Creating positive employee change evaluation: the role of different levels of organizational support and change participation

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Abstract

Organizations are faced with fast-paced change and the need to ensure ongoing change intervention success. There is, however, evidence that employees who have experienced poor change management in the past are more likely to resist new changes. This is because poor change management is likely to create more adverse attitudes towards new changes, such attitudes in turn are likely to increase employee's resistance to change, a key factor for change failure, which can further contribute to an employee's perception of poor change management. We, in response to this, identify key elements which create positive change evaluations and adopt a socio-cognitive approach, the schematic approach, in discussing these. Bootstrapped mediation analysis of survey data collected from 228 employees suggests that different types of organizational support and change participation are key in creating a positive change evaluation. Specifically, the analysis shows that the relationships between perceived organizational support and supervisor support and change evaluation are mediated respectively fully and partially by change participation. Co-worker support, further, is directly related to employee's change evaluations. These very elements of the change process, we argue, are directly modifiable by change agents and are, therefore, of real practical value when seeking to increase future change intervention success.

Keywords:

Perceived organizational support, perceived supervisor support, perceived co-worker support, change participation, change evaluation, change management.

Introduction

Organizations are increasingly faced with the challenge to adapt to business conditions by designing and successfully implementing changes to their internal and external structures, processes, and strategies (By, 2005; Burnes, 2004; Whittington and Mayer, 2002). Some of these organizational change interventions are successful (Hughes, 2011) while others fail to reach their desired outcomes and potential (Burnes and Jackson, 2011; Aiken and Keller, 2009; Balogun and Hope Hailey, 2004; Kotter, 1995). Employee resistance to change has often been blamed for change management failures (Avey *et al.*, 2008; Giangreco and Peccei, 2005; Pardo del Val and Martinez Fuentes, 2003; Bovey and Hede, 2001a, 2001b; Piderit, 2000; Coghlan, 1993; Steinburg, 1992; Zaltman and Duncan, 1977), although it has also been recognized that change agents contribute to this resistance to change through their own actions and inactions (Ford *et al.*, 2008). Regardless of the reason for which change interventions fail, this mismanagement of the change process can lead to employee stress and cynicism and, consequently, reduce organizational commitment, motivation, job satisfaction, and organizational trust (Elias, 2009). It is, therefore, important for organizations to manage the change process as effectively as possible (By, 2005).

The literature on employee resistance to organizational change has provided many insights into understanding key factors that negatively affect employee receptivity towards change and, thereby, reduce the likelihood of change intervention success (see Jimmieson *et al.*, 2008; Oreg, 2006; Jones *et al.*, 2005; Wanberg and Banas, 2000). This body of research has increased our understanding of employee responses to organizational change and has offered insights to scholars and practitioners alike on how to implement change for best possible

results. However, it often focuses on an analysis of single change episodes, and tends to neglect the role of individuals' change history in shaping responses to organizational change interventions taking place at present time (Bordia et al., 2011; Pettigrew et al., 2001). Scholars such as Devos et al. (2002) and Schneider et al. (1996), however, provide empirical evidence to support the idea that individuals assess change in retrospect and subsequently develop either a positive or negative attitude towards prospective change interventions. More recently, Bordia et al. (2011) highlighted the roles of context and situation, specifically of change history, in shaping employee orientation towards the organization and current change programs. To be precise, this stream of research advocates the idea that individuals with a negative track record of organizational change are more likely to resist future change interventions, whereas those with a positive change history are more likely to welcome future changes. If employees feel that changes are implemented poorly and fail to connect with the new status quo, they are more likely to enter the almost inevitably occurring next change intervention with a less favorable, more adverse attitude (Bordia et al., 2011). This new intervention, in turn, is likely to fail or underperform again, as employees with an adverse attitude and with this associated negative change history are more likely to resist the new change -one of the key elements for overall change intervention failure (Vakola and Nikolaou, 2005; Vakola et al., 2004).

In order to address the implications associated with this, the article identifies three levels of support as key drivers of change evaluations, namely organizational, supervisor, and co-worker support. We consequently test for the directional relationships between these different levels of support, change participation, and change evaluations. The discussion of our

findings is framed within a socio-cognitive approach, the schematic approach, used to explain how organizations can potentially escape this sequence of negative change events.

The paper's contribution to change management theory and practice is twofold. Firstly, it contributes to the literature by exploring the directional link between three key levels of organizational support received by an employee (Coghlan, 1994), and their direct effects on an individual's positive change evaluation. Secondly, it contributes to the literature by suggesting that these directional links are likely to be mediated by an individuals' change participation. Key, in our view, is that all exogenous variables (and the mediator) are directly modifiable by organizations. Therefore, the results of this study are of real practical value for change agents who try to increase levels of change intervention success. Shedding light on the interplay of these key variables in the change management process, as such, can help organizations create positive change experiences and thereby increase overall change intervention success.

The role of organizational support perceptions in creating positive change evaluations

In order to better understand the effects of poor employee change management history, we adopt a socio-cognitive approach, to explain the cognitive processes that lead to individuals' reactions to change, and consequently to change evaluations. People form schemata to understand and evaluate their environment, including organizational schemata to understand and evaluate organizational change (Bordia *et al.*, 2011; Lau and Woodman, 1995; Bartunek *et al.*, 1992; Bartunek and Moch, 1987). A schema is "a cognitive structure that represents

organized knowledge about a given concept or type of stimulus" (Fiske and Taylor, 1991: 140). Schemata "help people to simplify, effectively manage, and make sense of information in their surrounding environments and guide the cognition, interpretation, and ways of understanding events or objects" (Lau and Woodman, 1995: 538). Therefore, when people experience organizational change, they have interpretations of and expectations about these changes. They form change schemata, cognitive maps for understanding the antecedents, significance, and consequences of change, to guide their responses to such change events (Lau and Woodman, 1995). These formed schemata do change as organizational change events unfold in one of three ways (Bartunek and Moch, 1987, 1994): schemata may be simply reinforced (first-order change); schemata may consciously be modified towards a particular direction (second-order change); or schemata may consciously be modified by organizational members after intentional training to increase their awareness of such schemata and develop their ability to change these (third-order change). If we put aside the third-order change outcome which requires a systematic approach to changing the way organizational members view change initiatives, the other two change outcomes involve individual processes of schematic change via a constant evaluation of the change experience and can lead to either a simple re-enforcement of existing experiences, or to a change in views, attitudes, or behaviors, such as to lower trust, job satisfaction, and openness to change, and higher cynicism over turnover intentions (Bordia et al., 2011). It is important to focus research on how positive change evaluations can be or are created, as we believe they have the potential to reduce resistance to change and to also increase individual-level change support; two key elements of change intervention failure or success, respectively.

Literature on organizational support theory (e.g. Rhoades and Eisenberger, 2002) suggests that employees are more willing to engage psychologically in an organization when they have positive feelings over how the organization is treating them. One aspect of this perception over treatment refers to the level of support an employee receives from their employing organization. Perceived organizational support theory (e.g. Byrne and Hochwarter, 2008; Rhoades and Eisenberger, 2002; Eisenberger et al., 1990 Eisenberger et al., 1986; Coch and French, 1948) presents the view that employees form beliefs concerning the extent to which the organization values their contributions and cares about their well being and suggests that employee behavior can be affected by such beliefs. Therefore, if an organization desires its employees to exhibit positive behaviors over change, it is important to create a positive perception over treatment, particularly a positive perception over the level of support provided by co-workers, supervisors and the organization as a whole. One needs to understand support, particularly employee perceptions over support, at three different organizational levels, the organizational level, the supervisory level, and the co-worker level (Coghlan, 1994), and identify how such support perceptions can affect employee change evaluations.

Based on existing work on organizational schemata created to understand and evaluate organizational change (Bordia *et al.*, 2011; Lau and Woodman, 1995; Bartunek *et al.*, 1992; Bartunek and Moch, 1987), we argue that perceived organizational support may indeed create positive emotions towards the organization and change through developing positive change schemata, and lead to positive employee change evaluations. In other words, we argue that the level of organizational support offered to an employee has the power to affect the employee's mindset, emotions, and individual schemata, and, ultimately, his/her experience with change,

thus facilitating the formation of positive change evaluations by managing perceptual distortions responsible for resistance to change (Bovey and Hede, 2001b). We suggest that, if employees feel they are receiving adequate support from their employing organization, they are more likely to positively experience change and form more positive change evaluations and incorporate these positive experiences into their cognitive change schemata. We therefore hypothesize the following:

Hypothesis 1a: Perceived organizational support will be positively related to employees' positive change evaluation.

In addition, perceived supervisor support refers to the degree to which employees believe that their supervisors care about them and value their work contributions (Stinglhamber and Vandenberghe, 2003; Eisenberger *et al.*, 2002; Kottke and Sharafinski, 1988). Supervisors represent the organization and are often involved in both the communication and implementation of change (e.g. Neves and Caetano, 2009; Eisenberger *et al.*, 2002). In other words, supervisors can be seen as key agents in the implementation of organizational change initiatives as changes are cascaded downwards in the organization and need to be put into practice at lower hierarchical levels (Neves and Caetano, 2009). This is likely to have implications on the way employees evaluate the change and form change schemata (Lau and Woodman, 1995; Bartunek and Moch, 1987, 1994). More specifically, if employees receive support and guidance from this key organizational entity, they are likely to form a more positive change schema and are therefore more likely to evaluate the change in a more positive way. In fact, there is evidence that trust in the supervisor fully mediates the relationship between affective commitment to change and work outcomes (turnover

intentions, organizational citizenship behaviors, and perceived performance) (Neves and Caetano, 2009), which suggests that supervisors can be highly influential sources powerful enough to modify cognitive schemata individual employees have about change. Therefore, the support from the supervisor is crucial for developing positive change experiences and forming positive change evaluations. Without support from this source, we argue, employees are unlikely to positively evaluate a change post-implementation. We, therefore, hypothesize the following:

Hypothesis 1b: Perceived supervisor support will be positively related to employees' positive change evaluation.

Lastly, perceived co-worker support refers to the degree to which employees perceive that their co-workers care about their well being and respect their contributions to the organization (Eisenberger *et al.*, 2002). When change occurs, employees are often asked to learn new skills and adapt their working style to fit the new status quo. One's co-workers may well be a very helpful source of such support, and can help with acquiring new skills and knowledge (Hon *et al.*, 2011; Hargadon and Bechky, 2006). Co-workers can also emotionally support each other in times of uncertainty often caused by organizational change initiatives. This support improves the experience employees have with change and can positively influence or modify cognitive schemata about change (Lau and Woodman, 1995; Bartunek and Moch, 1987, 1994). Based on this line of reasoning, we hypothesize the following:

Hypothesis 1c: *Perceived co-worker support will be positively related to employees' positive change evaluation.*

The role of change participation in creating positive change evaluations

Hypotheses 1a, 1b, and 1c, state our predictions about the effects of different types of organizational support on employees' change evaluation. We argue, however, that there is a key factor missing in these directional links. To be precise, we suggest that an employee's change participation is likely to play a mediating role between the different types of organizational support and an employee's change evaluation.

Social exchange theory (Tajfel and Turner, 1979) has much to offer to our understanding of these directional relationships and to possible motives as to why individuals actively participate in change and form positive change evaluations. Social exchange theory suggests that when individuals receive favorable treatment from other individuals or social entities, they develop a desire to reciprocate for such treatment (Gouldner, 1960). In organizational life, such social exchanges of particularistic resources form the basis of employee/organization, employee/supervisor, and employee/co-worker relationships (Shore and Wayne, 1993; Eisenberger *et al.*, 1986; Blau, 1964; Gouldner, 1960). In essence, the closer and more embedded such relationships are in social exchanges, the more the employee will want to reciprocate for such exchanges with the exhibition of positive attitudes and behaviors, including, in our case, those relating to change interventions (Byrne and Hochwarter, 2008; Rhoades and Eisenberger, 2002). In other words, employees are likely to develop a strong desire to reciprocate for favorable treatment received and one way of doing so is to actively engage in change initiatives (Gouldner, 1960; Neves and Caetano, 2009).

In addition to this, psychological ownership (Pierce and Jussila, 2011; Van Dyne and Pierce, 2004; Pierce et al., 2004; Vandewalle et al., 1995) of the process of change is likely to be created when employees actively participate in it. The early work of Coch and French (1948) suggests that management may be able to greatly modify or remove completely any resistance to change by stimulating employee/group participation in the planning of changes. More recently, Van Dyne and Pierce (2004) examined the relationship between psychological ownership and work attitudes (commitment, job satisfaction, and organization-based selfesteem) and work behaviors (task performance and organizational citizenship behavior) and found a positive directional link between these variables. More specifically, when individuals actively engage in a change initiative, their involvement will create positive experiences of this initiative as they feel a sense of belonging and integration. Such positive experiences will then, arguably, influence the cognitive schemata the individual has over the change (Lau and Woodman, 1995; Bartunek and Moch, 1987, 1994). Based on this, we expect a mediation effect of change participation on the relationships between the three types of organizational support and an employee's positive change evaluation. We therefore hypothesize the following:

Hypothesis 2a: The relationship between perceived organizational support and positive change evaluation will be mediated by employees' change participation.

Hypothesis 2b: The relationship between perceived supervisor support and positive change evaluation will be mediated by employees' change participation.

Hypothesis 2c: The relationship between perceived co-worker support and positive change evaluation will be mediated by employees' change participation.

Figure 1 depicts these hypothesized relationships and indicates that all three types of organizational support perceptions are positively related to change participation, which in turn is related to employees' positive change evaluation.

Insert Figure 1 about here

Method

Research procedure and sample characteristics

We obtained access to the British subsidiary of an American entertainment company and emailed instructions and a link to a multiple item, self-completion anonymous online questionnaire to all 730 permanent employees in the UK. A total of 228 employees filled in the entire online questionnaire, equaling a response rate of 31.2%. This method was chosen because many employees of the organization are geographically dispersed, thereby enhancing the chances to allow all members of staff to participate. Both the entire organization and the British subsidiary experienced numerous rounds of changes over the past ten years, including a number of different M&A activities, downsizing, and outsourcing, among others.

The sample consists of 118 (51.8%) male and 110 (48.2%) female respondents of which 8.8% are aged between 18 and 25 years, 31.6% between 26 and 35 years, 39.0% between 36 and 45 years, 18.4% between 46 and 55 years, and 2.2% are 56 years or older. 31.6% of the respondents have organizational tenure of less than one year, 11.8% of one to three years, 12.7% of four to seven years, 13.6% of eight to ten years, and 30.3% of more than eleven years. The sample consists of 30.3% non-managerial staff, 32.9% supervisory staff, 32.0% management staff, and 4.8% directorial-level staff.

Measures

All questionnaire items were measured on a five-point Likert-type scale ranging from 'Strongly disagree' (1) to 'Strongly agree' (5) and are shown in Table 1. *Perceived organizational support* was measured with seven items based on Eisenberger *et al.* (1986) and shows good levels of internal consistency reliability (Cronbach alpha=0.94). Our second organizational support element, *perceived supervisor support*, was measured with four items based on Rhoades *et al.*'s work (2001). The Cronbach alpha for this variable is also good (0.87). The third organizational support element, *perceived co-worker support*, is based on Podsakoff *et al.* (1997) and was measured with four items. The high Cronbach alpha value (0.92) for this variable indicates high levels of internal consistency reliability. An employee's *change participation* was measured with four items based on Antoni (2004) and asked respondents to think about a recent change that has happened at their organization. The variable shows high levels of internal consistency reliability as indicated by the Cronbach alpha value (0.92). Lastly, an employee's *positive change evaluation* was measured with three self-developed items and also asked respondents to think about a recent change in their organization. The variable shows overall satisfactory levels of internal consistency reliability as measured with three self-developed items and also asked respondents to think about a recent change in their organization.

(Cronbach alpha=0.71). We controlled for age, gender, and organizational tenure. Table 1 shows all study variables and their respective questionnaire items.

Insert Table 1 about here

Analytical procedure

To analyze the data, we follow a two-step approach as recommended by DeVellis (2003) and Long (1983). In the first step, we test all measurement models with confirmatory factor analysis (LISREL 8.80, © 2006; SSI, Scientific Software International, Lincolnwood, IL) and treat the data as ordinal due to violations of non-normality associated with five-point Likerttype scale items. Polychoric correlation matrices with associated asymptotic co-variance matrices are produced as input into these analyses as suggested by Jöreskog (2005) for dealing with ordinal data. Based on recommendations by Hu and Bentler (1999) and Jöreskog (2005), we use the Satorra and Bentler (2001) scaled chi square (SB c^2) statistic which adjusts for non-normality with ordinal data. We adhere to rigorous cut-off points for these analyses and, in line with Bollen (1989) and Kelloway (1998), consider a c^2 degree of freedom (DF) ratio (c^2 /DF) below two as a good fitting model, a ratio between two and three as an acceptable fitting model, and a ratio between three and five as a model which approaches an acceptable level of fit. The root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR) are also used to determine the statistical fit of the measurement models. Based on Hu and Bentler (1999) and Steiger (2000), we suggest a

cut-off value of 0.05 (or lower) for good fitting models, a cut-off value between 0.05 and 0.08 as acceptable levels of fit, and a cut-off value between 0.08 and 0.10 as approaching acceptable levels of fit for these indices. Additionally, the comparative fit index (CFI) and the goodness of fit index (GFI) are used. For these indices, a cut-off value of 0.95 (or higher) indicates a good fitting model and values below 0.90 tend to be seen as non-good fitting models (Bollen, 1989; Marsh et al., 2004). Finally, we also present the expected crossvalidation index (ECVI) in order to compare the badness of fit. For this index, generally, lower values indicate a better fit to the data as suggested by Kelloway (1998) and Mueller (1996). It is important to refer to the work of Hu and Bentler (1999) and Marsh et al. (2004) at this point, however, who argue that overly stringent adherence to these cut-off values may lead to an over-rejection of otherwise good fitting models. They argue that it is best to use these values in conjunction with each other, relying to some extent on the overall judgment of the scholar. We also perform measurement independence tests and the Harman (1976) test, which initially load all items onto their identified latent constructs before comparing this to a number of different solutions which load items onto single factors. We adhere to similar cutoff values for the measurement independence and Harman tests as for the confirmatory factor analyses. As a last step in the testing of the measurement models, we use Cronbach's (1951) alpha coefficient to test for internal consistency reliability. After these analyses, mean-based composites are created for each variable which are then used for the structural testing.

In the second step, we conduct both correlation analysis to identify specific patterns and trends in the data and further test the structural models using Preacher and Hayes $(2008)^1$

¹ Please note that Preacher and Hayes' SPSS Macro can be downloaded from: <u>http://www.afhayes.com/spss-sas-and-mplus-macros-and</u>-code.html [accessed online 09.07.2012].

recommended approach for mediation analysis. This approach recommends the use of bootstrapped samples and bootstrapped parameters with confidence intervals for all mediation effects. We have chosen this approach over the more traditional method proposed by Baron and Kenny (1986) as it allows us to test the structural relationships simultaneously without the need to rely on a number of sequential statistical tests. To gain further confidence in the robustness of these structural models, we also conduct Sobel (1982) tests for all mediation effects found in the previous analytical step of this structural testing.

While both our measurement and structural testing are of sound nature, we need to raise an important limitation of our overall research design at this point, given the nature of our research area (i.e. organizational change). We test our model on cross-sectional data, thereby running the risk of potential common method variance effects (Podsakoff et al., 2003). In the ongoing debate about the size and significance of such effects in quantitative research, some scholars suggest that the effects are not significant (Brannick et al., 2010; Pace, 2010) and are, on the whole, neglectable. We disagree with this line of reasoning and suggest, in line with Podsakoff et al. (2003), that common method variance effects can pose a potential threat to the validity of both measurement and directional relationships in quantitative research. While we conduct the Harman (1976) test and a series of measurement independence tests as suggested by Podsakoff et al. (2003) to remedy common method variance effects at the measurement level of analysis, our research design regrettably does not allow us to test the structural model before and after a specific change. This, arguably, would have increased the confidence we have in the directional relationships, as we could have compared the responses at two different points in time and thereby control for possible distortions associated with common method variance.

Results

Measurement models

On the whole, our measurement models show acceptable to good levels of statistical fit as indicated by the confirmatory factor analyses. Specifically, perceived organizational support shows good levels of fit on all indices apart from the GFI which only indicates acceptable levels of fit ($c^2=22.05$, DF=14, c^2 /DF=1.58, SRMR=0.03, RMSEA=0.05, CFI=1.00, GFI=0.94, ECVI=0.22), and shows further overall good factor loadings (F1=0.82, F2=0.83, F3=0.80, F4=0.82, F5=0.86, F6=0.83, F7=0.87). Our second support measure, perceived supervisor support, also shows good levels of fit ($c^2=0.01$, DF=2, c^2 /DF=0.01, SRMR=0.00, RMSEA=0.00, CFI=1.00, GFI=1.00, ECVI=0.08) and good factor loadings (F1=0.78, F2=0.79, F3=0.84, F4=0.88). Perceived co-worker support, further, also shows good levels of statistical fit (c^2 =1.31, DF=2, c^2 /DF=0.66, SRMR=0.01, RMSEA=0.00, CFI=1.00, GFI=0.99, ECVI=0.08) and good factor loadings (F1=0.92, F2=0.87, F3=0.88, F4=0.88). Our scale that measures employees' levels of change participation also shows good levels of fit ($c^2=1.17$, DF=2, c^2 /DF=0.59, SRMR=0.01, RMSEA=0.00, CFI=1.00, GFI=0.99, ECVI=0.08) and overall good factor loadings (F1=0.88, F2=0.86, F3=0.82, F4=0.97). Lastly, and given that LISREL 8.80 (© 2006) does not provide fit statistics for latent variables with three or less items, our change evaluation measure shows acceptable factor loadings (F1=0.79, F2=0.64, F3=0.68) and, combined with an acceptable Cronbach alpha value (0.71), indicates overall satisfactory psychometric properties.

Insert Table 2 about here

In addition to these factor analyses, the measurement independence tests also indicate that our study variables are, on the whole, empirically distinct from each other². Perceived organizational support and perceived supervisor support set as a two-factor model ($c^2=67.81$, DF=43, c^2 /DF=1.58, SRMR=0.04, RMSEA=0.05, CFI=1.00, GFI=0.91, ECVI=0.50), for instance, show a significantly better fit (SB c^2 difference=54.63, p<0.01, DF=1) when compared with a one-factor model ($c^2=143.58$, DF=44, c^2 /DF=3.26, SRMR=0.05, RMSEA=0.10, CFI=0.98, GFI=0.82, ECVI=0.83). Perceived organizational support and perceived co-worker support, further, show better levels of fit when set as a two-factor model $(c^2=53.07, DF=43, c^2/DF=1.23, SRMR=0.03, RMSEA=0.03, CFI=1.00, GFI=0.92,$ ECVI=0.44) when compared to a one-factor model (c^2 =120.69, DF=44, c^2 /DF=2.74, SRMR=0.04, RMSEA=0.09, CFI=0.99, GFI=0.84, ECVI=0.73). Both models are, again, significantly different from each other (SB c^2 difference=-54.78, p<0.01, DF=1). Perceived organizational support and our change participation measure also show a better fit to the data as a two-factor model (c^2 =73.04, DF=43, c^2 /DF=1.70, SRMR=0.03, RMSEA=0.06, CFI=1.00, GFI=0.89, ECVI=0.52) when compared to a one-factor model (c^2 =88.53, DF=44, c^{2} /DF=2.01, SRMR=0.03, RMSEA=0.07, CFI=0.99, GFI=0.87, ECVI=0.58). Again, the SB c^2 value indicates the statistical distinctiveness of these two models (SB c^2 difference=48.94,

² Please note at this point that the measurement independence tests suggest further testing of our positive change evaluation measure in order to determine its statistical distinctiveness. The results of this additional testing are reported within the scope of the Harman test at the end of this paragraph.

p<0.01, DF=1). Lastly, perceived organizational support and positive change evaluation show only a statistically non-significant (SB c^2 difference=2.25, p>0.05, DF=1) but slightly better fit to the data set as a two-factor model ($c^2=52.24$, DF=34, c^2 /DF=1.54, SRMR=0.03, RMSEA=0.05, CFI=1.00, GFI=0.92, ECVI=0.42) when compared to a one-factor model $(c^2=54.38, DF=35, c^2/DF=1.55, SRMR=0.03, RMSEA=0.05, CFI=1.00, GFI=0.92,$ ECVI=0.42). Our second support measure, perceived supervisor support, shows a statistically better fit to the data (SB c^2 difference=57.56, p<0.01, DF=1) set as a two-factor model with perceived co-worker support ($c^2=26.85$, DF=19, c^2 /DF=1.41, SRMR=0.03, RMSEA=0.04, CFI=1.00, GFI=0.94, ECVI=0.27) than when set as a one-factor model with perceived coworker support (c^2 =57.08, DF=20, c^2 /DF=2.85, SRMR=0.04, RMSEA=0.09, CFI=0.99, GFI=0.89, ECVI=0.39). Perceived supervisor support and change participation tested as a two-factor model (c^2 =30.21, DF=19, c^2 /DF=1.59, SRMR=0.03, RMSEA=0.05, CFI=1.00, GFI=0.94, ECVI=0.28) also show a better fit to the data when compared to a one-factor model (c²=62.74, DF=20, c²/DF=3.14, SRMR=0.04, RMSEA=0.10, CFI=0.99, GFI=0.88, ECVI=0.42) and the SB c^2 difference test also indicates the statistical distinctiveness of these two models (SB c^2 difference=20.10, p<0.01, DF=1). Lastly, perceived supervisor support and positive change evaluation show an almost identical fit to the data when tested as a twofactor model (c^2 =19.35, DF=13, c^2 /DF=1.49, SRMR=0.03, RMSEA=0.05, CFI=1.00, GFI=0.96, ECVI=0.22) versus a one-factor model (c^2 =19.29, DF=14, c^2 /DF=1.38, SRMR=0.03, RMSEA=0.04, CFI=1.00, GFI=0.96, ECVI=0.21). The two models are unsurprisingly also not statistically different (SB c^2 difference=0.07, p>0.05, DF=1). The measurement independence tests for perceived co-worker support and change participation, however, indicate their distinctiveness (SB c^2 difference=-118.63, p<0.01, DF=1) when tested

as a two-factor model (c^2 =32.93, DF=19, c^2 /DF=1.73, SRMR=0.03, RMSEA=0.06, CFI=1.00, GFI=0.93, ECVI=0.29) versus a one-factor model (c^2 =99.72, DF=20, c^2 /DF=4.99, SRMR=0.04, RMSEA=0.13, CFI=0.98, GFI=0.82, ECVI=0.58). Perceived co-worker support and positive change evaluation, on the other hand, are not statistically different (SB c^2 difference=-0.07, p>0.05, DF=1) and the two-factor model (c^2 =25.36, DF=13, c^2 /DF=1.95, SRMR=0.03, RMSEA=0.07, CFI=0.99, GFI=0.95, ECVI=0.24) is almost identical when compared with the one-factor model ($c^2=24.58$, DF=14, c^2 /DF=1.76, SRMR=0.03, RMSEA=0.06, CFI=0.99, GFI=0.95, ECVI=0.23). Lastly, change participation and positive change evaluation are also not statistically different (SB c^2 difference=1.56, p>0.05, DF=1) and the two-factor model (c^2 =26.96, DF=13, c^2 /DF=2.07, SRMR=0.03, RMSEA=0.07, CFI=0.99, GFI=0.94, ECVI=0.25) is again almost identical when compared with the onefactor model (c^2 =28.43, DF=14, c^2 /DF=2.03, SRMR=0.03, RMSEA=0.07, CFI=0.99, GFI=0.94, ECVI=0.25). Reflecting on these results, and bearing the high face validity of our positive change evaluation scale in mind, it becomes clear that additional testing is required to gain confidence in the distinctiveness of all study variables. We conduct the Harman test which compares a one-factor model (c^2 =491.05, DF=209, c^2 /DF=2.35, SRMR=0.04, RMSEA=0.08, CFI=0.99, GFI=0.74, ECVI=2.55) of all study variables with a five-factor model (c^2 =294.80, DF=199, c^2 /DF=1.48, SRMR=0.04, RMSEA=0.05, CFI=1.00, GFI=0.82, ECVI=1.77) which loads all items onto their respective latent constructs. The test indicates an overall acceptable and superior fit of the five-factor model and the SB c^2 difference test additionally shows that both models are statistically distinct (SB c^2 difference=1,898.54, p < 0.01, DF=10). On the whole, these results, read in combination, create sufficient levels of

confidence in the suitability of our five study variables which are used for further analyses below.

Insert Table 3 about here

Descriptive statistics

Table 4 shows the descriptive statistics and correlations among all study variables. The analysis indicates that some of our study variables correlate with each other. To be precise, perceived organizational support correlates with age (r=0.31, p<0.001) and tenure (r=0.70, p < 0.001). Perceived supervisor support additionally correlates with age (r=0.29, p < 0.001), tenure (r=0.61, p<0.001), and also with perceived organizational support (r=0.77, p<0.001). Our perceived co-worker support scale also correlates with age (r=0.27, p<0.001), tenure (r=0.63, p<0.001), perceived organizational support (r=0.85, p<0.001), and additionally with perceived supervisor support (r=0.81, p<0.001). Change participation, further, correlates with age (r=0.28, p<0.001), tenure (r=0.66, p<0.001), perceived organizational support (r=0.90, p<0.001), perceived supervisor support (r=0.83, p<0.001), and with our perceived co-worker support scale (r=0.84, p<0.001). Lastly, positive change evaluation correlates with age (r=0.24, p<0.001), tenure (r=0.58, p<0.001), perceived organizational support (r=0.77, p<0.001), perceived supervisor support (r=0.78, p<0.001), perceived co-worker support (r=0.80, p<0.001), and with change participation (r=0.80, p<0.001). Unsurprisingly, our control variable age also correlates with tenure (r=0.69, p<0.001). While some of these coefficients suggest multicollinearity among the study variables, the results of the

measurement independence tests and the Harman test overall indicate the distinctiveness of our scales.

Insert Table 4 about here

Structural models

While the correlation analysis provides some initial evidence for our hypotheses, the structural testing suggests that a number of our directional predictions are in fact supported by the data. Specifically, the model incorporating Hypothesis 1b, which argues that perceived supervisor support is positively related to employees' positive change evaluation, is significant (F[7, 220]=79.52, p<0.001, R^2 =0.72), with a directional link between perceived supervisor support and positive change evaluation (Beta=0.27, p<0.001). Hypothesis 1c, which suggests that perceived co-worker support is positively related to employees' positive change evaluation, is also empirically supported (Beta=0.26, p<0.001). Hypothesis 1a, which suggests that perceived organizational support is positively related to employees' positive change evaluation, however, is not supported in our structural testing (Beta=0.08, p>0.05).

Insert Table 5 about here

The model which predicts mediation effects among our study variables, including Hypothesis 2a, which argues that the relationship between perceived organizational support and positive change evaluation is mediated by employees' change participation, is also significant (F[6, 221]=234.32, p<0.001, R^2 =0.86). Specifically, perceived organizational support relates to change participation (Beta=0.65, p<0.001), which in turn relates to positive change evaluation $(Beta=0.17, p<0.05)^3$. Results of the Sobel test provide further evidence that this mediation effect is in fact significant (Sobel=2.16, p<0.05). Hypothesis 2b, which suggests that the relationship between perceived supervisor support and positive change evaluation is mediated by employees' change participation, is also supported. The data suggest that this relationship is mediated only partially, as perceived supervisor support relates to change participation (Beta=0.36, p<0.001) (which in turn relates to positive change evaluation) and also directly to positive change evaluation (Beta=0.27, p<0.001). The Sobel test provides further empirical support for this partial mediation effect (Sobel=2.09, p<0.05). Lastly, the results of our structural testing do not support Hypothesis 2c, which suggests that the relationship between perceived co-worker support and positive change evaluation is mediated by employees' change participation. Perceived co-worker support is not significantly related to change participation (Beta=0.10, p>0.05). However, the direct link suggested by Hypothesis 1c between perceived co-worker support and positive change evaluation remains significant (Beta=0.26, p<0.001). The structural testing indicates (i) that perceived co-worker support is directly related to positive change evaluation, (ii) that the relationship between perceived organizational support and positive change evaluation is mediated fully by change participation, and (iii) that the relationship between perceived supervisor support and positive

³ Please note that the directional link from change participation to positive change evaluation is always Beta=0.17 (p<0.05) in the Preacher and Hayes mediation testing, and will therefore not be repeated for Hypothesis 2b and 2c in this section.

change evaluation is mediated partially by change participation. Figure 2 depicts these empirically supported directional relationships.

Insert Figure 2 about here

Discussion

This research found hypotheses 1a, 1b and 1c to be supported: perceived organizational support, perceived supervisor support, and perceived co-worker support all correlate with change evaluation. Hypothesis 1c is further supported in the structural model as there is a direct link between co-worker support and change evaluation. Our research, therefore, shows that when individual employees perceive their supervisors (help on the job provided, attention to what is said, caring for well being, appreciation, etc.) and their colleagues (help on the job, encouragement, sharing of expertise, peacemaking when disagreeing, etc.) to be supportive, that such perceived support does indeed affect employee's change evaluations. Supervisors and co-workers have further, and in line with our findings, been identified in the change management literature as being key agents in the implementation of change initiatives (e.g. Hon *et al.*, 2011; Neves and Caetano, 2009; Hargadon and Bechky, 2006; Eisenberger *et al.*, 2001, 2002) because they are both influential sources with the power to affect cognitive schemata individuals' have about change. So the question that now arises is: How can employers manage or influence the levels of support provided by the organization,

supervisors and co-workers to individual employees in times of change in order to create more positive change evaluations?

Interpersonal trust (between individual employees and their supervisors and co-workers) has widely been discussed in the literature (e.g. Searle and Dietz, 2012) and may be important to consider in this context. In fact, trust has been identified as key in creating affective commitment to change (Neves and Caetano, 2009), as a crucial component enhancing work effectiveness and job satisfaction (Schindler and Thomas, 1993), and as being positively associated with organizational citizenship behaviors (Singh and Srivastava, 2009). For this trust to be achieved, a wide range of elements need to be in place: sharing appropriate information, allowing mutuality of influence, not abusing the vulnerability of others, supervisor availability, competence, consistency, discreetness, fairness, integrity, loyalty, openness, promise fulfillment, and reciprocity, among others (Butler, 1991; Zand, 1972).

Hypothesis 2a was also found to be supported as change participation fully mediates the relationship between perceived organizational support and positive change evaluation. Hypothesis 2b was only partially supported as the relationship between supervisor support and change evaluation was partially mediated by change participation. Hypothesis 2c was not supported as change participation does not mediate the relationship between co-worker support and change evaluation.

These findings suggest that the degree to which individual employees participate in a change initiative (Coch and French, 1948) as well as the degree of support they receive from the organization and their supervisors, can create positive change evaluations. People form

organizational schemata to understand and evaluate organizational change (e.g. Bordia *et al.*, 2011; Lau and Woodman, 1995; Bartunek *et al.*, 1992; Bartunek and Moch, 1987). A high level of change participation and support offered by the organization and the supervisor affect these schemata created and make employees more positively inclined to change, thus creating positive change evaluations. In other words, an engaged employee who is supported in times of change is less likely to create a negative change management perception (Bordia *et al.*, 2011) and more likely to have positive feelings about change (Rhoades and Eisenberger, 2002). Positive change experiences, importantly, are more likely to occur through a supportive culture (supportive organization, supervisor and co-workers) as highlighted by social exchange theory (e.g. Shore and Wayne, 1993; Eisenberger *et al.*, 1986; Blau, 1964; Gouldner, 1960) and through engaging employees with the change and increasing the levels of their psychological ownership of change events (e.g. Pierce and Jussila, 2011; Van Dyne and Pierce, 2004; Pierce *et al.*, 2004; Vandewalle *et al.*, 1995).

Conclusion

This paper acknowledges the debate surrounding the success/failure rates of change initiatives (Hughes, 2011) and contributes to the body of literature which focuses on improving change management practice (Burnes and Jackson, 2011; Aiken and Keller, 2009; Balogun and Hope Hailey, 2004; Kotter, 1995). Our work adds to current literature on resistance to organizational change (e.g. Jimmieson *et al.*, 2008; Oreg, 2006; Jones *et al.*, 2005; Wanberg and Banas, 2000) by suggesting that the three levels of support (organization, supervisor, co-worker) can create positive change schemata (Bordia *et al.*, 2011; Lau and Woodman, 1995; Bartunek *et al.*, 1992; Bartunek and Moch, 1987) and lead to positive change evaluations,

therefore minimizing future resistance to change. More specifically, our work contributes to Bordia *et al's*. (2011) research on past change history and implications for change interventions, particularly in shaping employee orientation towards the organization and current change programs. Based on earlier discussions on the different types of support (e.g. Coghlan, 1994), our work further builds on Bordia *et al's*. (2011) research and discusses the importance of these types of support for creating a positive change evaluation.

On a practical level, our research shows that organizations can explore strategies to increase levels of organizational, supervisor, and co-worker support, by fostering trust (Neves and Caetano, 2009), creating opportunities for employees to participate in change events (Coch and French, 1948), and increasing employee ownership of change interventions (Pierce and Jussila, 2011; Van Dyne and Pierce, 2004; Pierce *et al.*, 2004; Vandewalle *et al.*, 1995). Such actions can enable organizations and employees to positively experience change.

Future studies should focus on establishing the type of support needed for creating positive change evaluations based, for example, on House (1981), Jacobson (1986) and Barrera and Ainlay (1983) who suggest that support may take different forms (e.g. emotional, instrumental and informational support and behavioral assistance). Therefore, it would be interesting to see which of these different support elements have direct and particular strong effects on participation and employees' change evaluations. It would also be interesting to investigate other factors likely to influence change participation and, consequently, post-change evaluations, to provide additional insights to organizations and scholars on how to create positive change experiences. In doing so, we would encourage scholars to further develop our positive change evaluation scale by adding relevant questionnaire items to

provide a more robust measure for this important concept. At the same time, qualitative research on the above issues would provide useful insights and complement already existing quantitative approaches in this area.

In addition to the above-discussed limitation associated with our research design and possible common method variance effects potentially impacting the directional models, a further limitation refers to our positive change evaluation scale. Despite the high face validity of this measure (see Table 1), the measurement independence tests indicate that the scale, to some extent, lacks measurement accuracy and empirical distinctiveness. Given that the scale shows acceptable levels of internal consistency reliability and overall acceptable albeit slightly low factor loadings, however, it is deemed to be an acceptable measure for this construct. We, nonetheless, acknowledge this as a limitation of the study and encourage future scholarly work to add further items to this scale and thereby increase its measurement accuracy. Finally, it is also possible that questionnaire respondents were influenced by a social desirability effect (Podsakoff *et al.*, 2003). Such influence implies that participants of a successful or unsuccessful change could potentially have provided answers in line with the response other organizational actors would expect, hence not providing a totally accurate response to our questionnaire items (Kuncel and Tellegen, 2009).

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Tables

Variables and measurement items

Perceived organizational support

- 1 [The organization's name] really cares for my well being.
- 2 [The organization's name] values my contribution to its well being.
- 3 [The organization's name] fails to appreciate any extra effort from me. (R)
- 4 [The organization's name] would ignore any complaint from me. (R)
- 5 Even if I did the best job possible, [the organization's name] would fail to notice. (R)
- 6 [The organization's name] shows very little concern for me. (R)
- 7 [The organization's name] takes pride in my accomplishments at work.

Perceived supervisor support

- 1 My supervisor is useful in helping me to do my job.
- 2 My supervisor pays attention to what I say.
- 3 My supervisor cares about my well being.
- 4 I feel appreciated by my supervisor.

Perceived co-worker support

- 1 My co-workers help each other when someone falls behind with their work.
- 2 My co-workers encourage each other when someone is down.
- 3 My co-workers willingly share their expertise with each other.
- 4 My co-workers try to act like peacemakers when there are disagreements.

Change participation

- 1 I have supported the organizational change goals.
- 2 I communicated problems of the change that I saw arising.
- 3 I contributed with my suggestions and ideas to the change.
- 4 I have been able to participate in the implementation of the change that has been proposed and that is occurring.

Positive change evaluation

- 1 The change has been properly implemented.
- 2 The change has been carefully elaborated.
- 3 The change has been erroneously elaborated. (R)

Table 1. Variables and respective measurement items.

Note: (R)=reverse-coded item.

Measurement models	DF	c^2	c^2/DF	SRMR	RMSEA	RMSEA 90% C I (;)	CFI	GFI	ECVI
Perceived organizational st	upport								
Null model	21	2,308.56							
One-factor model	14	22.05	1.58	0.03	0.05	0.00; 0.09	1.00	0.94	0.22
Perceived supervisor suppo	ort								
Null model	6	632.16							
One-factor model	2	0.01	0.01	0.00	0.00	0.00; 0.00	1.00	1.00	0.08
Perceived co-worker suppo	rt								
Null model	6	838.70							
One-factor model	2	1.31	0.66	0.01	0.00	0.00; 0.12	1.00	0.99	0.08
Change participation									
Null model	6	823.86							
One-factor model	2	1.17	0.59	0.01	0.00	0.00; 0.11	1.00	0.99	0.08

Table 2. Results confirmatory factor analyses.

Note: As LISREL 8.80 (\odot 2006) only produces perfect fit statistics for latent constructs with three or less items, the values for positive change evaluation are not presented in this table.

organizational support and change participation', Journal of Change Management, 14(3): 361-383.

Measurement models	DF	c^2	c^2/DF	SRMR	RMSEA	RMSEA 90% C I (;)	CFI	GFI	ECVI	$SB c^2 [DF]$
Perceived organizationa	l support	and perceived	supervisor s	support						
Null model	55	5,186.54	1	11						
One-factor model	44	143.58	3.26	0.05	0.10	0.08; 0.12	0.98	0.82	0.83	
Two-factor model	43	67.81	1.58	0.04	0.05	0.03; 0.07	1.00	0.91	0.50	54.63 [1]**
Perceived organizationa	l support	and perceived	co-worker s	upport						
Null model	55	6,020.49								
One-factor model	44	120.69	2.74	0.04	0.09	0.07; 0.11	0.99	0.84	0.73	
Two-factor model	43	53.07	1.23	0.03	0.03	0.00; 0.06	1.00	0.92	0.44	-54.78 [1]**
Perceived organizationa			rticipation							
Null model	55	6,322.50								
One-factor model	44	88.53	2.01	0.03	0.07	0.05; 0.09	0.99	0.87	0.58	
Two-factor model	43	73.04	1.70	0.03	0.06	0.03; 0.08	1.00	0.89	0.52	48.94 [1]**
Perceived organizationa Null model	l support 45	and positive cl 3,969.12	hange evalue	ation						
One-factor model	35	54.38	1.55	0.03	0.05	0.02; 0.07	1.00	0.92	0.42	
Two-factor model	33	52.24	1.55	0.03	0.05	0.02; 0.07	1.00	0.92	0.42	2.25 [1]
Perceived supervisor sup								=		[-]
Null model	28	3,098.85	FF							
One-factor model	20	57.08	2.85	0.04	0.09	0.06; 0.12	0.99	0.89	0.39	
Two-factor model	19	26.85	1.41	0.03	0.04	0.00; 0.08	1.00	0.94	0.27	57.56 [1]**
						,				
Perceived supervisor sup	-		pation							
Null model	28	3,139.93								
One-factor model	20	62.74	3.14	0.04	0.10	0.07; 0.12	0.99	0.88	0.42	
Two-factor model	19	30.21	1.59	0.03	0.05	0.00; 0.08	1.00	0.94	0.28	20.10 [1]**
Perceived supervisor sup	pport and	positive chang	e evaluation	1						
Null model	21	1,755.35								
One-factor model	14	19.29	1.38	0.03	0.04	0.00; 0.08	1.00	0.96	0.21	
Two-factor model	13	19.35	1.49	0.03	0.05	0.00; 0.09	1.00	0.96	0.22	0.07 [1]
Perceived co-worker sup	port and	change partici	pation							
Null model	28	3,502.94								
One-factor model	20	99.72	4.99	0.04	0.13	0.11; 0.16	0.98	0.82	0.58	
Two-factor model	19	32.93	1.73	0.03	0.06	0.02; 0.09	1.00	0.93	0.29	-118.63 [1]**
Perceived co-worker sup	port and	positive chang	e evaluation	ı						
Null model	21	2,057.24								
One-factor model	14	24.58	1.76	0.03	0.06	0.01; 0.10	0.99	0.95	0.23	
Two-factor model	13	25.36	1.95	0.03	0.07	0.03; 0.10	0.99	0.95	0.24	-0.07 [1]
Change participation an	d positive	change evalua	ution							
Null model	21	2,026.55								
One-factor model	14	28.43	2.03	0.03	0.07	0.03; 0.10	0.99	0.94	0.25	
Two-factor model	13	26.96	2.07	0.03	0.07	0.03; 0.11	0.99	0.94	0.25	1.56 [1]
Harman test incorporation	ng all stu	dy variables								
Null model	231	22,767.06								
One-factor model	209	491.05	2.35	0.04	0.08	0.07; 0.09	0.99	0.74	2.55	
Five-factor model	199	294.80	1.48	0.04	0.05	0.04; 0.06	1.00	0.82	1.77	1,898.54 [10]*

Table 3. Results measurement independence and Harman tests.

Note: =p<0.05, **=p<0.01; please see Satorra and Bentler's (2010) explanation for rarely occurring negative SB c^2 -values.

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		Mean	SD	1	2	3	4	5	6	7	8
1	Age	2.74	0.93								
2	Gender	1.48	0.50	-0.06							
3	Tenure	2.99	1.66	0.69***	-0.03						
4	Perceived organizational support	3.35	0.91	0.31***	-0.08	0.70***	(0.94)				
5	Perceived supervisor support	3.39	0.83	0.29***	0.05	0.61***	0.77***	(0.87)			
6	Perceived co-worker support	3.66	0.97	0.27***	-0.03	0.63***	0.85***	0.81***	(0.92)		
7	Change participation	3.14	1.03	0.28***	-0.05	0.66***	0.90***	0.83***	0.84***	(0.92)	
8	Positive change evaluation	3.60	0.81	0.24***	-0.02	0.58***	0.77***	0.78***	0.80***	0.80***	(0.71)

Table 4. Descriptive statistics and correlations.

Note: N=228; *=p<0.05, **=p<0.01, ***=p<0.001; SD=Standard Deviation; categories for age are 1=18-25 years, 2=26-35 years, 3=36-45 years, 4=46-55 years and 5=56+ years; categories for gender are 1=male and 2=female; categories for tenure are 1=under 1 year, 2=1-3 years, 3=4-7 years, 4=8-10 years and 5=11+ years; Cronbach alphas are presented in parentheses across the diagonal.

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Independent variable	Dependent variable					
	Change participation	Positive change evaluation				
Age	-0.06	-0.04				
Gender	-0.04	-0.02				
Tenure	0.04	0.02				
Direct effect perceived organizational support	0.65***	0.08				
Direct effect perceived supervisor support	0.36***	0.27***				
Direct effect perceived co-worker support	0.10	0.26***				
Direct effect change participation		0.17*				
Indirect effect of perceived organizational support through change participation		0.11 (0.01; 0.221)				
Indirect effect of perceived supervisor support through change participation		0.06 (0.005; 0.12)				
Indirect effect of perceived co-worker support through change participation		0.02 (-0.001; 0.044)				
R	0.93	0.85				
\mathbf{R}^2	0.86	0.72				
Adjusted R ²	0.86	0.71				
F	234.32	79.52				

Table 5. Results Preacher and Hayes mediation test.

Note: N=228; *=p<0.05, **=p<0.01, ***=p<0.001; lower level confidence intervals and upper level confidence intervals are presented in

parentheses.

Figures

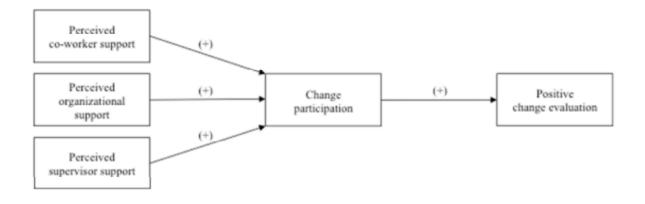


Figure 1: The theoretical model.

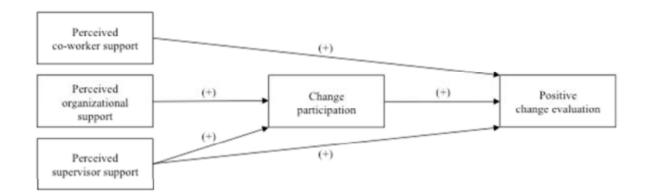


Figure 2: The empirically supported model.