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## Why some performance measurement initiatives fail: lessons from the change management literature

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**Abstract:** Currently, there is great interest in performance measurement with many companies attempting to implement the balanced scorecard. However, there is also evidence that many of these implementations are not successful. In this second of two papers on performance measurement implementation, the change management literature is reviewed to create a better understanding of why so many initiatives fail. The paper concludes that one reason for the lack of success is that the published processes are all partial processes in that they create the desire for change and provide the first steps for change, but give little guidance on implementation. Another conclusion is that the participative nature of the design process limits the situations in which they should be applied.

**Keywords:** Performance measurement; implementation; change management.

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## 1 Introduction

Currently, there is considerable interest in performance measurement and within the growing literature on the subject, an influential section has focused on promoting performance measurement [1–3]. However, less attention has been paid to the problems or difficulties associated with implementing a balanced performance measurement system ([4–8] excepted) and some authors suggest that up 70% of initiatives fail [5].

Traditional performance measures, developed from costing and accounting systems, have been heavily criticised in the literature for encouraging short-termism [9,10], lacking strategic focus [11], encouraging local optimisation [12,13], encouraging minimisation of variance rather than continuous improvement [14,15] and not being externally focused [16]. But judging from the reaction of practitioners attending our industrial workshops, the problems with traditional accounting based measures are now much more widely recognised than they were three years ago.

In an attempt to overcome these and other criticisms, performance measurement frameworks have been developed which provide a more balanced view, between internal and external focus [17], between levels in the organisation [18], between results and their determinants [19], between the four perspectives of the balanced scorecard [16] and the multiple stakeholder perspectives of the performance prism [20]. In particular, the balanced scorecard is being widely promoted, through articles [21], books [22–24] and conferences (e.g., [25]).

Within this growing literature, one subset focuses on the management processes for designing balanced performance measurement systems. These management processes have been developed from the literature, [26], through consultancy experience [3,21,27–32] and action research [33–38]. However, this activity has not been matched by research into the implementation and embedding of the resulting performance measurement system and with the growing evidence that not all performance

measurement interventions are successful [4–6,8,39], this is an important area for research.

In the first paper [40] we reviewed the published processes for the design and implementation of performance measurement systems. The wide range of approaches adopted suggested that the approaches should be categorised to create a better understanding of the methodologies being proposed.

The two dimensions used were:

- the underlying procedure, which could be considered the ‘hard’ issues
- the underlying approach, in terms of the role of the process leader, change agent or consultant, which could be considered the ‘soft’ issues

The underlying procedures adopted in the literature were then divided into three categories: ‘needs led’, (e.g. ‘Getting the measure of your business’, [35]) ‘audit led’ (e.g. ‘The Performance Measurement Questionnaire’, [34]) and ‘model led’ (e.g. ECOGRAI, [33]). The approaches were divided into two categories: ‘consultant led’ (e.g. early Balanced Scorecard methods, [21,41]) and ‘facilitator led’ (e.g. strategy mapping, [3,23]). This demonstrated that not only was there a wide range of procedures being proposed to develop the structure of the performance measurement systems, but also different levels of involvement of consultants and the senior management team were used.

The first paper [40] also reviewed the writings on success and failure of performance measurement interventions and concluded that although there was much agreement on the reasons for success and failure, the performance measurement literature is at the stage of identifying difficulties and pitfalls to be avoided, based on experience and reflections of practitioners with few published research studies on the topic. The paper concluded that many of the issues raised in implementation were connected with change management issues, whilst little mention was made of these issues in the published design and implementation processes. This conclusion is reinforced by one of the few academic studies [6] that found that the application of the process and the content of the resulting performance measurement system were not major factors in determining the success and failure of implementations, whilst softer contextual factors such as ‘purpose’ and ‘management commitment’ were.

Therefore, this paper contains a review of the organisational behaviour literature to understand current theory on the implementation of change. The insights from this review are then used to suggest possible shortcomings in the performance measurement methodologies. The paper concludes by suggesting areas of improvement in the performance measurement methodologies and their application, together with suggestions of fruitful topics for future research.

## **2 On managing change**

Writers on managing change view the subject from different perspectives. Burnes [42], for example, divides the underlying theory into three levels; the individual perspective school, the group dynamics school and the open systems school. He then goes on to categorise the approaches to change under the headings of planned (organisational development interventions loosely based on the work of Lewin, hereafter referred to as

OD interventions) and emergent. Senior [43] divides the strategies for change into soft and hard systems models, whereas Dawson [44] argues that the three perspectives are the textbook orthodoxy (Lewin's three phase model of change and the OD approach, [45]), contingency theory and processual approaches.

All these perspectives are considered, beginning with a brief overview of what are seen as competing theories underpinning the management of change. The paper then goes on to describe the polar examples of soft and hard methods, before reviewing the work of those prescribing how change should be undertaken in organisations. Most of these prescriptions are in the genre of 'one-best way', but there are contingency approaches (e.g. [46]), which will be described and discussed as well as the processual (or emergent, depending on your perspective) approaches.

### *2.1 Theoretical foundations of change management*

To ensure clarity and to limit the intrusion into other social sciences, the underlying theoretical approaches are confined here to the individual perspective school, the group dynamics school and the open systems school.

The individual perspective school looks at change through the lens of the individual. Even here, there are two approaches, typified by the Behaviourist and the Gestalt-Field psychologists. In behavioural theory, all behaviour is learned. As a result, all human behaviour is seen as being conditioned by the expected consequences, a Pavlovian response. Consequently, behaviour that is rewarded tends to be repeated and that which is ignored is not, so changing behaviour is dependant on changing the conditions that cause it.

Gestalt-Field psychologists take a more emic [47] approach in that behaviour is not just a product of external stimuli but results from how the individual interprets these stimuli. Thus, reason intervenes to create meaning and dislocates pure stimulus from behaviour. Consequently, in initiating change "... the Gestalt-Field proponents seek to help individual members of an organisation change their understanding of themselves and the situation in question, which, they believe, in turn will lead to changes in behaviour." [42, p.174].

The group dynamics school emphasises the workings of the team or the group. Followers of this school argue that bringing about change at the individual level is impossible without considering the group in which the individual works. The behaviour of the individual is a function of the group environment, or 'field' [48]. According to Lewin, it is the interplay of the forces or group pressures on the individual which influences individual behaviour. The focus for change is therefore directed at influencing the group norms, roles and values.

The open systems school deals with the organisation as a whole. It views the organisation as being open both externally to the environment in which it operates and internally to the various sub-systems which comprise the organisation as a whole. Change, according to the open systems school, is conducted through understanding and manipulating the subsystems so that the organisation functions better overall and adapts to the environment in which it operates.

So, change management can be viewed from three levels, the individual, group and organisation. Given the classifications cited above, one would expect contributions to change management from a wide range of academic disciplines including psychology, sociology and strategy. Also, there are academics who specialise in change management

and whose approaches combine disciplines, for example, Strebel [49] (the individual perspective and group dynamics), Dawson [50] (group dynamics and open systems) and those who argue that it is impossible to implement change successfully without addressing all three levels [51,52].

Given the diversity of underlying disciplines, there is no single overarching theory of change management. The best that can be done here is to review the different perspectives and to identify how each of these perspectives may impact on the implementation of a performance measurement system.

## *2.2 Hard and soft systems approaches*

There are two distinct approaches to change in the literature [43,51,53], the hard system model of change (based on the Open University course material, 1984, 1994; [53,54]) and the soft systems model of change (based around the OD approach and action research interventions). Both approaches are described and compared here, together with suggestions of when they should be applied.

### *2.3 The 'hard systems' approach to managing change*

The hard systems approach is derived from techniques developed within the fields of operations and systems management [55, p.133] based on the premise that logic and rationality can be used to develop clear change objectives and the best way of achieving them. The result is a rational three-phase model of a change management intervention, definition, evaluation and implementation (see Figure 1).

### *2.4 The 'soft systems' approach to managing change*

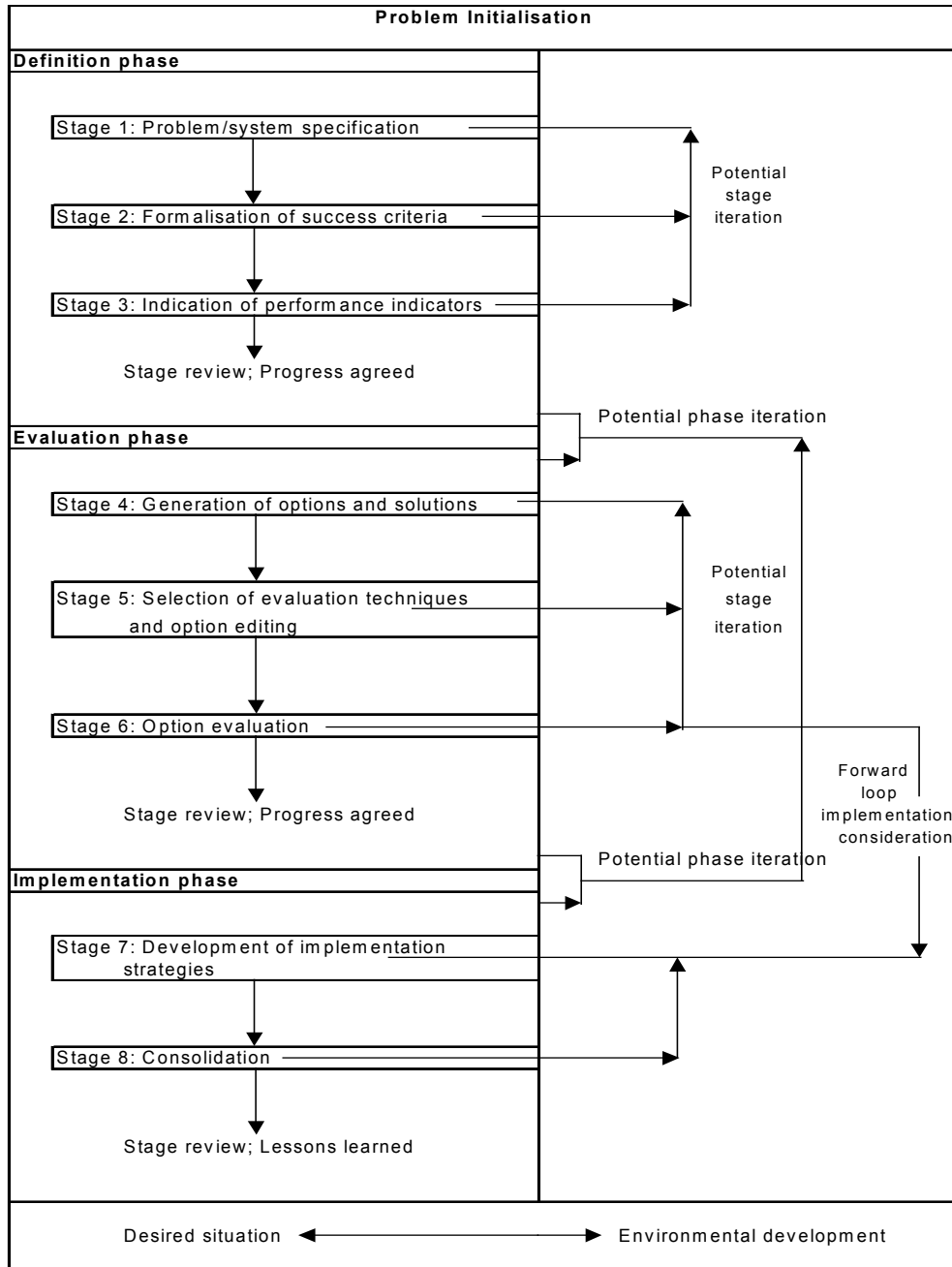
Proponents of the soft systems approach reject the premise that all problems can be rationally analysed and clear change objectives set. They see change as a journey: "Organisational development is about changing the organization from one situation, which is regarded as unsatisfactory, to another by means of social science techniques for change." [53, p.129]

They go on to define organisational development stating that:

"Organizational development is an ongoing process of change aimed at resolving issues within an organization through the effective diagnosis and management of the organization's culture. This development process uses behavioural and social science techniques and methodologies through a consultant facilitator and employs action-research as one of the main mechanisms from investigating change in organizational groups." [p.131]

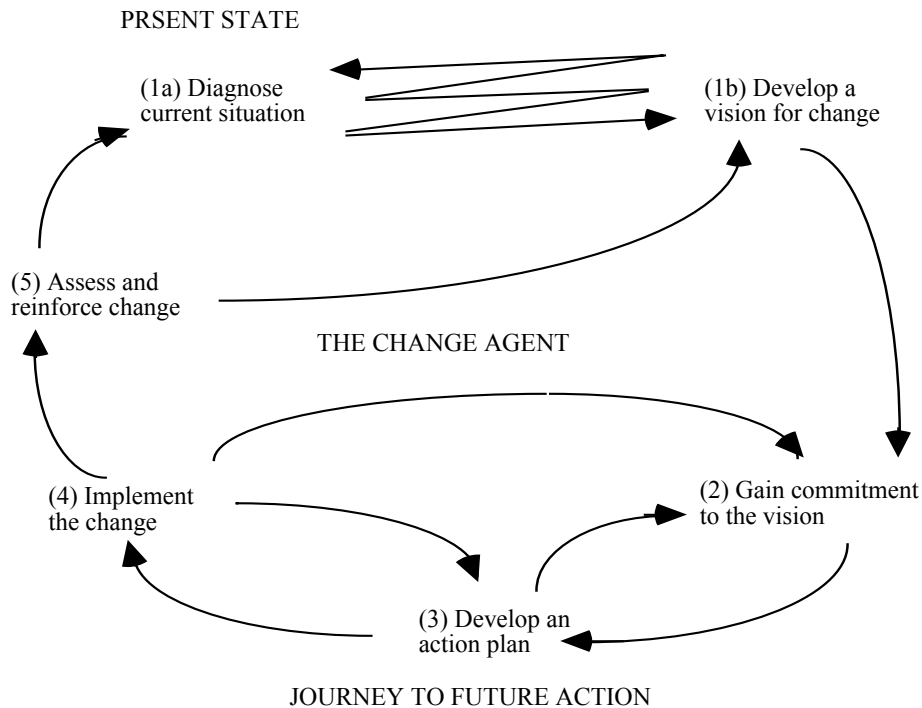
Consequently, although OD interventions have defined phases, there is considerably more recycling through stages of the process. Time is taken to acquire feedback from the proposed actions. People are encouraged to reflect on the process and results, modifying their approach as they develop. Social science techniques are also used for group team building and groups are encouraged to engage in the debate about the planned change. Figure 2 provides an example of an OD approach; the arrows are designed to show the constant cycling between the different phases of the change journey.

**Figure 1** A three phase rational change model



Source: Adapted from Mayon-White [55]

**Figure 2** A representation of the OD change process



Source: Adapted from Senior, [43, p.266]

There is debate in the literature about the appropriate use of these two techniques [42]. McCalman and Paton [51] argue that the technique should be chosen based on the complexity of the problem being solved and the intensity of interaction between people and any new system. They argue for adopting a hard systems approach when the complexity and intensity are low and have developed a TROPICS test (time-scale, resources, objectives, perceptions, interest, control and sources of origin) as a technique to guide selection. Senior [43] argues that the hard systems approach is more appropriate for ‘difficult problems’ and soft approaches for ‘messy problems’ (based on Ackoff’s ‘the art and science of mess management’ [56]).

However, these two techniques are a dyad. On the one hand, any change initiative must not lose sight of the hard rational objectives which have to be achieved. On the other, a better understanding and consideration of the human issues involved should improve the chances of success. Actual change management processes borrow from both ends of the spectrum and, in the next section, we shall use this framework to compare the management approaches found in the literature.

### 2.5 *Management approaches*

At its simplest, the management of change is a three-step process [57]:

- 1 assess the current position
- 2 create a preferred future scenario
- 3 manage the transition between the current position and preferred scenario

However, in organisations one cannot assume that everyone will agree with the assessment of the current position or that they will agree with the future scenario. This makes the transition problematic. As Strebel [58] states, “For many employees, however, including middle managers, change is neither sought after nor welcomed. It is disruptive and intrusive. It upsets the balance.”

Hence, much of the management literature on change focuses on legitimising the need for change [59–61], creating a shared vision [62,63], mobilising a change team [63,64] and communicating the vision widely [61,63].

But the consensus is that change will still be resisted [61,64–68]. It is therefore important to ensure top management commitment to the change process. Creating a sense of urgency [63,67,69] will help create a perception of importance as will the development of a homogeneous top management team or guiding coalition [63].

Although management change processes are often viewed simply as mechanisms for overcoming resistance to the change [44, p.14], there are benefits to surfacing resistance [70]. Encouraging objections to be expressed [59], preventing them going underground [71] and effectively managing contention [64] are all part of the process.

The change itself needs to be supported by rhetoric, action, policies and behaviours [60]. Resources need to be assigned [60], structures and reporting systems altered [72,73], HR policies [74] and reward systems aligned [49] with the change effort. Engineering quick gains [63] and publicising these wins are prescribed actions designed to support the transition [61]. Managing the casualties of the change is also an important part of the process [61] as an organisation which deals humanely with the losers in a change initiative will be more successful in the future.

During the transition, the change needs to be monitored to gauge progress [59,62,75]. On completion, the subsequent performance needs to be monitored to ensure the organisation does not slip back into its old habits. Performance measurement is seen as an effective mechanism for ensuring this [59,76–79] although ultimately, it is hoped that the new ways of working will be habitualised and embedded in the culture of the organisation [44].

From the description above, it can be seen that prescriptive management processes for introducing change are designed to create a strong coalition around a shared view of the future and a dissatisfaction with the current status of the organisation. This is sometimes combined with actions to reduce the resistance to change, although many of the techniques focus on communicating the reason why the change is necessary. This analysis fits well with one of the better known formulae for organisational change proposed in the 1960s by Gleicher of Arthur D Little [65, p.473]. Gleicher’s argument was that organisational change will only occur when:

$$K \times D \times V > C$$

- when K represents **K**nowledge of first practical steps
- D represents **D**issatisfaction with the status quo
- V represents the desirability of the **V**ision of the future
- C represents the **C**ost, both material and psychological, of doing something

The multiplication signs in this formula are included to represent the fact that if any single factor is missing (i.e. the value reaches zero) the change will not occur.

Consequently, although there are differences in approach, which are summarised in Figure 3, much of the prescribed management literature focuses on creating dissatisfaction with today and developing a vision of the future, whilst reducing the resistance to change. Gleicher’s suggestion that knowledge of the first practical steps (implied but not stated by others cited above) is required provides a useful additional insight into the management of change.

**Figure 3** Management approaches to change

<i>Pugh [59]</i>	<i>Beer et al [62]</i>	<i>Kotter [63]</i>	<i>Duck [60]</i>	<i>Goss et al [63]</i>	<i>Eccles [61]</i>	<i>Fletcher [74]</i>
Six change rules	Six steps to effective change	Eight stage process	The Top Management Teams' eight primary responsibilities	Managing the present from the future	The fourteen factors of change	Six stages of change
Work hard at establishing the need for change	Mobilise commitment to change through joint diagnosis of business problem	Establish a sense of urgency	Establish context for change and provide guidance	Assembling a critical mass of key stakeholders - the employees who make things happen round here	There has to be a champion who embodies and lives the new dream	Define the mission, vision and values
Think through change - what it will mean for the parties involved	Develop a shared vision of how to organise and manage for competitiveness	Create a guiding coalition	Stimulate conversation	Doing an organisation audit - establishing the company's true competitive position	There has to be a clear and sustained purpose to which people can commit	Formulate strategy and policies, review and plot current initiatives
Initiate change through formal discussion to get feedback and participation	Foster consensus for the new vision, competence to enact it, and cohesion to move it along	Develop a vision and strategy	Provide appropriate resources	Creating urgency, discussing the undiscussable	There has to be a defensible unambiguous reason for the change	Develop competences/ies based on future needs for strategic implementation and culture change
Positively encourage those concerned to give their objections	Spread revitalisation to all departments without pushing it from the top	Communicate the change vision	Coordinate and align projects	Harnessing contention, use variety, conflict and tension productively	Do not expect everybody to back the change	Plan the structure using competence analysis

**Figure 3** Management approaches to change (continued)

<i>Pugh [59]</i>	<i>Beer et al [62]</i>	<i>Kotter [63]</i>	<i>Duck [60]</i>	<i>Goss et al [63]</i>	<i>Eccles [61]</i>	<i>Fletcher [74]</i>
Be prepared to change yourself	Institutionalised revitalisation through formal policies, systems and structures	Empower employees for broad based action	Ensure congruence of messages, activities, policies and behaviours	Generating organisational breakdowns to surface barriers to change and organisational weaknesses	Communicate as much as is practical, taking some risks by being candid	Profile the roles and structure
Monitor and reinforce the change	Monitor and adjust strategies in response to problems in the revitalisation process	Generate short term wins	Provide opportunities for joint creation		Effective communication is vital and almost impossible to over-do	Use the competence framework to revise and integrate the HR functions
		Consolidate gains and produce more change	Anticipate, identify and address people's problems		The more senior employees must take the most responsibility	
		Anchor the new approach in the culture	Prepare the critical mass		Even enterprising employees need to be led	
					Teams and leaders need to support each other	
					Use the structure to change the culture	
					Create winners, personal success is a great motivator	
					Early success creates momentum	
					Caring for the causalities is both moral and supportive of the process	
					Try to minimise the unintended consequences by anticipation and recovery	

## *2.6 Contingent approaches to change*

The management approaches to change cited in the last section are prescriptive in nature, often promoting ‘one best way’ for change. However, it would be logical to assume that not all situations are the same and therefore not all situations warrant the same approach to change. In fact, Strebel [58] has even gone as far as stating: “Those who pretend that the same kind of change medicine can be applied no matter what the context are either naive or charlatans.”

His approach is then to categorise approaches to change based upon the two components of Lewin’s [48] force-field model, the strength of the forces promoting the change and the strength of the forces resisting the change (see Figure 4).

Dunphy and Stace [46] argue that although the OD model has received considerable attention from academics as a participative method for managing change, many consultants are using radical coercive change. They argue that the change management literature is driven by the values of the change agent authors who are mainly academics and not by the needs of the organisation. From their study of change management in Australian industry, Dunphy and Stace concluded that a more contingent approach was necessary.

Their typology is ‘collaborate/coercive’ and ‘incremental/transformational’ and their definition of ‘incremental/transformational’ is as follows:

“In our view, the essential difference between incremental and transformative change is not the difference between slow and rapid change, or normal and exceptional change. Rather, the differences lie in whether the organizations are effecting change on a continuous or on a discontinuous basis.” [80, p.322]

The Dunphy and Stace [46] framework for planning change strategies is therefore designed to challenge the personal values of the managers and consultants. They argue that although there is a place for each strategy, selection should be made on the basis of dominant contingencies, the needs of the organisation (see Figure 5).

Although Dunphy and Stace’s work has challenged previous orthodoxy in change management and helped explain the approaches being taken by strategy consultants, it has been criticised on two grounds [44].

“The two major weaknesses of this contingency approach are: firstly, that the model does not tackle the political dimension of change and, secondly, no attempt is made to provide typology of change strategies and conditions for their use during the actual process of organisational change.” [p.21]

**Figure 4** A contingent approach to change

Contrasting Change Paths			
Resistance	PROACTIVE	REACTIVE	RAPID
Closed to change	Radical leadership	Organisational realignment	Downsizing & restructuring
Can be opened to change	Top down experimentation	Process Reengineering	Autonomous restructuring
Open to change	Bottom up experimentation	Goal cascading	Rapid adaption
	Weak	Moderate	Strong
	<b>Change Force</b>		

Source: Adapted from Strelbel, [58]

**Figure 5** Typology of change strategy and conditions for their use

	Incremental Change Strategies	Transformational Change Strategies
Collaborative Modes	<p>1. Participative Evolution</p> <p>Use when organization is in fit but needs minor adjustments, or is out of fit but time is available and key interest groups favour change</p>	<p>2. Charismatic Transformation</p> <p>Use when organization is out of fit, there is little time for extensive participation but there is support for radical change within the organization</p>
Coercive Modes	<p>3. Forced Evolution</p> <p>Use when organization is in fit but needs minor adjustments, or is out of fit but time is available and key interest groups oppose change</p>	<p>4. Forced Evolution</p> <p>Use when organization is out of fit, there is little time for extensive participation and no support within the organisation for radical change, but radical change is vital to organizational survival and fulfilment of basic mission.</p>

Source: Adapted from Dunphy and Stace, [80, p.331]

This leads to viewing change as a process.

### *2.7 Processual approaches to change management*

Processual approaches to change view change in terms of the time frames and influences on the change process rather than as a prescriptive management process to be followed. As such, these approaches provide a framework for analysing change rather than purely prescriptive advice on how to change. Three approaches are described here, Lewin's [45] classic three stage model, Burnes' [42] 'choice-management, change-management' model and Dawson's [44] processual model.

### *2.8 Lewin's three-stage model*

The classical approach to change management is Lewin's [45] three-stage process of 'unfreezing, moving and refreezing'.

Unfreezing is the stage in which the organisation prepares for change. A recognition of the need for change has to occur, alternatives identified and a proposed course of action selected. But in addition to these planning activities, action must be taken to 'unfreeze' existing attitudes and behaviours to allow the change to occur. Lewin sees this stage as essential for the generation of support for the change initiative and for the minimisation of resistance. In this respect, this stage of the change can be viewed through the perspective of Lewin's [48] own technique, force-field analysis. Lewin argues that in any social system there are two opposing sets of forces, forces driving change and forces resisting change. If these opposing forces are in equilibrium, the status quo is maintained. Consequently, during unfreezing, action should be taken to increase the forces driving change and reduce the forces resisting change. Putting this in the context of the discussions above, it has been argued that the OD practitioners emphasise the unfreezing through reducing the resistance to change [81,82], whilst the strategic change practitioners [61,83] emphasise the role of top management commitment and increasing the forces for change.

Moving then occurs during the stage in which the new systems and procedures are implemented. Usually this requires changes in organisational structures and processes as well as the development of new behaviours, values and attitudes. Achieving this during a short period when all the focus is on the change is relatively simple compared with trying to sustain the changes in the longer term. Hence the need for the third stage in Lewin's [48] model, refreezing.

During refreezing, action has to be taken to reinforce the changes that have occurred and to "ensure that the new ways of doing things become habitualised" [44, p.17].

Despite being over half a century old, Lewin's three-stage model is still widely advocated today [42,43,51,84], taken as the basis for new frameworks (e.g. [49,57]) and used for the analysis of cases [85,86]. Its strength lies in its simplicity, making it easy to understand and use [44]. However, the model is not without its critics. The two main criticisms made of the model are that firstly, it is unidirectional and secondly there are concerns that the need to refreeze is not conducive to creating a culture of continuous change. Being a simple model, it fails to capture completely the dynamics of change, which are often considerably more complex than the model implies, but this is the nature of simple models. The second criticism is important, as many would argue that the rate of

change, especially in technology, has greatly accelerated since the 1950s. In particular, Weisbord [81] has argued that in markets where the rate of change is in a state of perpetual transition rather than ‘quasi-stationary equilibrium’ [p.94] the concept of refreezing is inappropriate and in this respect the model could be considered dated.

### 2.9 Burnes’ choice-management, change-management model

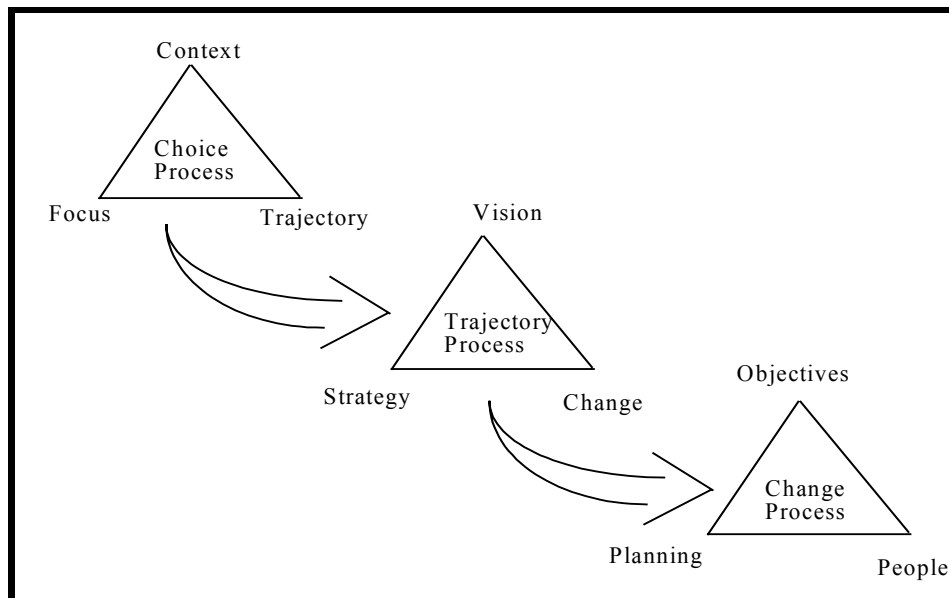
One of Burnes’ [42] core concepts is that management has choices and is not totally constrained by its environment, as one would infer from contingency theory. In fact managers can attempt to alter their environment rather than submit to it and therefore have more freedom of choice than many authors believe.

Burnes argues that there are three processes:

- “The choice process – which concerns the nature, scope and focus of organisational decision making.
- The trajectory process – which relates to an organisation’s past and future direction and is seen as the outcome of its vision, purpose and future objectives.
- The change process – which covers approaches to, mechanisms for and outcomes of change.” [p.323]

Burnes [87] argues that the model provides a view of the interaction between strategy and change and shows whether change is driven by strategy or strategy by earlier change.

**Figure 6** The choice management: change management model



Source: Adapted from Burnes, [42, p.323]

“It (the model) argues that both (strategy and change) are part of the same iterative process – some firms may well make decisions centrally regarding change, but these will be influenced by how change has been carried out in the past, by the perceived degree of success achieved and by the applicability of such approaches to future needs. Likewise, some organizations may decentralise decision making, but local decisions are likely to be influenced by the overall goals, direction and culture of the organization (which in turn will be reinforced or undermined by these local decisions).” [p.758]

### 2.10 Dawson’s processual model of change

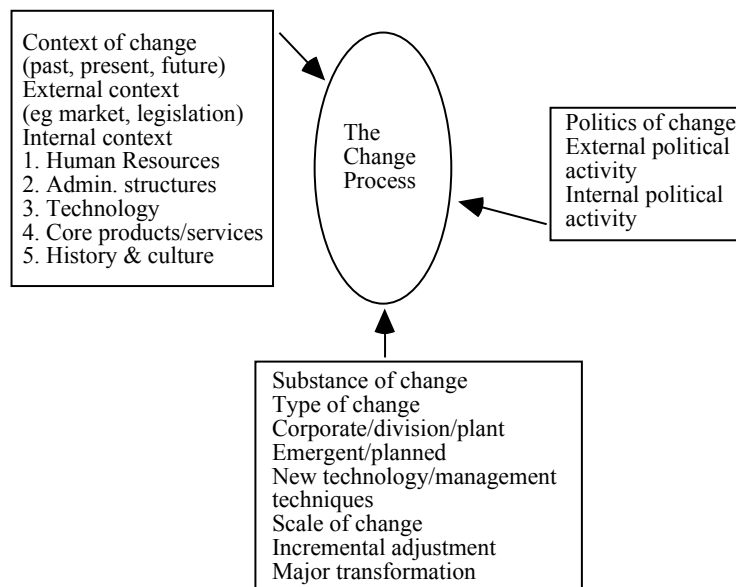
As described above, Dawson [49] is critical of the ‘contingent school’ of change management. His argument is [44]:

‘In order to explain the ways in which the management of change is shaped at a critical juncture during the process of transition, it is necessary to further develop our framework for analysing change. One way of doing this is to classify the major determinants of change and to locate these within the temporal framework developed above. The three major groupings of determinants used here comprise:

- The substance of change
- The politics of change
- The context of change.” [p.41]

Dawson then goes on to describe the substance as the type and scale of change, the politics as the activities of consultation, negotiation, conflict and resistance which occur both within and outside the organisation and context of change as the past, present and expected future external and internal environments (see Figure 7). The processual framework itself is depicted in Figure 8.

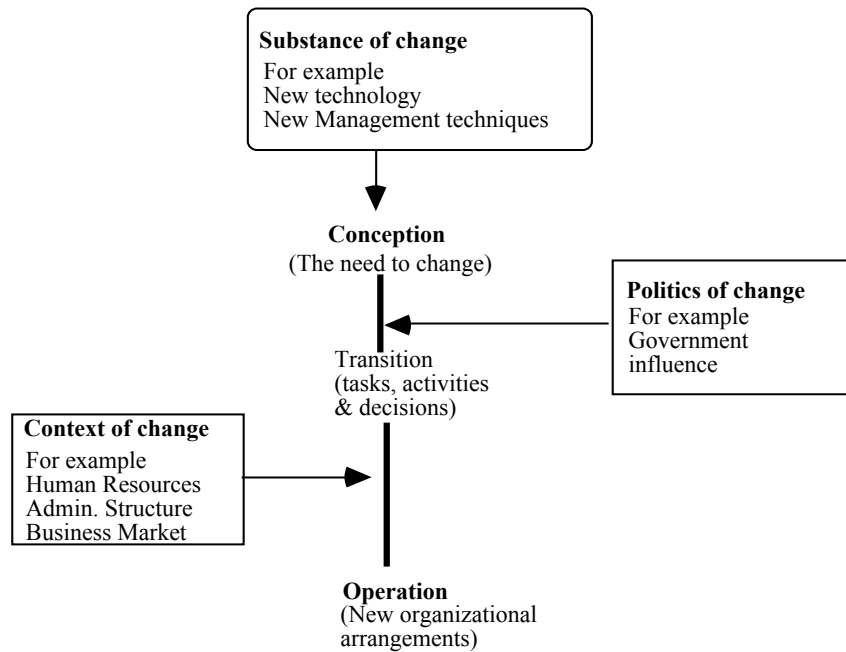
**Figure 7** Determinants of organisational change



Source: Adapted from Dawson, [50 p.65]

The result is a framework that incorporates three time frames which are very similar to those proposed by Lewin [45], much of Pettigrew *et al.* [88] context, process and content as well as (although less explicitly) Burnes' [42] ideas of choice, trajectory and process.

**Figure 8** Organisational change: a processual framework



Source: Adapted from Dawson, [50, p.44]

### 3 Placing the performance measurement design processes in context

The objective of this section is to set the performance measurement design processes described in our first paper [40] in the context of the current body of knowledge found in the change management literature. This will be undertaken by considering the processes in terms of the underpinning theoretical perspectives of change management, soft and hard processes, management processes and contingency theory.

#### 3.1 Underpinning theoretical perspectives

Firstly, we looked at the three underpinning theoretic perspectives on change, the open systems perspective, the group perspective and the individual perspective. The performance measurement system design processes can be viewed at all three levels.

At the open systems level, the processes are the medium by which the senior management team views reality. The tools used in the processes are designed to surface information from outside the organisation as well as from subsystems within the organisation. It is through the processes that decisions are made and objectives, performance measures and targets are agreed.

At the group level, the processes are designed to facilitate a change in perception of the senior management team. The information surfaced through using the tools, the ensuing discussion, the facilitation or the consultant's intervention create new forces. If these forces are accepted by the team, a change in perception occurs, which can create a powerful consensus for action.

At the individual level, the processes should assist individual members of the team to change their understanding of themselves (or at least the role they play in delivering the organisation's performance) and the situation in question, which, in turn will lead to changes in behaviour.

In terms used by operations managers, the processes would be described as creating a shared vision of the situation and consensus on the action to be taken. However, the three social science perspectives highlight the need for the individuals and group truly to engage in the process. A failure to do so will mean that either the situation is not seen as relevant, the forces are not seen as real or their role and situation have not changed. Therefore, for the performance measurement system design processes to be effective, they have to be seen as being central to the ongoing management of the business and the managers and directors involved have truly to enter the debate. Taking Kim and Mauborgne's [89] view of procedural justice research, part of this voluntary collaboration in the process is based on the process being seen as fair.

### *3.2 Soft and hard systems*

Categorising the processes in terms of soft or hard systems approaches to change is difficult. Although the tools used suggest that the approaches are very rational and therefore more akin to a hard systems approach, the interaction and debate make the application of the process much softer than might have been envisaged from simply reading the process descriptions. In fact, the processes are very much a learning processes and on specific occasions, there is considerable recycling through stages. However, McCalman and Paton's [53] definition of "... process of change aimed at resolving issues within an organisation through the effective diagnosis and management of the organisation's culture" does not fit well either. The processes do make differing uses of social science techniques such as facilitation, questionnaires and feedback and therefore encompass attributes of soft systems. Consequently, the processes must be considered a mixture of the two systems, but with a stronger soft systems component because of the learning nature of the processes.

### *3.3 Management processes*

In terms of the management processes for change described above, the processes can be viewed in different ways. They can be said to meet Gleicher's criteria, as they are designed to create dissatisfaction with current performance measures, they help develop a shared and agreed vision of the future and provide practical first steps for implementing the measures. However, they can only be considered a partial process. There are two reasons for this. Firstly, (at least during the initial stages of design, the focus of the literature) the processes only involve a small section of the organisation, the senior management team. Secondly, the processes do not cover fully all the steps from agreement of the measures to the embedding of the new ways of working. Although the

processes meet all the criteria required to launch a change ('unfreezing' in Lewin's terminology), they are still deficient as a complete change management process, as the other two steps ('moving' and 'refreezing') are ignored.

### *3.4 Contingency theory*

Taking the Dunphy and Stace [46] typology, the approaches can be categorised as participative as they takes managers through exercises which help them diagnose their own situation and plan their own change. It can also be argued that the processes (if applied properly) are transformational, as the act of measurement should stimulate continuous change and not just simple movement to a new state.

Dunphy and Stace [46] argued that the change management approach should be determined by the needs of the organisation rather than the values of the change agent. Given the nature of the performance measurement system design processes, the corollary of this argument is that the processes should only be applied in certain situations: participative evolution or charismatic transformation.

## **4 Conclusions and suggestions for future research**

This paper has highlighted the change management aspects of implementation of performance measurement systems, which suggests there may be other explanations for the variation in success. For example, the content of the performance measurement system or quality of application of the performance measurement system design process may be important factors. However, to date, academic studies have not found this to be the case. Content has not been found to be a determining factor of success and failure [6] and, although quality of application of the design process may be an important factor, it is a necessary but not sufficient requirement for success [90]. This suggests that the change management aspects of performance measurement system design and implementation require greater scrutiny.

The review of the change management literature suggested that one difficulty might lie in the fact that the performance measurement system design processes described in the literature are only partial processes. They focus on 'unfreezing', the first of Lewin's three steps in managing change (or in other frameworks – the initial 'conception' phase of Dawson's [44] processual model and the 'choice and trajectory' steps suggested by Burnes [42]). However, the fact that these processes are only partial change management processes may explain the relative lack of success, but it does not explain why the processes work in some companies and not in others [6].

Two further insights that emerged from the literature review are the result of the participative nature of the performance measurement system design processes.

Firstly, the corollary of Dunphy and Stace's [46] argument that the choice of change management approach should be determined by the needs of the organisation, is that the development of performance measurement systems should be limited to specific situations (Dunphy and Stace's participative evolution and charismatic transformation). This conclusion is supported by the time required to implement and obtain benefit from the system [7,22,90–93], as these timescales are not consistent with the rate of change required in crisis situations.

Secondly, in adopting the participative processes described in the literature, management really has to engage in the process [89]. This requires senior managers to enter into the debate about the future direction of the business, contributing their knowledge and experience and listening to those of others. If this is not the case, then the unfreezing will not occur. Factors influencing the engagement in the process should therefore be another focus of future research.

The dearth of research into the success and failure of the implementation of performance measures is an important deficiency in our knowledge of performance measurement. The literature presented above suggests that there are problems and difficulties in implementation of performance measurement systems, which are just beginning to be recognised. To date, our knowledge is based primarily on the reflections of practitioners and therefore, further comparative studies of the success and failure of the implementation of performance measures in different businesses using a consistently high quality application of a single process would add to our knowledge in this area.

## **5 Consequences for practising managers**

The literature reviewed in our first paper [40] and discussed here, describes the process of designing a performance measurement system in hard systems terms, focusing almost exclusively on the logic and rationality of developing the business objectives and the performance measures. However, because most of these methodologies have been developed by consultants, they all contain large elements of soft systems approaches to change, but these are not made explicit. From a change management perspective, these soft systems aspects are at least as important as the hard systems.

Figure 9 summarises both papers. The Figure presents Lewin's [48] three phases of change together with the prescriptions from the performance measurement and change management literatures. Each phase is divided into Pettigrew *et al.* [88] organisational context, change process and resulting strategy content and populated with the literature prescriptions. Figure 9 clearly shows that the further the change proceeds, the less informative the literature. This is particularly true of the performance measurement literature, which contains little between 'unfreezing' and the description of the fully completed performance measurement system.

However, whilst there is a dearth of prescription from the performance measurement literature, the change management literature does provide us with a good checklist of issues to be addressed during the process of the change, even though many of these are stated in general terms. The literature suggests that successful implementations of performance measurement systems should draw from these change management insights and managers should not confine themselves to what is published in the performance measurement literature.

Practising managers need to appreciate that the performance measurement processes described [40] are not just approaches to designing a new performance measurement system, they are also mechanisms for making the change happen. So they need to be managed with this in mind. Time will be required to work through the stages; a certain amount of review and recycling through decisions may also be needed to ensure that all those involved stay engaged. Consideration will also have to be given to the team; how it is progressing in its understanding and commitment. These are critical issues as important as the measures themselves.



But having successfully designed a performance measurement system, the whole roll out and implementation needs to be managed. It is a long process [7], but has no chance of success if this first phase is not successful, both in terms of the measures chosen and the management commitment created.

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