

The article, for this reader, loses credibility on its analysis of BPR at a number of points where the authors appeal to authority, logic and history as justification for their conclusions. At a critical point in their argument, revealing and discrediting the positioning strategy underlying BPR, the article states as fact the cause effect, success and faults inherent in the positioning model and the conventional model of strategic dynamic by appealing to history, empirical evidence, and literature. Without reference to who, where, or when, the reader is expected to accept the logical argument on the authority of the authors, "trust me."

At such a critical point of the article, it is strange the authors have neglected to ensure credibility of their argument. Acceptance of the 'dynamic improvement' model hinges on the readers acceptance that BPR strategy, positioning, is faulty. The article continues its demise with *"because of the complexity, interdependence and novelty of this configuration, designing it all in advance is simply impossible."* The article requires the reader to accept the elegance of the logic as truth and there are other examples of what this reader perceives as logical fallacies in the paper.

Conclusion

The article is very readable, accessible and provides management insight into BPR through its use of the MIT90s model. The logic is elegant but needs, to this reader, tightening up and further attention to credibility.

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