The Change Capacity of Organisations: General Assessment and Five Configurations

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Innover et initier des changements majeurs constituent un processus complexe et beaucoup d'organisations n'atteignent pas les résultat désires. Cette étude s'est donné pour objectif de recenser les facteurs qui favorisent ou contrecarrent les changements d'une grande portée. Ces facteurs sont recherchés dans les caractéristiques des organisations, ainsi que dans la conception et al gestion des processus de changement. Au total, nous évaluons soixante facettes dans l'appréciation des capacités de changement des organisations et nous en étudions les modèles sous-jacents. Les résultats globaux semblent indiquer que les capacités de changement des organisations ne sont ni fortes, ni faibles. Cela va à l'encontre du sens commun, c'est l'inverse de ce que nous savons des differences entre les organisations que changent. Une analyse complémentaire des clusters a mis en évidence un nombre limité de configurations dans les capacités de changement des organisations. Cinq configurations ont dévoilé des modèles précis parmi les facteurs qui handicapent le changement ou y contribuent. Ces configurations ont été nommées "l'organisation innovante", "l'organisation désirante", "l'organisation pourvue d'une technologie ancienne", "l'organisation dont l'approche du changement est maladriote" et "l'organisation cynique". Ces configurations montrent qu'il est indispensable de prendre en compte de nombreuses dimensions des organisations et des processus de changement pour comprendre pleinement ce qui géne ou stimule le changement organisationnel. De plus, les résultats de cette étude indiquent qu'un sentiment d'urgence n'est pas nécessaire pour que le changement air lieu, que la résistance au changement est due à la gestion du processus de changement, que chaque configuration requiert des interventions spécifiques et que les configurations peuvent être rapportées à des variables organisationnelles comme le secteur ou la taille.

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Realizing major organisational change and innovation is a complex process and many organisations do not obtain the outcomes they desire. The purpose of this study is to investigate which factors hinder or contribute to far-reaching change. These factors are sought in characteristics of organisations, and in the design and management of change processes. Altogether, we evaluate 16 aspects when assessing the change capacity of organisations. In addition, we explore underlying patterns in the change capacity of organisations. General results suggest that the change capacity of organisations is neither low nor high. This is counterintuitive and opposite to what we know about differences between changing organisations. Additional cluster analyses revealed a limited number of configurations in the change capacity of organisations. Five configurations show distinct patterns in factors that frustrate or contribute to change. We interpreted the configurations as the innovative organisation, the longing organisation, the organisation with aged technology, the organisation with a clumsy change approach, and the cynical organisation. The configurations demonstrate that focusing on multiple aspects of organisations and change processes is important to fully comprehend what hinders and helps organisations change. Furthermore, results from this study suggest that a sense of urgency is not needed for change to take place, that resistance to change is related to the management of the change process, that each configuration requires specific interventions, and that configurations may be related to organisational variables as sector and size.

INTRODUCTION

A common statement is that change tends to become the stable state of the contemporary organisation (e.g. French & Bell, 1995; Kotter, 1995). Rapid developments in the organisation's environment, market demands, and internal processes are common reasons for companies to start more or less drastic change processes. However, the outcome of a change process is often different from what was planned and new projects are started before previous ones have been finished properly. Sometimes, change processes are canceled deliberately or they lose importance and dissolve slowly. Despite the efforts of scientists and practitioners to understand change better and to learn from experience, organisations still encounter many problems. Managers are unable to establish a sense of urgency for change, change programs either go too fast or too slow, change objectives are incoherent or too abstract, leaders are either too powerful or have too little authority, and so on (cf. Beer, Eisenstat, & Spector, 1990; Kotter, 1996; Pfeffer, 1992).

In the past decades, many reasons for difficulties that arise during change have been identified. For instance, we know much more about the limitations of bureaucracies (Mintzberg, 1983), innovative and conservative organisational cultures (Schein, 1992), learning in organisations and the lack thereof (Argyris & Schön, 1978; Senge, 1990), and resistance to change (Jermier, Knights, & Nord, 1994). There are many experts in the field of organisational change, working as university professors, as researchers, as consultants, and as change agents. The frameworks they use for analysing and explaining why

change in organisations is so complicated usually focus on one single explanation. It is either the hierarchy, or bad communication, or lack of teamwork, or another reason. Heterogeneous explanations, which pay attention to the relationships between aspects of organisations, are less common.

Moreover, aspects of the change process are often absent in explanations for difficulties. The change process itself gets relatively little attention from academics studying organisational change and from managers that are responsible for change processes in organisations. Studies of organisational change seem to be preoccupied with the changes rather than with an analysis of changing (cf. Pettigrew, Ferlie, & McKee, 1992). To put it simply, there is much more attention for what is being changed in organisations (content) than for how change is being accomplished (process). In practice, this is especially the case in design approaches to change that invent solutions for problems but underestimate the implementation process (Boonstra, 1997). Developmental approaches pay more attention to processual aspects of change (cf. French & Bell, 1995). Regardless of the approach to change that is being used, it is important to evaluate process characteristics.

In this article, we present a research project in which barriers to far-reaching change were investigated from a heterogeneous perspective. The distinctive elements of this project are that (1) we focus on a relatively large number of key issues related to organising and change management, and (2) we pay special attention to the interrelatedness of aspects of organisations and change processes. Our goal is to form an encompassing and coherent image of factors that contribute to or hinder far-reaching change in organisations. Theoretically, such an image contributes to a better understanding of barriers to change because a range of possible problems is taken into account. Practically, such an image can be used for choosing or developing appropriate interventions to improve an organisation and the management of the change process. Four issues will be addressed in this article. First, we examine in what sense aspects of organisations form obstacles to far-reaching change. Second, we examine in what sense aspects of change processes prevent organisations from attaining the objectives of the change. Third, we explore underlying patterns in the barriers to change. Finally, we discuss theoretical and practical implications of our findings.

THE CHANGE CAPACITY OF ORGANISATIONS

Before we discuss the research, an outline of aspects that contribute to or hinder far-reaching change in organisations is presented. The division between aspects of the organisation and aspects of the change process determines the general structure of this section. Six aspects of organisations and ten aspects of change processes are discussed. Subsequently, a diagnostic

model of the change capacity of organisations is presented. The term change capacity refers to the degree to which aspects of an organisation *and* aspects of a change process contribute to or hinder change. We will elaborate on this concept when explaining the model.

Aspects of the organisation form the starting point for analysing its change capacity. When moving from the current situation to a new one, it is important to evaluate how the organisation functions (Harrison, 1987). The state of affairs in an organisation can contribute to or reduce its change capacity. In an innovative organisation for example, employees are familiar with change and they are actively striving for it, whereas a bureaucratic organisation focuses on stability and therefore hinders change in the organisation (Schein, 1992). The six aspects of an organisation we evaluate to determine its change capacity are: (1) goals and strategy of the organisation, (2) structure, (3) culture, (4) technology, (5) job characteristics, and (6) power relations. These aspects are interrelated and change in one of them affects the others, as sociotechnical systems theory explains (Boonstra, 1997; Trist, 1981). Generally, far-reaching change processes have consequences for all aspects of an organisation. In terms of configuration theory (Miller & Friesen, 1984) this would be described as a quantum change from one configuration to another.

Most evaluations of the state of affairs in organisations include their goals and strategy. The formulation of goals and a strategy that can be adapted to changes in the environment is generally seen as a task of top managers (Mintzberg, 1973). It is important that people in an organisation are familiar with its goals and agree with them (Burke, 1987). An externally orientated strategy is necessary for competitive advantage (Quinn & Rohrbaugh, 1983). Flexibility of the strategy helps the organisation respond to changes in the market or society.

Structure refers to the organisation of work and to relationships between different units in an organisation. A general distinction can be made between mechanicistic and organic structures (Burns & Stalker, 1961). Mechanicistic structures are formal and rigid, whereas organic structures are flexible and innovative. Lawrence and Lorsch (1967) have shown that there is no best way of organising. However, changing mechanistic organisations such as bureaucracies is difficult because their structure resists change (Miller & Friesen, 1984).

Organisational culture is defined in many different ways (cf. Deal & Kennedy, 1982; Schein, 1992). Changing an organisation's culture takes time and is generally seen as very complicated. For our purposes, we focus on innovativeness and people orientation of managers because these are important aspects of culture and key issues in organisational change.

Technology, especially information and communication technology, is essential for the contemporary organisation. Organisations use technology as a tool or supporting system in many different ways. Its contribution

varies from improving the flexibility and innovative capacity of an organisation to controlled regulation of the workflow and limiting the freedom of employees (Boonstra & Vink, 1996).

Job characteristics encompass elements of job satisfaction and of human resource theory. Generally speaking, job characteristics have to do with the extent to which people like their jobs and the possibilities that an organisation gives them to use their knowledge and abilities, and to develop themselves. Hackman and Oldham (1976, 1980) describe core characteristics needed for job enrichment, like skill variety and autonomy. In addition, human resource activities in organisations deal with issues like career perspectives and development potential of employees.

Political relations refer to the balance between autonomy and mutual dependency of groups and individuals in organisations. This aspect of organisations is not included in many theories yet the importance of power and politics in organisations is acknowledged more and more (Boonstra, 1995; Boonstra & Bennebroek Gravenhorst, 1998a). Pfeffer (1992) describes how centrality of groups and departments increases power but can ultimately lead to strong competition and non-cooperative behavior. Top managers and key persons in an organisation are important characters in analyses of power (Beer et al., 1990; Pettigrew & McNulty, 1998). Some of them focus mainly on themselves and their own position whereas other key persons adequately pay attention to the organisation and its employees.

Aspects of the change process itself generally are not taken into account when the change capacity of organisations is determined. However, both the design and management of the change process have a crucial impact on the change capacity of organisations (Beer, 1980; French & Bell, 1995; Kanter, Stein, & Jick, 1992). In general, the change process becomes a visible reality for employees only after the initial diagnosis of the organisation has been made and the goals for the change have been set. At the start of the implementation of the changes people form an image of the new organisation and the necessity for the change (Jick, 1993). Therefore, we also incorporate aspects of the change process in our analysis of the change capacity of organisations. Thus, the change capacity is distinguished from organisational diagnosis. The latter can be determined before the start of a change process whereas the former needs to be determined during the process. The ten aspects of change processes we evaluate are: (7) goals and strategy of the change, (8) its technological aspects, (9) tensions within and between groups in the organisation, (10) the timing of the process, (11) information supply, (12) generation of support for the change, (13) the role of change managers, (14) the role of line managers, (15) expected outcome, and (16) support for change.

Many of these aspects are topics in the literature on organisational development (cf. Cummings & Worley, 1993; French & Bell, 1995; Greiner

& Schein, 1989). Additional aspects to be considered when evaluating far-reaching change processes are provided by authors following other approaches to organisational change. For instance, Clark (1995) highlights the importance of technology in change processes and Carnall (1990) stresses the timing of change processes. In the following paragraphs, we briefly describe the ten aspects of change processes we evaluate when assessing the change capacity of organisations.

One of the first steps in far-reaching change processes is the formulation of goals. After a sense of urgency is established, people in an organisation will start thinking about the direction the change process should take. Kotter (1995) calls this "creating a vision". Agreement among stakeholders over the goals is important both for further specification of the goals and for transforming the abstract goals into concrete actions to be taken on the work floor.

Information and production technology can be a supporting tool for organisational change as well as a major problem when for instance computer systems cannot be integrated in the case of a merger of two administrative companies. Therefore, it is important to assess the need for technological changes, their complexity, and the effort required to implement them (cf. Clark, 1995).

Tension within and between groups seems to be an intrinsic part of change processes. In addition, in far-reaching change, tension between the existing culture and the desired culture is needed to get the organisation moving. Nevertheless, sensing tension and dealing with it are important aspects of change management (Boonstra & Bennebroek Gravenhorst, 1998b).

The importance of timing is recognised by many authors, but specific recommendations are scarce. Three dimensions of timing seem to be relevant. Phasing of far-reaching change processes is well-known and common practice (French & Bell, 1995). The amount of change in a specific period is a key variable for determining the impact change has for an organisation (cf. Cummings & Worley, 1993). Available time for each phase may be the most delicate dimension. If the phases take too long, the change may lose salience and most people will not notice something happening (Beer et al., 1990). However, too little time for change constrains the necessary solving of problems and adaptation to the new situation (Carnall, 1990). In addition, far-reaching change requires people to learn new behavior and often to adjust their norms and values. Such major adjustments take time and are hindered when phases follow each other too fast.

Providing information and communicating about the change should be adapted to the different stages in the process (Klein, 1996). In general, effective information supply entails clear presentation adapted to the audience, frequent presentation (if possible through various media), honest information, and trying to use the formal routes before the informal ones.

This provides clarity about the change to all layers of the organisation and makes employees feel involved in the process.

Generating support and participation of employees are seen as crucial elements in successful change (Beer et al., 1990; Burke, 1987; Kanter et al., 1992; Landau, 1998). One critical factor is active involvement of top managers in the change process: they should communicate a vision about the future organisation and propagate the norms and values of the new culture. An open attitude of change managers towards ideas and experiences of employees stimulates active support. In addition, such an attitude makes it possible to use available knowledge in the organisation for improving the change process.

Change managers guide and monitor the change process. Professionalism of change managers, credibility, and trust in their skills by all parties involved significantly contribute to the change capacity of an organisation because they reduce uncertainty (Burke, 1987). In addition, change managers need good communicative skills to discuss topics such as goals, decisions, the design of the process, and achieved results. Furthermore, sensitivity for obstacles, problems, and political behavior of groups and individuals is desirable.

Line managers generally fulfill a crucial role in far-reaching change processes. They manage the day-to-day process of change and assist the change managers. That is, they translate the overall goals of the change into specific actions to be taken in their departments or teams (cf. Kanter et al., 1992; Nadler & Tushman, 1990). At the same time, they usually have to change their personal leadership style and the way they interact with their employees. Currently, we see a movement away from authoritative leadership to middle managers who are expected to coach and facilitate (Yukl, 1998). Coaching and facilitating leadership styles are important aspects with respect to the course of change processes.

Expected outcome or willingness to change (Metselaar, 1997) is influenced by many factors. Here, we focus on the psychological component of the expected outcome of a change process. At the psychological level, elements such as faith in the feasibility of the change, belief that it is necessary and does not threaten personal interests, the certainty of being qualified to do a good job in the new organisation all contribute to a positive expectation of the change process (Connor, 1995). The organisational and social components of willingness to change (Werther & Davis, 1986) such as functional organisation of work or political behavior are discussed above. In short, expected outcome refers to the psychological conditions that help people to develop a positive attitude towards the change.

Support for change refers to the active role that people can fulfill in a change process. A clear example of this is the contribution that employees desire to make to a change process. Among others, Burke (1987) supposes

a positive relationship between generating support and employees' desire to contribute. If people are invited to participate in the change process and if their ideas are taken seriously, then support and commitment will increase (cf. Strauss, 1998; Toulmin & Gustavsen, 1996), as will personal benefit of the change. Furthermore, when people find the change necessary and they agree with the goals their support for change and commitment are likely to increase.

Our view on the change capacity of organisations is summarised in Fig. 1. The model visualises the aspects we evaluate when assessing the change capacity of an organisation. On the left side, the model shows the aspects of an organisation in a box. The box represents the boundary of the organisation. The arrows connecting the organisation with its environment indicate the interaction between the two. We distinguish six interrelated aspects of an organisation. The middle part of the model shows the interrelated aspects of the change process. On the right side of the model, the future organisation is reflected. The thick arrows represent the change process leading to a new situation. The future organisation also consists of a number of interrelated aspects. These aspects have the same names as in the current organisation but as a result of the far-reaching change process, they are new or significantly different compared to the situation before the change. The shaded aspects of the model are evaluated in this study. This evaluation shows the state of affairs in an organisation during a change process.

Both the literature and experience show that situations between organisations vary (e.g. some organisations have clear goals and strategy, whereas others do not). Generally speaking, some organisations run well, whereas others do not. The same holds for change processes. Following this line of thinking, we expect to find four possible patterns in the change capacity of an organisation: a positive evaluation of both the organisation and the change process, a negative evaluation of both the organisation and the change process, a positive evaluation of the organisation combined with a negative evaluation of the change process, and a negative evaluation of the organisation combined with a positive evaluation of the change process.

The two patterns in which the evaluations of the organisation and of the change process are alike point to high and low change capacity of an organisation. The patterns with mixed evaluations can be interpreted as respectively: (1) an organisation in need of change where the change process runs smoothly and (2) an organisation that runs well whereas it encounters problems in the change process. These four patterns are based on the idea that all aspects of an organisation or a change process are interrelated and thereby are either positively or negatively evaluated. However, it is also possible that some aspects of a change process are positively evaluated and others are not. Logically speaking, many variations can appear. Still, based on the interrelations that are often found among aspects of an organisation and among aspects of a change process, we expected to find a limited number of patterns.
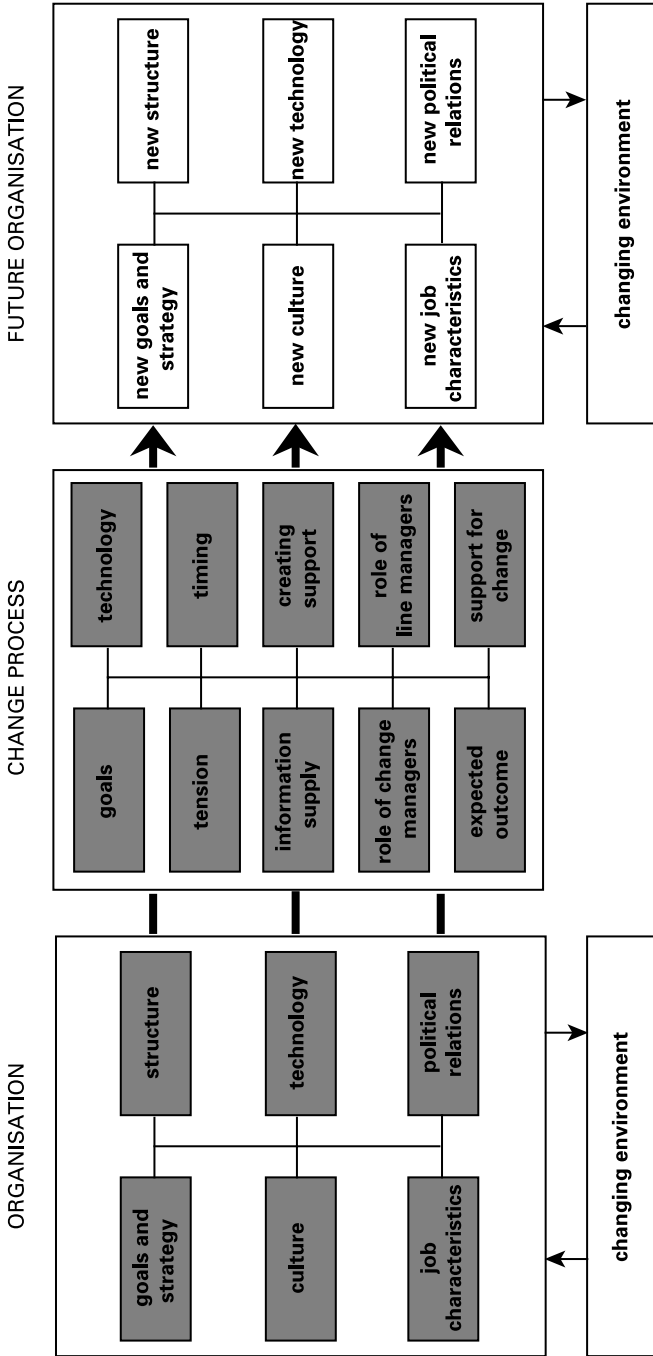
FIGURE 1.   Aspects of the change capacity of organisations.

A limited number of patterns can be interpreted as configurations in the change capacity of organisations. Our notion of configuration differs from the way Miller and Friesen (1984) use the concept in the sense that we incorporate aspects of the change process in our search for configurations. Miller and Friesen mainly focus on the stable state or configuration in organisations. They argue that configurations are punctuated by quantum structural change, which can move the organisation to a new configuration. We aim to understand problems in change processes by looking at configurations in the organisation *and* the change process (i.e. configurations in the change capacity) may help us understand the complex issue of barriers to change. However, because every change process is in some ways unique we must be sensitive to oversimplification and cases that do not fit into configurations.

A QUESTIONNAIRE TO ASSESS THE CHANGE CAPACITY OF ORGANISATIONS

In this study, we used a questionnaire to determine the change capacity of organisations. This questionnaire was developed in four stages. First, a broad literature review was conducted to gather: (1) statements about actions and circumstances that contribute to or hinder change in organisations, (2) results of studies on far-reaching change processes, and (3) theoretical ideas about how change should or should not be designed. In addition, we analysed case descriptions of change processes from about 60 consultants and change managers. Second, the results we obtained in the first stage were arranged according to the aspects in Fig. 1 and the first outlines of the questionnaire appeared. Third, data from an exploratory study on the change capacity of organisations were used to test the pilot version of the questionnaire. We asked practitioners attending post academic courses to write down what conditions contribute to or hinder change according to their experiences. Comparing the hundreds of statements they produced with the pilot version of the questionnaire led to a few additional statements being included in the questionnaire. Fourth, the questionnaire was administered in a pilot study to test whether the statements were clear, whether the scales were reliable, and to get experience with its feedback possibilities.

The questionnaire has 16 scales, which are described in Table 1. Each scale consists of three to eight statements. Respondents are asked to indicate on 5-point scales, ranging from −2 (strongly disagree) to 2 (strongly agree) to what degree each of the 79 statements applies to the situation in their organisation. This distinction is useful for reading the graphical display of the results because disagreement with statements is displayed as a negative contribution to the change capacity and agreement as a positive contribution (see Fig. 2). An example of a statement about the characteristics of the

TABLE 1
Scale Descriptions of the Change Capacity of Organisations Questionnaire

Organisation	
Goals and strategy	This scale refers to clearness of the goals of an organisation, agreement about these goals, external orientation of its strategy, and degree of flexibility to deal with market demands and developments outside the organisation
Structure	This scale refers to the organisation of work and decision making about operations in an organisation
Culture	This scale refers to opportunities for innovation, people oriented leadership, and cooperation within an organisation
Technology	This scale refers to available technology, clearness of the use of supporting systems, and information about work procedures
Job characteristics	This scale refers to division of labor, quality of work, relationships with colleagues, and career perspectives in an organisation
Political relations	This scale refers to the interests of individuals and departments or teams, the division of influence, and to the degree of competition in an organisation

Change process	
Goals	This scale refers to clearness of the change objectives, agreement about these objectives, and understanding of the change strategy
Technology	This scale refers to complexity of technological adjustments, effort required from employees to implement the adjustments, and available technological support to effectuate the change
Tension	This scale refers to tensions between and within teams or departments of an organisation resulting from the change and to pressure on the existing culture
Timing	This scale refers to phasing and pace of the change process, time to adopt the change, and the speed of the decision making process about the change
Information supply	This scale refers to amount and clearness of information about the change process and the way an organisation supplies this information
Creating support	This scale refers to involvement of top managers, coaching of employees, and opportunities people have to influence the course of the change process
Change managers	This scale refers to the competence of the change managers, their visibility, and communication between change managers and employees
Line managers	This scale refers to the role of line managers in the change process, the way they deal with the change, and the interaction with their subordinates during the change process
Expected outcome	This scale refers to expectations of employees regarding the development and outcomes of the change process
Support for change	This scale refers to the perceived necessity of the change and the desire of people to actively contribute to the change process

change process is "The goals of the change process are clear for members of my organisation". If a respondent disagrees with this statement, the lack of clear goals is considered a barrier to change. When he or she agrees, clarity of the goals is considered to contribute to the change process.

In this study, data were collected by asking participants in 11 post academic courses on change management to fill out the questionnaire and to distribute four copies in their organisation among a representative selection of colleagues. Thus, we collected five questionnaires per organisation. Respondents were asked to indicate the general opinion among members of their reference group (e.g. managers were asked to describe the opinion of the managers in their organisation, employees were asked to describe the opinion of their team members or members of their department). This procedure gives an impression of the overall assessment of the organisation and the change process in each case. All participants worked in organisations involved in far-reaching change processes. Completed questionnaires were sent directly to the university. Feedback on the results was provided in the post academic courses. This feedback consisted of a graphic evaluation of the change capacity of the participants' organisations, discussions about the underlying causes of factors impeding the change, and suggestions to enlarge the change capacity of the organisations. In general, participants found it easy to interpret their graphs and recognised the general opinion in their organisation.

About 60 per cent of all participants used the opportunity to evaluate the change capacity of their organisation. In the final data set 104 organisations are represented through 495 questionnaires. In general, the goals of the change processes are to move from traditional organisations to organisations that are able to meet contemporary requirements. For example, this means moving from functionally structured organisations to team-based work, privatised state organisations that have to learn to operate in a competitive market, organisations engaged in business process redesign, or mergers between organisations.

Table 2 contains the scale reliabilities and intercorrelations of the scales. Given the relatively few items in many scales, Cronbach's alphas were reasonably satisfactory, ranging from 0.58 to 0.83. The alpha for the structure scale is 0.58, which is below the standard criterion of 0.60. This scale needs to be improved in the next version of the questionnaire. We have found many scales to be correlated which might be explained by the interrelatedness of the aspects that were measured as was explained in the previous section.

DESCRIPTIVE RESULTS

Table 3 contains the means, standard deviations, and ranges of the 16 scales. Means are computed dividing the summed scores by the number of items in the scale. The scale with the highest mean is Support for change

TABLE 2
Scale Reliabilities and Intercorrelations

Organisation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Goals and strategy	(0.75)															
2. Structure	0.27**	(0.58)														
3. Culture	0.57**	0.37**	(0.74)													
4. Technology	0.27**	0.07	0.24**	(0.70)												
5. Job characteristics	0.46**	0.32**	0.60**	0.31**	(0.70)											
6. Political relations	0.37**	0.40**	0.55**	0.20**	0.46**	(0.70)										
Change process																
7. Goals	0.33**	0.05	0.25**	0.12*	0.20**	0.18**	(0.75)									
8. Technology	0.01	0.02	0.01	0.30**	0.07	0.15**	-0.03	(0.61)								
9. Tension	0.16**	0.20**	0.24**	0.07	0.18**	0.28**	0.24**	0.25**	(0.62)							
10. Timing	0.21**	0.14**	0.19**	0.14**	0.21**	0.25**	0.44**	0.29**	0.35**	(0.69)						
11. Information supply	0.20**	0.14**	0.27**	0.13**	0.22**	0.29**	0.62**	0.03	0.28**	0.48**	(0.69)					
12. Creating support	0.19**	0.04	0.28**	0.11*	0.33**	0.29**	0.49**	0.07	0.20**	0.53**	0.59**	(0.76)				
13. Change managers	0.32**	0.04	0.33**	0.18**	0.31**	0.32**	0.54**	0.15**	0.27**	0.57**	0.55**	0.65**	(0.83)			
14. Line managers	0.31**	0.30**	0.50**	0.07	0.36**	0.49**	0.26**	0.16**	0.28**	0.34**	0.37**	0.32**	0.42**	(0.72)		
15. Expected outcome	0.36**	0.18**	0.37**	0.16**	0.38**	0.41**	0.34**	0.27**	0.46**	0.41**	0.34**	0.41**	0.48**	0.41**	(0.69)	
16. Support for change	0.20**	0.07	0.22**	0.07	0.20**	0.17**	0.44**	0.02	0.21**	0.26**	0.28**	0.41**	0.37**	0.24**	0.38**	(0.68)

Note: Alpha coefficients are in parentheses.   * $P < 0.05$,   ** $P < 0.01$ two-tailed.

TABLE 3
Means, Standard Deviations, Ranges, and Final Cluster Centers for Five Clusters

	Overall			Cluster centers				
	M	SD	Range	1	2	3	4	5
Organisation								
Goals and strategy	0.06	0.69	3.80	0.65	−0.50	0.31	0.15	−0.99
Structure	0.19	0.75	4.00	0.48	−0.76	0.09	0.39	−0.46
Culture	0.23	0.69	3.75	0.82	−0.73	0.24	0.22	−0.99
Technology	0.13	0.62	3.67	0.45	−0.07	−0.22	0.09	−0.51
Job characteristics	0.34	0.45	3.33	0.70	−0.47	0.15	0.25	−1.02
Political relations	−0.02	0.64	4.00	0.78	−0.69	0.15	0.24	−0.90
Change process								
Goals	0.20	0.68	3.75	0.72	0.42	0.27	−0.77	−0.99
Technology	0.34	0.73	3.67	0.30	0.27	−0.93	0.48	−0.31
Tension	−0.33	0.73	3.67	0.73	−0.13	−0.44	−0.07	−0.60
Timing	−0.07	0.61	3.20	0.86	0.38	−0.51	−0.30	−0.87
Information supply	0.05	0.74	4.00	0.78	0.48	0.12	−0.69	−1.06
Creating support	0.38	0.60	3.43	0.73	0.58	0.03	−0.54	−1.17
Change managers	0.20	0.65	3.80	0.84	0.47	0.03	−0.53	−1.21
Line managers	0.05	0.64	4.00	0.84	−0.39	0.03	−0.03	−0.87
Expected outcome	0.18	0.51	2.88	0.88	0.01	−0.35	−0.03	−1.05
Support for change	0.53	0.54	3.75	0.55	0.22	−0.02	−0.32	−0.72

($M = 0.53$, SD $= 0.54$), which indicates that in the organisations in our sample people find the changes are necessary and they want to contribute to the change process. The lowest mean was found for Tension ($M = -0.33$, SD $= 0.73$), which indicates that change processes generate considerable tension within and between teams and departments. However, many means are close to 0. The lowest and highest possible scores are −2 and 2, which suggests that evaluations of organisations and change processes are neither positive nor negative.

We believe the overall means are not very useful in this study. First, standard deviations and the ranges indicate that there are substantial differences in the evaluation of each of the 16 scales. Second, the results of each particular organisation show many aspects to be evaluated either negatively or positively, instead of rather neutrally. Third, there is theoretical support for the idea of variation in the change capacity of organisations and we argued that a limited number of configurations might be found to describe that variation.

We performed cluster analysis to identify configurations in the change capacity of organisations. Cluster analysis is a common technique for an

empirical approach to discovering configurations (Miller & Friesen, 1984). We performed cluster analysis on the standardised scores using a hierarchical method (Ward) and a non-hierarchical, iterative procedure (K-Means). The hierarchical method produced five clusters. Subsequently, K-Means cluster analyses were performed with five to eight clusters to determine the final number of clusters for interpretation. The five-cluster solution did not produce overlapping cluster patterns and therefore we selected it. Table 3 contains the cluster centers of the five clusters that resulted from this analysis.

Interpretation of the Clusters: Five Configurations in the Change Capacity of Organisations

The five clusters are graphically displayed in Fig. 2. The figure contains simplified representations of peoples' opinions about the state of affairs in their
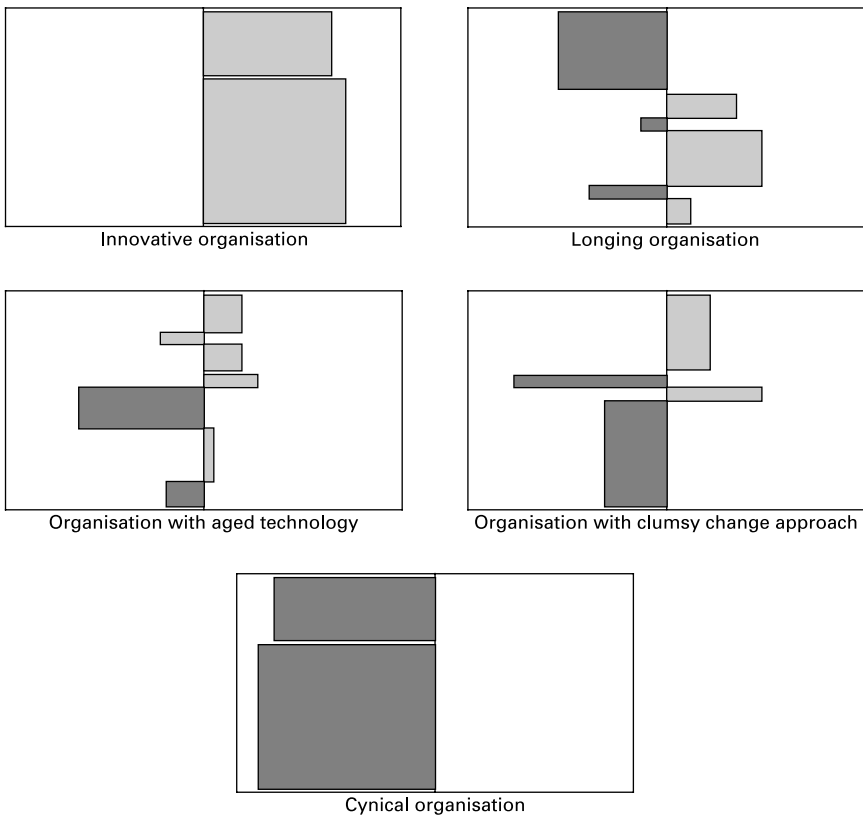
FIGURE 2.   Configurations in the change capacity of organisations.

organisation and about the change processes. Bars pointing to the left represent a negative evaluation of the organisation or the change process. Bars pointing to the right represent a positive evaluation. We labeled the five configurations as the innovative organisation, the longing organisation, the organisation with aged technology, the organisation with a clumsy change approach, and the cynical organisation. Each configuration shows a distinct pattern in the evaluation of the aspects of the organisation and the change process.

The *innovative organisation* shows positive evaluations of all aspects of the organisations and the change process. Thus, conditions for successful change seem to be fulfilled in this cluster. People working in organisations represented by this cluster are familiar with the goals and strategy of their organisation. Respondents indicated that members of their organisation consider the structure to be flexible. The culture is characterised as innovative and people make use of modern technology. Members of the organisation are satisfied with their jobs and political relations are good. The goals of the change process are clear and people agree over them. Technological change is easily realised, and the process does not cause tensions within and between departments. The change process allows enough time for employees to accept the change process and for completing each change phase. Information about the goals and the progress of the process is clear and well-spread in the organisation. Top managers are actively involved in the process and are sensitive to interests of the groups involved, thereby stimulating full support from all organisation members. Line managers, who are responsible for the actions to be taken to realise the change, handle that task well, involve their subordinates, and pay attention to their problems. Members of the organisation have positive expectations regarding the development and outcomes of the change process, believe that the change is necessary, and want to contribute to the change process.

The organisations in this cluster are mostly working in the ICT sector. We also found a few service companies (consulting firms), healthcare organisations, educational organisations, and industrial organisations in this cluster. Most innovative organisations are small (up to 100 employees) or medium-sized (100 to 500 employees). However, central government was also found in this cluster.

The *longing organisation* has a rather different pattern. All aspects of the organisation are evaluated negatively. This state of affairs is likely to be the reason for the change process. The change process is handled well and people seem to realise that something has to be done. Members of the organisations in this cluster know what the goals of the change process are, they agree about these goals, they perceive the change as necessary, and they want to contribute to it. It seems that they are longing for a new and better situation. However, two aspects of the change process are evaluated

negatively. There is some tension and line managers find it difficult to deal with the change. Both tension and the difficulties with line managers may be related to the fact that groups and individuals in the organisation mainly focus on their own interests. Presumably, one of the goals of the change process is to improve political relations in the organisation.

In this cluster, we found central and local government organisations, service companies (consulting firms and financial services), and industry. In most cases, these organisations are large (over 500 employees).

The *organisation with aged technology* runs relatively smoothly. Technology is the problem in the present situation. This could mean that computers are not working well and systems are difficult to use, or do not provide adequate support to do the work. Improving or changing technology leads to problems. Technology is the most negatively evaluated aspect of the change process, which means that it is a complex issue and it requires considerable effort of both managers and employees. In addition, changing technology causes tension, people indicate that it goes too fast, and that they have negative expectations of the outcome. Still, the goals of the change are clear and people agree that change is needed, so that does not seem to be the problem. The almost neutral evaluation of the other aspects of the change process provide a clue as to what is going on in organisations in this cluster. Changing technology is a difficult matter and requires considerable effort of change managers and line managers. Besides, little attention is being paid to information supply and to creating support for technological change.

In this cluster, we found service companies, healthcare organisations, educational organisations, industry, trading companies, and not-for-profit organisations. Most of these organisations are medium-sized or large.

The *organisation with a clumsy change approach* shows that the state of affairs in the organisation is evaluated positively. However, people criticise almost all aspects of the change process. Goals of the change score lowest in this cluster. The state of affairs in the organisation does not draw attention to large problems, which makes it even more important and at the same time difficult to make clear why change is needed. This is why we use the term clumsy change approach. The main reasons for this problem seem to be insufficient information supply, not creating support, and inadequate change management. Apparently, in a situation such as this people do not want to contribute to the change process. The positive opinion about changing technology means either that this is not a problem or that changing technology is not an issue in this organisation.

The organisations in this cluster are local government, service companies, and not-for-profit organisations. Except for one, they are medium-sized.

The *cynical organisation* displays negative evaluations of the state of affairs in the organisation and of the change process. For instance, the goals and strategy are not clear, the culture is conservative, groups and individuals

pursue their own interests, and people are not willing to change. In addition, people seem to be rather dissatisfied with their jobs. This could contribute to a desire to change. However, the critique on the change process shows that change is unlikely to succeed. For instance, the goals are unclear, the information supply is insufficient, and change managers seem to be lacking the skills necessary to do their difficult job. Consequently, people do not expect much of the change process and they do not wish to contribute to it. In short, just about everything is wrong in the cynical organisation and the magnitude of the problems requires serious concern.

In this cluster, we found central and local government organisations, service companies, healthcare organisations, educational organisations, industry, trading, and not-for-profit organisations. Most of the financial services organisations and large trading organisations are cynical. We did not find small organisations in this cluster.

CONCLUDING REMARKS

The first question in this study was in what sense aspects of organisations form obstacles to far-reaching change. The second question was in what sense aspects of change processes prevent organisations from attaining the desired goals. A general answer to these questions cannot be given. The aspects were evaluated for more than a hundred organisations involved in far-reaching change processes. The results show that, on average, the state of affairs in organisations and the evaluation of ongoing change processes cannot be characterised as troublesome or worthy of serious deliberation. On the other hand, we also did not find factors contributing to change in organisations. In other words, this would mean that the change capacity of organisations is neither low nor high. This is counterintuitive. Both academics and practitioners know from literature and experience that there are many differences between organisations and that change processes often do not proceed without problems. This is one of the reasons why we performed additional analyses to try to find configurations in the change capacity of organisations that describe such variation.

We interpreted the five configurations we found as the innovative organisation, the longing organisation, the organisation with aged technology, the organisation with a clumsy change approach, and the cynical organisation. The innovative organisation and the cynical organisation are the most familiar ones. In the first, things runs smoothly and changing is easy, so this organisation has a high change capacity. In the cynical organisation just about everything is wrong and its change capacity is low. The change capacity of the longing organisation is fairly high. Aspects of the organisation are evaluated negatively, which indicates a need for change. The change process runs smoothly, there is a positive expectation of the outcome, and support

for change is high. The opposite holds for the organisation with a clumsy change approach. Here, the change capacity is fairly low. The organisation is running relatively well, but the change process is evaluated rather negatively and support for change is lacking. Finally, the change capacity of the organisation with aged technology is also fairly low. Here, changing technology is the main problem. It seems that the change process was not given enough attention, which could have contributed to the negative expectation of the outcome.

We conclude that difficulties in changing organisations can be described by a limited number of configurations. These configurations seem to encompass a large proportion of the situations occurring in organisations involved in a far-reaching change process. The five configurations we found show distinct patterns in factors that frustrate or contribute to change in organisations. Focusing on multiple aspects of an organisation leads to a better understanding of the situation than does focusing on a single aspect. The configurations show that problems in organisations are related. The same holds for positive evaluations of aspects of an organisation. Including aspects of the change process further extends our understanding. For instance, it draws attention to the possible combination of a well-running organisation and a badly managed change process. Alternatively, it is also possible that an organisation with complex problems smoothly moves to a new situation through a well-managed change process. Our results showed that such situations actually occur. This means that, in a context of change, diagnosing an organisation is important but not enough. We should also monitor the change process to fully comprehend what hinders and helps organisations to change.

A first implication of this study is that a clear need for change or sense of urgency as a start for far-reaching change is not always necessary. Change processes are started for many reasons. Problems related to one or more aspects of the organisation can be one of them. Management may decide that change is necessary to solve these problems. Alternatively, change processes are also started without a clear need for change as three of the five configurations show. Here, reasons for change can be to further improve the relatively positive situation in the organisation or to prevent problems in the future. Our impression is that in innovative organisations change processes are started to keep up with developments in the environment or within the organisation, even though there is no urgent need to do so. In that case, long-term strategic considerations are strongly related to other aspects of the organisation, managing change and enjoying it. In the organisation with a clumsy change approach and in the organisation with aged technology the need for change seems relatively low. Here, the main problems arise during the change process. Still, a well-managed change process could have improved the situation in these organisations. The states

of affairs in the cynical organisation and in the longing organisation most clearly ask for change.

A second implication is that resistance to change primarily appears to be related to problems in the change process. If we take expected outcome and support for change as indicators of resistance, our results do not support the idea that resistance is a psychological reaction inherent to human beings or that it is caused by bureaucracy, division of labor, or conservative culture. In the innovative organisation and in the longing organisation there is no resistance to change, so it is not a standard psychological reaction. In addition, in the longing organisation, people support the change despite its bureaucratic structure and its conservative culture. The opposite is found in the organisation with aged technology and with a clumsy change approach. Here, we find a rather flexible structure and an innovative culture combined with negative expected outcome and lack of support. These patterns suggest that people do not want to put effort into a process that is badly designed and managed.

A third implication is that different interventions are needed to deal with the specific problems in each of the configurations. For the innovative organisation, interventions do not appear imperative at the moment. Here, the challenge is to keep what has been accomplished. The longing organisation is faced with two specific problems in the change process. For this organisation, the amount of tension and the role of line managers require special attention. The organisation with aged technology has to deal with a more complex situation. Changing technology is the main problem. If people in the organisation are able to deal with the technology change themselves, more attention to the management of the process is needed. If they cannot do it, another solution must be found. For the organisation with the clumsy change approach, the most important question is why the change is needed. If that question is answered, the next thing to work out is how to improve the management of the change process. The cynical organisation is faced with the most difficult situation. Change is needed, but continuing the current change process is ineffective. A way to unfreeze the negative atmosphere could be to figure out how to reach a shared understanding of the problems. Another possibility is that hard interventions may force a breakthrough. Naturally, these general ideas need to be worked out in detail for each particular organisation. We think that the specific results of each organisation should serve as the basis for interventions. Nonetheless, for particular organisations the configurations are useful as a main reference point.

More research is needed to investigate the relationship between configurations and other variables typical for organisations. We found specific kinds of organisations in most of the clusters, which suggests that sector is related to configuration. For instance, innovative organisations are usually active in the ICT sector. Many of these organisations are also relatively young and

small or medium-sized. We need to collect more detailed information about sector, size, age, reasons for change, available time, and phase of the change process to improve the description and understanding of the configurations. Relationships between configurations and these variables may be useful for explaining why certain organisations are innovative and others are cynical.

Finally, outcome measures are needed to establish the predictive utility of the configurations. The aim of this study was to understand problems in changing organisations. We assume that problematic change is negatively related to the outcome of change processes. For instance, when the goals of the change are not clear, the process is managed badly, and people do not support the change, we consider chances for successful change to be low. Empirical support for this assumption could be obtained through remaining in contact with participating organisations to measure the outcome of their change processes. Finding a negative relationship between problematic change and success would strengthen our argument for the importance of good change management and for monitoring the change capacity of organisations.

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