Does a Well-Informed Employee Have a More Positive Attitude Toward Change? The Mediating Role of Psychological Contract Fulfillment, Trust, and Perceived Need for Change

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Abstract

This study examined the mediating role of psychological contract fulfillment, trust, and perceived need for change in the relationship between change information and employee attitude toward organizational change. As one of the first studies in organizational change research, attitude toward change was operationalized here as a tridimensional construct, comprising an affective, a behavioral, and a cognitive dimension. In a sample of 399 employees, data were gathered using questionnaires. The results confirmed that psychological contract fulfillment, trust, and perceived need for change mediated the relationship between change information and attitude toward change. Change information was positively related to all three mediating variables, which in turn were positively related to at least one of the attitude toward change dimensions. Furthermore, the relationship between trust and all three attitude toward change dimensions was mediated by psychological contract fulfillment and perceived need for change. Recommendations for future research and implications for practitioners are discussed.

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Introduction

One of the key reasons why organizational transformations fail is that communication is insufficient, incomplete, or that information is incorrect (Kotter, 1995; Mishra, 1996). Employees who receive or have access to an adequate amount of useful information about the organizational change experience less uncertainty (Schweiger & DeNisi, 1991) and less psychological strain (Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004) and are more open to the organizational change (Axtell et al., 2002; Wanberg & Banas, 2000). However, thus far nearly all research on the relationship between change information and employee response to organizational change has focused on either affective, behavioral, or cognitive responses, rather than on a combination of such responses. Moreover, most research on employee response to change has labeled these responses as either positive (e.g., readiness or openness) or negative (e.g., resistance or cynicism). By doing so, these studies offer an incomplete view on employees' responses to an organizational change, neglecting the complexity and variety with which employees can respond to changes.

Piderit (2000) therefore advocates "a new wave of research on employee responses to change, conceptualized as multidimensional attitudes" (p. 789). Such a more neutral and all-embracing conceptualization not only connects the various existing labels of employee responses to change (Bouckenooghe, 2010), but it also "permits a richer view of the ways in which employees may respond to change" (Piderit, 2000, p. 789). The present study adopts this multidimensional perspective to explore employees' responses to organizational change.

There are empirical hints that change information influences psychological contract fulfillment (e.g., Freese, 2007), trust (e.g., Paterson & Cary, 2002), and perceived need for change (e.g., Armenakis, Harris, & Mossholder, 1993), and that these variables are in turn related to how employees respond to organizational change (e.g., Armenakis, Bernerth, Pitts, & Walker, 2007; Oreg, 2006; Van den Heuvel & Schalk, 2009). However, no prior study has explored the mediating role of these variables in the relationship between change information and attitude toward change. The present study contributes to this largely unexplored area of research by examining the mediating role of psychological contract fulfillment, trust, and perceived need for change in the relationship between change information and the affective, behavioral, and cognitive dimension of the attitude toward change construct.

The following section discusses the two central variables of the study, attitude toward change and change information. After that we will expound on the empirical support for the mediating role of psychological fulfillment, trust, and perceived need for change. After presenting the results, limitations of the present study are discussed,

recommendations for future research on attitudes toward change and its antecedents will be made, and suggestions for an adjusted perspective on organizational change management are provided.

Attitude Toward Organizational Change

The responses of employees to organizational changes have found to be strong predictors of work-related outcomes such as job satisfaction (e.g., Rafferty & Griffin, 2006), intention to quit (e.g., Johnson, Bernhagen, Miller, & Allen, 1996), and organizational commitment (Martin, Jones, & Callan, 2005). Insight into these responses therefore helps organizational leadership and change agents to distill valid concerns and constructive feedback about the change outcome or the change process, which subsequently helps them to properly manage and improve the organizational change (Bartunek, Rousseau, Rudolph, & DePalma, 2006).

Previous studies have used a variety of labels to describe employee responses to organizational change. Although resistance to change (e.g., Ford, Ford, & D'Amelio, 2008) and readiness to change (e.g., Holt, Armenakis, Feild, & Harris, 2007) are the most common ones, labels such as openness to change (e.g., Axtell et al., 2002; Wanberg & Banas, 2000), willingness to participate in change (e.g., V. D. Miller, Johnson, & Grau, 1994), cynicism about a change (e.g., Stanley, Meyer, & Topolnytsky, 2005), acceptance of change (e.g., Paterson & Cary, 2002), and commitment to change (e.g., Herscovitch & Meyer, 2002) have also been applied. Although the usage of these labels can be helpful for specific research purposes, they share the common characteristic that they are either positively or negatively phrased. This is problematic, since such a label does not consider the full continuum of responses from negative to positive. A conceptualization in terms of resistance, for example, does not consider potential positive responses to organizational change but merely an absence of resistance, thus the absence of a negative response. Conversely, the absence of resistance does not necessarily imply enthusiasm.

Another limitation of using such labels is that each merely refers to either an affective, a behavioral, or a cognitive response, rather than to a combination of such responses. Since there is a considerable body of research showing that all three types of employee responses are common during organizational changes, "any definition focusing on one view at the expense of the others seems incomplete" (Piderit, 2000, p. 786). Piderit (2000) therefore proposes to integrate the three alternative views and to conceptualize the responses of employees to organizational change as a multidimensional attitude, comprising an affective, behavioral, and cognitive component. This more neutral conceptualization not only recognizes that an employee's affective, behavioral, and cognitive responses can be ambivalent (Piderit, 2000, p. 787), but it also considers the change response as a continuum, which can range from negative to positive.

The emergence of the three-dimensional attitude construct dates back to the 1960s, when Rosenberg and Hovland (1960) introduced their influential tripartite model of

attitudes (see also Ajzen, 1984; Bagozzi, 1978; Ostrom, 1969). In this multidimensional perspective, affective responses refer to the feelings of employees, such as anger, anxiety, or enthusiasm; behavioral responses concern the employees' actions or intentions to act such as complaining, obstructing, or convincing; whereas cognitive responses concern the thoughts and beliefs regarding the necessity, advantages, and disadvantages of an organizational change (Eagly & Chaiken, 1998; Elizur & Guttman, 1976; Oreg, 2006; Piderit, 2000). However, until the work of Piderit (2000), the tripartite model of an attitude has rarely been applied to conceptualize or operationalize the responses of employees to an organizational change (see, for an exception, Elizur & Guttman, 1976).

In recent literature, the adoption of the three-dimensional attitude toward change construct is scarce as well (Oreg, Vakola, & Armenakis. 2011). One explanation for this lack of empirical research on the three-dimensional construct proposed by Piderit (2000) could be the absence of a valid and reliable measurement for the multidimensional change attitude construct. Oreg (2006) was among the first to develop such a scale and to explicitly measure all three components separately. Later, Van Dam, Oreg, and Schyns (2008) also applied Oreg's (2006) scale, but they analyzed the scale without distinguishing between the three dimensions in their results. Van den Heuvel and Schalk (2009), however, did study the relationship between psychological contract fulfillment and all three dimensions separately. Finally, Chung, Su, and Su (2012) examined the effect of cognitive flexibility on the three-dimensional construct.

Information in Times of Organizational Change

The success of organizational change heavily depends on an organization's internal communication (Pundzienė, Alonderienė, & Buožiūtė, 2007). A lack of information creates uncertainty among individuals (Rousseau, 1996) because they cannot accurately predict the effects of organizational changes (Milliken, 1987). Although most practitioners are aware of this, it remains an enormous challenge for change agents to provide the information desired by the change recipients on time, with a sufficient level of detail, through appealing communication channels and in a way that it answers the most pressing questions of each individual employee. Rousseau and Tijoriwala (1999) note that although organizational changes prompt an increase in the individual's need for information, the availability of information often declines during change processes, causing employees to make "greater efforts to gather information and interpret events, typically through reliance on informal sources" (p. 525). Moreover, it was found that informal communication is just as important as the formal information provided by management, since it enhances the exchange of ideas, involvement, and awareness, which are prerequisite for successful organizational change (Yazici, 2002). Thus, a good communication climate in terms of both formal and informal information increases employees' readiness for change (Holt et al., 2007).

There are several empirically grounded communication principles that increase the likelihood of successful organizational change. Face to face communication, communication by direct supervisors, communication of personally relevant information and

the usage of multiple media channels have been proven to be more effective than abstract, general, and impersonal information provided by nonhierarchical change agents and/or through a single medium (Klein, 1996). However, a single "success-guaranteed" or "one-size-fits-all" guideline on which information should be provided to employees, and what is the most efficient and effective way to do so does not exist. It cannot even exist, as every organizational change requires a tailored change management and communication approach, depending on the organizational context, the organizational culture, the change culture, and the characteristics of the workforce. Moreover, every individual employee will have a different need for information. In line with the work of Wanberg and Banas (2000), change information is therefore conceptualized here as the extent to which the employee perceives that information about the change is received in time, is useful, and is adequate in that it satisfies his or her questions about the change.

The Mediating Role of Psychological Contract Fulfillment

This study expects three variables to mediate the relationship between change information and attitude toward organizational change. First of all, this study expects that proper change information results in a more positive evaluation of the psychological contract, which subsequently causes a more positive affective, behavioral, and cognitive response to the organization change. The psychological contract can be defined as an individual's belief about mutual obligations, in the context of the relationship between an employee and an employer (Rousseau, 1990). These obligations arise out of perceived promises (Rousseau & Tijoriwala, 1998), and when applying social exchange theory (Blau, 1964) on which psychological contract theory is based, the employee expects the organization to live up to its promises in return for the contributions that the employee made to the organization.

However, a lack of trustworthy information about an organizational change creates rumors and uncertainty (Schweiger & DeNisi, 1991), which makes an employee uncertain whether the organization is willing or able to live up to promises made previously in the employment relationship. A breach of the psychological contract is likely to be the result. Indeed, in her longitudinal research on psychological contracts in times of organizational change, Freese (2007) found that psychological contracts are susceptible to breaches during organizational changes. Moreover, the results of her research showed that employees who received clear information about the organizational change evaluated their psychological contract more positively. Additionally, Rousseau and Tijoriwala (1999) found that the nature of psychological contracts played an important role in the change recipients' perception of the legitimacy of the change. Employees who held a more transactional contract, as compared to a more relational contract, were less willing to accept poorly justified organizational change. Thus, providing adequate and trustworthy information during an organizational change can prevent a breach of the psychological contract, which in turn causes more positive responses to organizational change. It is therefore hypothesized that

Hypothesis 1: Psychological contract fulfillment mediates the relationship between change information and attitude toward change, in a way that change information is positively related to psychological contract fulfillment, and that psychological contract fulfillment is positively related to the affective, behavioral, and cognitive dimension of attitude toward change.

The Mediating Role of Perceived Need for Change

The second variable that is expected to mediate the relationship between change information and attitude toward change is the employee's perceived need for change. The employee's perception of the necessity of an organizational change has been conceptualized in various ways. While the term *burning platform* is often used among practitioners (Armenakis et al., 2007), Armenakis et al. (1993) labeled the belief that a change is needed as the perceived discrepancy between a present state and a desired end-state. They noted that the message concerning the change is the primary mechanism for creating readiness to change. Change information that aims to create a sense of urgency should therefore be consistent with relevant contextual factors such as increasing competition, changing legislation, and economic circumstances (Armenakis et al., 1993).

Obviously, management should be the first to perceive a need for change. Milliken (1987), for example, suggested that failures to properly align organizations to the changing environment are likely to be caused by organizational administrators who fail to see that an environmental change poses a considerable threat to their organization. But even if top management feels a sense of urgency about initiating an organizational change, this does not necessarily mean that individual employees are aware of, understand, and/or agree with this sense of urgency.

Additional support for the existence of the relationship between change information and perceived need for change can be found in social accounts research, which focuses on how "a particular source of information regarding reasons, typically the managers involved in implementing change, shapes perceptions of adequacy or legitimacy of reasons" (Rousseau & Tijoriwala, 1999, p. 521). It is often hard for managers to get these reasons across to employees, because causal accounts (i.e., reasons to motivate complex organizational change) are not always accepted, understood, or received in the way managers intend, even if the organizational change is for the benefit of employees (Rousseau & Tijoriwala, 1999). It is interesting to note that well-performing organizations are particularly challenged to keep up with a changing environment, because successful organizations are often characterized by inertia (D. Miller, 1993). An explanation for this inertia is that "successful organizations discard practices, people, and structures regarded as peripheral to success and grow more inattentive to signals that suggest the need for change" (Weick & Quinn, 1999, p. 369).

Thus, when employees perceive a sense of urgency, it is more likely that they will evaluate the change more positively, since maintaining the status quo is seen as less favorable for their own position or that of their colleagues or the organization. This underlines the importance of proper change information to help employees understand

the rationale behind, and the necessity of the change to facilitate a positive response to the change. It is therefore postulated that

Hypothesis 2: Perceived need for change mediates the relationship between change information and attitude toward change, in a way that change information is positively related to perceived need for change, and that perceived need for change is positively related to the affective, behavioral, and cognitive dimension of attitude toward change.

The Mediating Role of Trust

Trust is the third variable that is expected to mediate the relationship between change information and attitude toward change. Trust can be defined as an individual's "beliefs regarding the likelihood that another's future actions will be favorable, or at least not detrimental, to one's interests" (Morrison & Robinson, 1997, p. 238). Trust can also be described as a "process of sensemaking in which small cues are enlarged through the incremental accumulation of evidence" (Adobor, 2005, p. 330). Trust develops over time, where "major events such as organizational changes can bring about a complete reassessment of the trust relationship, either making or breaking the trust bond" (Tucker, Yeow, & Viki, 2013, p. 190).

Communication on the consequences of an organizational change is one of the triggers that can cause trust in management to suddenly disappear (Smollan, 2013). Although the specific process through which trust is created has not been studied extensively (Adobor, 2005), there are empirical hints about the role that change information plays in times of organizational change. For example, Schweiger and DeNisi (1991) examined whether providing realistic information about a merger affected the employees' perceptions of their company's trustworthiness. In their study, the employees of one plant received a realistic merger preview, while employees of another plant only received limited information. Right after the announcement of the merger, the company's trustworthiness decreased within both groups of employees. However, once the realistic merger preview program was instituted, the company's trustworthiness within that particular group of employees did not further decline and over time even began to improve toward the initial levels of trustworthiness.

As Mishra (1996) pointed out, undistorted communication from trusted persons reinforces trust in them, while trust decreases if the other party lies or communicates a distorted version of the truth. Providing incomplete or incorrect information about the change thus creates mistrust and diminishes the credibility of the ones in charge of the change. The availability of "rich information channels, conveying both bad news and any other relevant information in a timely way" (Rousseau, 1996, p. 55) therefore helps maintain trust.

Trust is not only found to be of considerable importance when attempting to explain employee responses to organizational change (see, e.g., Devos, Buelens, & Bouckenooghe, 2007; Mishra & Spreitzer, 1998); there is also empirical support for

the mediating role of trust in the relationship between change information or communication and employees' responses to change. Armenakis et al. (1993), studying change agents' intervention opportunities in social information processing in times of organizational change, identified persuasive communication and the management of external sources of information as powerful influence strategies to increase the readiness to change among employees. They also found that the effectiveness of these influencing strategies depended on the credibility and trustworthiness of the change agents who made the attempts to influence the processing of information. Rousseau and Tijoriwala (1999) stressed the importance of providing consistent information from credible sources during a change process, especially given the central role that trust plays in perceiving the communicated reasons for the change as being legitimate. Additionally, in a study among 750 employees at two health care organizations, Albrecht (2010) found that change information was positively related to trust in senior management, which in turn was negatively related to employee cynicism toward change. Additionally, Ertürk (2008), who conducted a survey study among 878 employees employed by public organizations in Turkey, demonstrated that the trust of an employee in one's supervisor fully mediated the relationship between managerial communication and openness to change.

However, no prior study has investigated the mediating role of trust in the relationship between change information and the three-dimensional attitude toward change construct. Since both theoretical and empirical hints for the existence of this relationship are present, this study expects that

> **Hypothesis 3a:** Trust mediates the relationship between change information and attitude toward change, in a way that change information is positively related to trust and that trust is positively related to the affective, behavioral, and cognitive dimension of attitude toward change.

We also hypothesize that trust affects both psychological contract fulfillment and perceived need for change. Trust can be expected to play an important role in psychological contracts. Obviously, the social exchange between an employee and the organization requires a certain amount of trust that the other party will fulfill its reciprocal obligations. Otherwise an employee isn't likely to engage in the exchange relationship at all. But there is also evidence that trust influences the evaluation of the psychological contract, thus the degree to which the psychological contract is perceived to be fulfilled. In a longitudinal study on the role of trust in relation to psychological contract breach, Robinson (1996) found that trust influences the likelihood of a psychological contract breach in that higher initial trust in an employer was negatively related to psychological contract breach later on in the employment relationship. An explanation for this relationship was given by Schalk and Roe (2007), who noted that employment relations that are characterized by high levels of trust are likely to have broad zones of change acceptance. It is therefore hypothesized that

> **Hypothesis 3b:** Trust has a positive effect on psychological contract fulfillment.
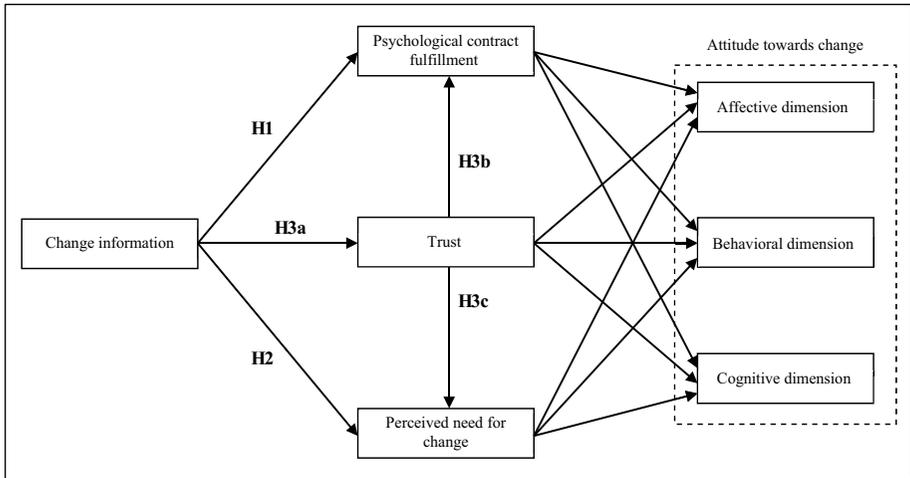
Figure 1. Theoretical model with hypotheses of the study. All effects are hypothesized to be positive.

Rousseau and Tijoriwala (1999) argued from a motivated reasoning perspective that employees with high trust in management will perceive the reasons for change as more legitimate than employees with low trust in management. The results of their survey study, which was conducted among 501 nurses, supported this presupposition. Additionally, trust was found to be negatively related to beliefs in dysfunctional reasons for change and positively related to economic and quality reasons. An explanation for these findings is that trust in the organization and its representatives increases the employee's "willingness to pay attention to managerial communications so the message is received," and it facilitates the "believability of explanations that otherwise might appear to be imprecise, unclear, or confusing" (p. 525). These results indicate that trust influences the sensemaking process in times of organizational change, and it is therefore postulated that:

Hypothesis 3c: Trust has a positive effect on perceived need for change.

Figure 1 depicts our conceptual model and our hypotheses.

Method

Procedure

The present study used an exponential nondiscriminative snowball sampling approach. Initially, 150 persons from within the researchers' professional and personal networks, who were known to be employed at that moment, were invited by e-mail to participate in an anonymous study. These people, who were employed in Germany, the

Netherlands, and the United Kingdom, were invited to fill out a survey and to forward the survey link to people in their network who had a paid job and were not self-employed. After 4 weeks, a total of 399 respondents had completed the survey.

Translations

The survey was available in German, Dutch, and English. The original "trust" items, which were derived from the international PSYCONES (2006) research, were already available in all three languages and the "psychological contract fulfillment" items derived from the Tilburg Psychological Contract Questionnaire (Freese, Schalk, & Croon, 2008) were available in Dutch and English. However, the items for the variables "change information" (Wanberg & Banas, 2000) and "attitude toward change" (Oreg, 2006) were only available in English, and the items to measure "perceived need for change" were self-developed in English. Native Dutch speaking and native German-speaking graduate students of Tilburg University translated the original English items of the scales into Dutch and German, respectively. Subsequently, the translations were reviewed by other graduate students as well as staff of the Department of Human Resource Studies at Tilburg University. The reviewed versions of the translations were included in the final survey. At the start of the survey, respondents were asked in all three languages to select the preferred language for the remainder of the survey. Of the 399 respondents, 73% selected the German version, 18% selected the Dutch version, and 9% selected the English version.

Participants

The sample consisted of 176 males (44.1%) and 223 females (55.9%). The average age was 36.53 years (*SD* = 11.52). Concerning the family situation, 33% were single or living as a single, 57% were married or cohabiting, and 10% were living with family, parents, or friends. The highest degree of education attained was primary or low secondary education for 6%, high secondary education for 37%, and tertiary education for 57% of the respondents. Skilled and unskilled blue-collar workers represented 11% of the sample. A majority of 80% consisted of white-collar workers (lower level white-collar workers 15%, intermediate white-collar workers or white-collar supervisors 35%, upper white-collar worker, middle management, or executive staff 30%). Managers and directors represented 9% of the sample. The sample included 22 different nationalities, although most respondents were German (71%), Dutch (19%), or English (4%). In-line with these numbers, the majority of the employees were employed in Germany (70%), followed by the Netherlands (20%) and the United Kingdom (4%). Twenty-four employees (6%) were working in 19 other countries across the world.

Measurements

Since a snowball sampling method was used, no single organizational change could be selected for which the change-related items could be answered. Before answering the

"change information," "perceived need for change," and "attitude toward change" questions, the respondents were therefore asked to keep in mind the most important organizational change that was either taking place at that moment or that would take place in the near future.

Change Information. The four items used to measure the information about the change were based on Wanberg and Banas's (2000) adjusted version of the original information scale developed by V. D. Miller et al. (1994; for further application of the scale, see also Oreg, 2006). The four items for which the respondents were asked to indicate the extent to which they agreed or disagreed were "the information I have received about the change was timely," "the information I have received about the change was useful," "the information I have received has adequately answered my questions about the change," and "I have received adequate information about the change." A 5-point scale ranging from *strongly disagree* = 1 to *strongly agree* = 5 was used. The scale's reliability coefficient (Cronbach's alpha) was .86.

Psychological Contract Fulfillment. The fulfillment of organizational obligations in the psychological contract was measured with a scale developed by Freese et al. (2008; for further application of the scale, see also Freese, Schalk, & Croon, 2011; Van der Smissen, Schalk, & Freese, 2013). The scale consisted of six dimensions, namely job content, career development, social atmosphere, organization policies, work-life balance, and rewards. Per dimension, four related items were presented for which the respondents needed to indicate the extent to which they considered their employer to be obliged to offer these aspects. "Variation in work" was, for example, mentioned for the dimension job content, "training and education" for career development, "appreciation and recognition" for social atmosphere, "clear and fair rules and regulations" for organization policies, "adjustment of working hours to fit personal life" for work–life balance, and "good benefit package" for the dimension rewards. The main purpose of these items was to properly frame each dimension. After each set of four items, the respondents were asked to indicate the extent to which their employer had fulfilled its obligations regarding the particular dimension. For the six fulfillment questions a 5-point scale was used, ranging from *much less than expected* = 1 to *much more than expected* = 5. The average of the six fulfillment scores was included in the analyses. The reliability coefficient of the scale was .80, which is comparable with the reliability score of .79 of Van der Smissen et al. (2013), and with the average reliability score of .85 of Freese et al. (2011), who examined the psychological contract dimensions separately.

Trust. The items to measure trust were derived from PSYCONES (2006). The three items of the scale were "to what extent do you trust senior management to look after your best interests?" "in general, how much do you trust your organization to keep its promises or commitments to you and other employees?" and "to what extent do you trust your immediate line manager to look after your best interests?". A 5-point scale ranging from *not at all* = 1 to *to a great extent* = 5 was used, and the scale's reliability was .84.

Perceived Need for Change. To measure the perceived need for change, four items were developed. The scale comprised the items "I believe this change is needed," "there is no urgency to do this change," "this change is necessary," and "it is clear to me why we need this change." A 5-point scale ranging from *strongly disagree* = 1 to *strongly agree* = 5 was used. Because the second item was phrased negatively, it was reverse coded. The scale's reliability was .89.

Attitude Toward Change. Oreg's (2006) change attitude scale was used to measure the attitude of employees toward organizational change (for further application of the scale, see also Van den Heuvel & Schalk, 2009). The three-factor structure of the scale was confirmed by Oreg in a pilot study (comparative fit index [CFI] = .92; Tucker–Lewis index [TLI] = .90) and reconfirmed in his main study (CFI = .93; TLI = .90). Furthermore, the scales showed good reliability scores of .78, .77, and .86 for the affective, behavioral, and cognitive subscale (Oreg, 2006), respectively. In his study, Oreg assessed the change attitude of employees after the modification of an organizational structure following a merger of the two core units within the particular organization. The items of the scale were phrased in the past tense; for example, "I was afraid of the change." To avoid issues concerning the retrospective nature of the original change attitude scale, the present study rephrased all original items into the present tense.

Each dimension of the attitude toward change scale contained five items. Examples of items measuring the affective dimension are "I am afraid of the change" and "I have a bad feeling about the change." The items "I look for ways to prevent the change from taking place" and "I complain about the change to my colleagues" are examples for the behavioral dimension. Finally, two items included in the cognitive subscale are "I think that it's a negative thing that we are going through this change" and "I believe that the change will make my job harder." We reverse coded the negatively phrased items of the original scale (i.e., all items except item 3, 10, 14, 15). As a result, a higher score indicates a more positive attitude toward change. A 5-point scale ranging from *strongly disagree* = 1 to *strongly agree* = 5 was used, and the reliability coefficients of the affective, behavioral, and cognitive subscale were .81, .76, and .84, respectively.

Results

The descriptive statistics and correlations for the seven variables included in the study are presented in Table 1. The first column shows that change information was, as expected, positively associated with all three dimensions of attitude toward change; all other associations in the table were positive and significant as well. To test the hypotheses presented earlier, we fitted a structural equation model to the data with IBM SPSS Amos 19 software.

The model, presented in Figure 2 together with the standardized parameter estimates, included 7 variance parameters, 14 direct effects, the covariance between the errors of psychological contract fulfillment and perceived need for change, and 3 covariances between the errors of the attitude toward change dimensions (the

Table 1. Descriptive Statistics and Correlations for the Variables in the Study (N = 399).

| Variable	M	SD	1	2	3	4	5	6	7
1. Change information	3.20	0.76	1						
2. Psychological contract fulfillment	2.95	0.58	.480**	1					
3. Trust	3.28	0.85	.536**	.653**	1				
4. Perceived need for change	3.45	0.80	.426**	.277**	.369**	1			
5. Attitude toward change (affective dimension)	3.60	0.71	.304**	.246**	.237**	.445**	1		
6. Attitude toward change (behavioral dimension)	3.59	0.70	.297**	.244**	.232**	.497**	.675**	1	
7. Attitude toward change (cognitive dimension)	3.40	0.76	.446**	.352**	.418**	.659**	.610**	.634**	1

**p < .01 (one-tailed).
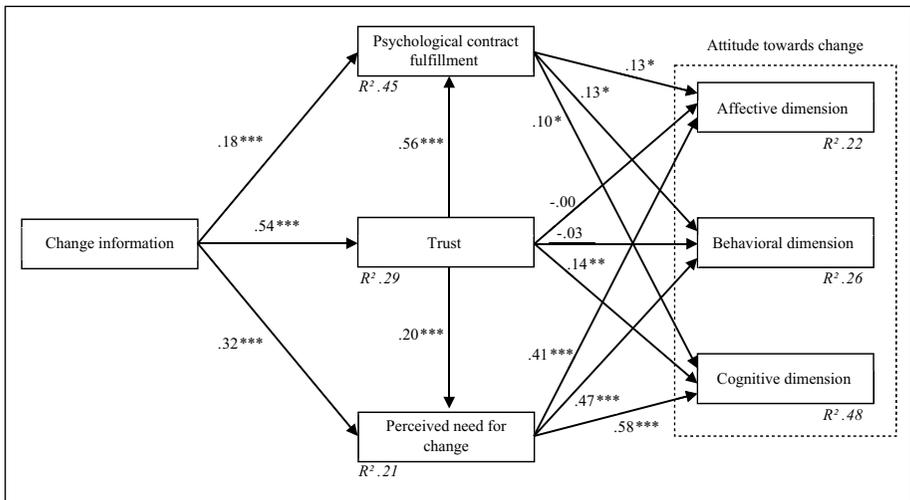
Figure 2. Structural equation model path model results.
*p < .05. **p < .01. ***p < .001.

covariances are not shown in Figure 2). The model excluded the three direct effects of change information on the attitude toward change dimensions and therefore had three degrees of freedom. The overall fit of the model was good (χ^2 = 7.76, df = 3, p = .051, root mean square residual [RMR] = .012, goodness of fit index [GFI] = .995, adjust goodness of fit index [AGFI] = .949, TLI = .973, CFI = .996, root mean square error of approximation [RMSEA] = .063).

To test our hypotheses on mediation we used the "joint significance method," which establishes mediation of the effect of X on Y by M if both the effects of X on M

and M on Y, are statistically significant (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). The joint significance method is easy to use and has higher statistical power than more commonly used methods, such as the Sobel test (MacKinnon et al., 2002).

Hypothesis 1, which suggested that psychological contract fulfillment would mediate the relationship between change information and attitude toward change, was fully supported. Change information was positively related to psychological contract fulfillment ($\beta = .18$, $p < .001$) and psychological contract fulfillment in its turn was positively related to the affective ($\beta = .13$, $p = .024$), the behavioral ($\beta = .13$, $p = .020$), and the cognitive dimension ($\beta = .10$, $p = .034$) of the attitude toward change construct. Thus, the better the change information (i.e., useful, timely, adequate, and responsive to questions held by the employee), the more the employee perceives that the organization kept its promises, and the more positive the employee's attitude toward the organizational change.

Hypothesis 2 postulated that the perceived need for change mediated the relationship between change information and employees' attitude toward change. Change information was indeed positively related to the employees' perceived need for change ($\beta = .32$, $p < .001$) and perceived need for change was positively related to the affective ($\beta = .41$, $p < .001$), behavioral ($\beta = .47$, $p < .001$), and cognitive dimension ($\beta = .58$, $p < .001$) of attitude toward change. The second hypothesis was therefore fully supported, which implies that the better the information regarding the change, the more the employee perceives that the change is needed and the more positive his or her affective, behavioral, and cognitive response to the attitude object is.

Hypothesis 3a, which suggested that trust mediated the relationship between change information and attitude toward change, was only confirmed for the cognitive dimension of the attitude toward change construct. Thus, although change information was significantly related to trust ($\beta = .54$, $p < .001$), trust was only found to be related to the cognitive dimension of attitude toward change ($\beta = .14$, $p = .006$). This implies that the better the information regarding the change is, the more the employee trusts his or her employer, and the more positive are his or her beliefs regarding the organizational change.

Since the model in Figure 2 excluded the three direct effects of change information on the attitude toward change dimensions, the fit of this model yields a test of the hypothesis of complete mediation of the effect of change information on these dimensions by trust, psychological contract fulfillment, and perceived need for change. The hypothesis of complete mediation is accepted ($\chi^2 = 7.76$, $df = 3$, $p = .051$); omitting the three direct effects did not decrease the fit of the model.

Hypothesis 3b, which assumed that trust would be positively related to psychological contract fulfillment, was confirmed ($\beta = .56$, $p < .001$). Thus, the more employees trust their organization and its representatives, the more they perceive that the organization kept its promises to them. Concerning the mediating role of psychological contract fulfillment, these results imply that psychological contract fulfillment mediates the relationship between change information and attitude toward change directly as well as indirectly via trust. Together, change information and trust explain 45% of the variance in the fulfillment of the psychological contract.

Hypothesis 3c expected trust to be positively related to the perceived need for change. The hypothesis was confirmed (β = .20, p < .001), meaning that the more employees trust their organization and its representatives, the more they perceive the organizational change is needed. As a result, perceived need for change mediates the relationship between change information and attitude toward change directly, but also indirectly via trust. Change information and trust explain 21% of the variance in the employee's perceived need for change.

Together, psychological contract fulfillment, trust, and perceived need for change explained 22% of the variance in the affective dimension, 26% of the behavioral dimension, and 48% of the cognitive dimension of the attitude toward change construct.

Discussion

This study examined the mediating role of psychological contract fulfillment, trust, and perceived need for change in the relationship between change information and attitude toward change. We found that the effects of change information on the three attitude toward change dimensions were completely mediated by psychological contract fulfillment, trust, and perceived need for change. That is, change information was positively related to all three mediating variables; thus, the more useful, timely, and adequate the information about the change, the more fulfilled the psychological contract, the higher the trust, and the higher the perceived need for change. Moreover, the three mediating variables were in turn positively related to the attitude toward change dimensions. Finally, there was no direct effect of change information on the three attitude toward change dimensions after controlling for the mediators. With the exception of the effect of trust on affective and behavioral attitude toward change dimensions, all hypothesized effects were confirmed.

The present study may have considerable theoretical implications for research on psychological contract fulfillment and attitude to change. First of all, as one of the first in the field of work and organization psychology, this study empirically demonstrates the relationship between psychological contract fulfillment and the affective, behavioral, and cognitive responses of employees toward organizational change. Although the large amount of empirical research on the outcomes of psychological contract breach and fulfillment has concentrated on affective reactions, work attitudes, and work behaviors such as mistrust, job satisfaction, organizational commitment, turnover (intentions), and organizational citizenship behavior (Zhao, Wayne, Glibkowski, & Bravo, 2007), research on attitudinal responses to change as an outcome of psychological contract fulfillment is scarce. In most studies to date, organizational change is considered as an antecedent of changes in the psychological contract (e.g., Freese et al., 2011; Schalk & Roe, 2007). However, as the results of this study show, a well-fulfilled psychological contract contributes to positive affective, behavioral, and cognitive responses to organizational change. We therefore recommend to further investigate this relationship in various organizational contexts and during different types of organizational changes.

The second theoretical contribution of the study concerns its conceptualization and operationalization of attitude toward change as a multidimensional construct comprising an affective, a behavioral, and a cognitive component. The focus has long been on behavior as the primary indicator of how an employee evaluates an organizational change. Affective and cognitive responses to change have been neglected or studied separately from each other. Although the added value of considering attitude toward change is being recognized more and more, extensive testing of a multidimensional attitude toward change scale in various organizational contexts and during different types of changes, has yet to be performed. A recommendation would therefore be to further assess the dimensionality of the attitude toward change concept as well as Oreg's change attitude scale and to produce and test translations of the scale.

Third, this study contributes to the understanding of how change information influences employees' responses to organizational change. A number of studies have assessed this either direct (e.g., Oreg, 2006; Wanberg & Banas, 2000) or indirect (Armenakis et al., 1993) relationship. However, no prior study has empirically investigated the mediating role of psychological contract fulfillment. Especially interesting in this respect is the important role that trust plays in the model. Not only was trust found to mediate the relationship between change information and the cognitive dimension of attitude change, but it was also significantly related to the fulfillment of the psychological contract and the perceived need for change. Together, change information and trust explained almost half the variance in psychological contract fulfillment and 21% of the variance in the perceived need for change. This underlines the importance of change information and trust in the sensemaking process during organizational changes. Trust, which can be enhanced by proper information about the change, helps create a sense of urgency among employees and serves as an emotional buffer preventing a breach of the psychological contract as a primary and impulsive response to an organizational change.

The latter results emphasize the complexity of the process in which trust affects the attitudes of employees toward organizational change. As the results in Table 1 demonstrate, trust was associated with all three attitude toward change dimensions, confirming Smollan (2013) who stated that "the construct of trust has been conceptualised as operating on cognitive, affective and behavioural levels" (p. 726). However, in our causal model, the direct effects of trust on the affective and behavioral dimension of attitude toward change were mediated by psychological contract fulfillment and perceived need for change, whereas the direct effect of trust on the cognitive dimension of attitude toward change was not. These results suggest that the concept of trust contains a certain element which has an effect on the cognitive dimension of attitude toward change that is not captured by psychological contract fulfillment and perceived need for change. Likewise, trust *does not* contain any elements that have an effect on the affective and behavioral dimension of attitude toward change that are not captured by either psychological contract fulfillment or perceived need for change. Although it is hard to explain these results from a theoretical standpoint, they suggest that merely exploring the direct effects of trust potentially oversimplifies the process in which trust influences the development of employee responses to organizational change.

Scholars should take this into account when exploring the role of trust during organizational changes in future research.

An important limitation of this research is its cross-sectional design using self-report measures, which prohibits us from determining causality in the significant relations that were found between the variables. Unfortunately, statistical modeling alone does not help us to determine the causal order of variables; models with very different causal orders of variables may provide an identical fit of the data (MacKinnon, 2008). Besides our causal model, there may be at least two other explanations for the observed positive associations between the variables in our study; a halo effect and sensemaking. A halo effect emerges if a general attitude to the participant's company affects more specific judgments about matters relating to the company. A positive general attitude then results in more positive evaluations of all variables in our model, such that at least part of the positive associations between the variables examined may be spurious.

The second explanation concerns the process of sensemaking. Weick, Sutcliffe, and Obstfeld (2005) illustrate that sensemaking is as much about interpreting what is said (i.e., the talk) as about what one should do next (i.e., the action). They emphasize that "in sense making, action and talk are treated as cycles rather than as a linear sequence; talk occurs both early and late, as does action, and either one can be designated as the 'starting point to the destination'" (p. 412). In other words, just as information about an organizational change influences, for example, an employee's trust in the organization, this level of trust also influences his or her interpretation of available information or occurring events. Indeed, prior research has shown that trust influences which sources employees select to gather information from in times of change and how they appraise the information that they receive (Allen, Jimmieson, Bordia, & Irmer, 2007). In the same vein, employees with high trust in the employer at the time of hire are less likely to perceive breaches in the psychological contract later on in the employment relationship, than employees with low levels of initial trust (Robinson, 1996). Thus, from this sensemaking perspective, a positive attitude toward an organizational change could just as well affect the perceived quality of the information.

Since our design does not allow for strict causal interpretations of associations, we recommend longitudinal research on change information, trust, perceived need for change, psychological contract fulfillment, and the three dimensions of attitude toward change and their interrelations, also including other than self-report measures. Such research would not only enable researchers to make stronger claims regarding the causality of relationships, but it would also yield insight into how the affective, behavioral, and cognitive dimensions of the attitude construct develop over the course of an organizational change, and how these dimensions might influence each other. Furthermore, the influence of the amount and quality of change information as well as the way change information is communicated and by whom should be explored further in a longitudinal setting. Linking measurements to important communication moments, like Schweiger and DeNisi (1991) did, will help understand how initial information provision, compared to communication during and after the change, can influence employees' attitudes toward change. Moreover, longitudinal research will help

understand how prechange perceptions of the employment relationship influence the change attitude during and after organizational change. This could reveal important prerequisites for successful organizational change. The results of the present study suggest that a certain amount of trust and fulfillment of the psychological contract is one of these prerequisites.

Finally, this research may have important implications for practitioners involved in organizational change management and human resource management. First of all, recognition of attitude toward change as a multidimensional construct will affect the way change management and communication approaches are designed and executed. Behavioral responses, whether positive or negative, are not the sole indicators of how well the change is absorbed by employees, because clearly observable behavioral responses are not necessarily in line with less well observable affective and cognitive responses. This emphasizes the importance of more individually oriented and bidirectional communication and change management approaches that aim to obtain insight into the underlying feelings and thoughts of employees about the change. Obviously, an employee can be hesitant to share feelings and thoughts, especially if these are negative or contrary to what colleagues and managers feel or think. Personalized bidirectional communication with trustworthy and independent organizational or external agents is likely to be more effective in exposing sincere feelings and thoughts about the change than primarily one-way communication performed by hierarchical managers.

However, for an organization to benefit from more comprehensive knowledge about employees' feelings, behaviors, and thoughts about the change, the organizational mind-set should learn to treat critical perspectives as constructive feedback to the change, rather than as obstruction or resistance. As Ford et al. (2008) emphasized, "in a world with absolutely no resistance, no change would stick, and recipients would completely accept the advocacy of all messages received, including those detrimental to the organization" (p. 370). Therefore, constructive feedback should be adequately and decisively acted on by management and change agents. It would be a start to not ignore it but to use it as input for communication with the employees.

Another implication for practitioners is related to the importance of knowing what factors make employees respond to an organizational change in a positive, a critical, or a negative way. Primarily as a result of advanced technology, the degree of organizational change has increased significantly in the past decades, requiring organizations to be more flexible and better able to respond quickly to environmental changes in order to gain or preserve their competitive advantage (Guest, 2004). In rapidly changing environments, managing the psychological contract and maintaining high levels of trust is a major challenge, which makes it even harder for change agents and business leaders to successfully manage organizational changes. Insight into which antecedents most significantly determine the feelings, behaviors, and thoughts of employees is therefore important.

In their review, Oreg et al. (2011) found a large amount of antecedents of change recipients' reactions to organizational change, which they categorized into "change recipient characteristics," "internal context," "change process," "perceived benefit/

harm," and "change content." This variety of responses illustrates the difficulty for practitioners to concentrate on the variables that have the highest predictive value for the employee's attitude toward change and therefore for the successful implementation of an organizational change. In the present research, psychological contract fulfillment, trust, and perceived need for change accounted for a respectable 22%, 26%, and 48% of the variance in the affective, behavioral, and cognitive dimension of attitude toward change. When subsequently considering the important role that the psychological contract and trust play in the regular employment relationship, organizations might want to rethink their common perspectives on how to assure successful implementation of organizational changes. It could just as well be argued that "resistance is neither a sudden nor a direct response to a particular instance of change but, rather, a function of the quality of the relationship between agents and recipients" (Ford et al., 2008, p. 363).

Perhaps the primary focus on change-specific antecedents should therefore shift to a focus on antecedents concerning the quality and strength of the general employment relationship, such as the psychological contract and trust. A constant focus on fulfilling the psychological contracts of employees and creating high levels of trust in the employment relationship—before, during, and after organizational changes—might contribute substantially more to the success of organizational changes than any of the other commonly considered antecedents.

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