Identification During Imposed Change: The Roles of Personal Values, Type of Change, and Anxiety

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Abstract

Using a person-situation perspective, we explain what happens to individuals' identification with a collective in the context of a change. We propose that given the anxiety that often emerges during change, individuals' personal values (conservation and openness to change) interact with type of change (imposed vs. voluntary) in predicting identification following change. In a pilot, longitudinal field study ($N = 61$, 67% female) of an imposed university campus relocation, we measured employees' values and identification with the university before and several months after the relocation. In two lab experiments (Study 1: $N = 104$, 91.3% female; Study 2: $N = 113$, 75.2% female), we manipulated a change to be either imposed or voluntary and compared the relationships between values and identification across types of change. In Study 2, we also measured anxiety from the change. When change was imposed (all three studies), but not when voluntary (Studies 1 and 2), individuals' conservation was positively, and openness negatively, related to individuals' post-change identification. The effects emerged only for individuals who experienced change-related anxiety (Study 2). Our findings demonstrate that individuals' identification with a changing collective depends on the amount of anxiety change elicits and on the particular combination of their values and type of change.

Change constitutes a key event in people's lives. Whether it is the transition to parenthood, immigration, occupational changes, or changes to one's social or work settings, change has a substantial impact on individuals' well-being and functioning, as well as on their ties with their environment. Accordingly, numerous studies have been conducted with the aim of predicting how individuals respond to and cope with change (e.g., Benet-Martínez & Haritatos, 2005; Oreg, Vakola, & Armenakis, 2011). This can be seen in studies of immigration and acculturation (e.g., Benet-Martínez & Haritatos, 2005), coping with major life transitions (e.g., Rönkä, Oravala, & Pulkkinen, 2003), reactions to organizational changes (e.g., Gleibs, Mummendey, & Noack, 2008), and consumers' adoption of new products (e.g., Moreau, Lehmann, & Markman, 2001). Many of these studies undertake an individual-differences perspective and demonstrate that how people respond to change is a function of their personal characteristics (e.g., traits, values). Specifically, those who hold a negative orientation toward the notion of change will exhibit a less favorable response to specific changes (e.g., Oreg, 2006), such as a decrease in identification with the entity (e.g., group, organization, nation) that has changed. Accordingly, in a couple of studies of immigrants, individuals with a negative orientation toward change (e.g., high conservation values, low

openness to experience) exhibited lower levels of identification with their country after changing their country of residence (Benet-Martínez & Haritatos, 2005; Roccas, Schwartz, & Amit, 2010).

As we explain below, however, there is also reason to believe that those who are predisposed to respond negatively to change may actually show more, rather than less, identification with their post-change setting. Based on uncertainty-reduction theory (Hogg, 2007), we argue that whether these individuals will show more or less identification with their post-change setting will depend not only on their personal orientation toward change, but also on the nature of the change experienced. In doing so, we adopt an interactionist perspective and integrate person and situation explanations of identification. Specifically, we will show that whereas individuals who tend to

prefer stability over change will exhibit less identification following a voluntary change, they will exhibit *more* identification following an imposed change. We further demonstrate that these effects weaken as the level of anxiety that is experienced during the change decreases. By demonstrating these effects, we aim to advance our understanding of the process of identification following change, and more generally, of how individuals respond to change.

Developing a Person-Situation Explanation of Identification Following Change

Identification is a multifaceted concept, reflecting one's general connection to an in-group (Leach et al., 2008). A key component of this connection, on which we focus in the present study, is the individual's emotional attachment to the group and willingness to contribute to it (Roccas, Klar, & Liviatan, 2006; Roccas, Sagiv, Schwartz, Halevy, & Eidelson, 2008). Several studies have focused on members' identification in the context of change (e.g., Amiot, Terry, Jimmieson, & Callan, 2006; Ethier & Deaux, 1994; Seppälä, Lipponen, Bardi, & Pirttilä-Backman, 2012). As noted above, a few of these studies demonstrate links between individuals' personal dispositions and their identification with their new situation (Benet-Martínez & Haritatos, 2005; Roccas et al., 2010). Less explicitly, studies linking personality to individuals' response to organizational change (e.g., Judge, Thoresen, Pucik, & Welbourne, 1999; Oreg, 2003), and studies linking personality to individuals' group identification (not in the context of change; e.g., Sagiv, Roccas, & Hazan, 2012), also support the notion that different people should exhibit different levels of identification following a change. Specifically, individuals oriented toward stability and maintaining the status quo (e.g., those high on conservation values) tend to show greater identification following a change in comparison to individuals with a preference for change (e.g., Roccas et al., 2010).

Rather than an individual-differences perspective, the focus in several studies of identification following change was on situational predictors (e.g., Amiot et al., 2006). Most of these studies were of employees' identification following an organizational merger, and they typically find that an open and participative change management approach is associated with greater identification following the change (e.g., Amiot et al., 2006; Jimmieson & White, 2011; Michel, Stegmaier, & Sonntag, 2010; see also a review in Drzensky & van Dick, 2013).

A more comprehensive explanation of identification following change, however, should acknowledge the joint effect that situational and individual-differences variables have on individuals' responses (e.g., Lewin, 1935; Mischel, 1977). In other words, the effects of individual-differences variables on individuals' post-change identification may very well vary as a function of the characteristics of the change. In the present research, we argue that identification with one's group following a change can be explained by the joint influence of individuals' personal values and the manner in which the change is implemented in the group. In particular, we propose that identification with the group is a function of members' conservation and openness to change values together with whether the change is voluntary or imposed. As a specific example of change, we focus on changes in organizational and educational settings and contrast imposed and voluntary change to highlight the unique dynamics that emerge when change is imposed. Although our focus in the present studies is on the organizational and educational context, the patterns of relationships we predict should similarly apply to other change settings, in which the collective could be one's group, team, or country.

We build on uncertainty-identity theory (e.g., Hogg & Abrams, 1993) to argue that anxiety plays a central role, underlying this interaction. Correspondingly, we demonstrate in Study 2 that the interaction effect of values and change type on identification is particularly salient when anxiety is high.

Identification as a Means of Reducing Uncertainty and Anxiety

Almost by definition, the context of change creates at least some level of uncertainty. Such uncertainty is typically accompanied by the experience of anxiety, which motivates individuals to reduce the uncertainty (Hogg, 2007). According to uncertainty-identity theory (Hogg, 2007), a key route to reducing uncertainty involves identifying with the collective to which one belongs. Identifying with a group involves, among other things, taking on the roles prescribed through group membership. When an individual experiences uncertainty, taking on such roles can reduce uncertainty by providing guidelines for the individual's behaviors and expectations (Reid & Hogg, 2005). This can be seen, for example, in the increased identification that individuals show with their nation in anxiety-provoking situations such as war (e.g., Stern, 1995). In other research, political leader–induced uncertainty has been shown to increase individuals' identification with their political party (Hohman, Hogg, & Bligh, 2010). Similarly, employees undergoing organizational change, which involves an increase in uncertainty and the anxiety that accompanies it, should also be motivated to identify with the organization as a means of reducing the uncertainty. The organization and its leadership may be perceived as anchors, providing structure and guidance that assist in attenuating the anxiety experienced. The greater the anxiety experienced, the stronger will be one's motivation to reduce it through identification.

Yet, in line with the dispositional perspective, the degree to which individuals identify as a means of reducing anxiety is not uniform. Beyond individual differences that exist in the degree of anxiety that people experience, once anxiety emerges, individuals with different motivational goals are expected to differ in how they deal with their anxiety. Such

individual differences can be captured through the concept of personal values, defined as stable and cross-situational cognitive representations of motivational goals, which serve as guiding principles in people's lives (Schwartz, 1992; Schwartz et al., 2012). In the theory of personal values, Schwartz presents a broad spectrum of motivational goals and lays out their interrelationships. These have provided a useful framework for assessing individual differences in people's value priorities, which have been shown to predict people's perceptions, attitudes, and behaviors in a variety of domains (e.g., Bardi & Schwartz, 2003; Lonnqvist, Leikas, Paunonen, Nissinen, & Verkasalo, 2006; Sagiv, Sverdlik, & Schwarz, 2011).

Values in the theory are positioned along two continua: one contrasting values of self-enhancement (e.g., achievement) with self-transcendence (e.g., benevolence), and the other contrasting values of conservation (e.g., security) with openness to change (e.g., stimulation). The latter continuum is of particular relevance for understanding individuals' identification with groups undergoing change. Although the two values are both theoretically and empirically inversely related, one is nevertheless not the exact opposite of the other, and neither has been conceptualized or defined by simply negating the other. Both values have been used for explaining change-related responses (Oreg et al., 2008; Sverdlik & Oreg, 2009) as well as people's identification with groups (Roccas et al., 2010). Specifically, individuals who value conservation, and accordingly show a preference for stability and security, have been shown to be dispositionally resistant to change (Oreg et al., 2008). Furthermore, individuals' personal emphasis of conservation has also been negatively associated with the adoption of voluntary (vis-à-vis imposed) changes (Sverdlik & Oreg, 2009).

In the context of research of identification, conservation values have been linked with greater identification with the collective (e.g., group, organization; Roccas et al., 2010). The rationale offered for this latter finding is that, given their preference for security and their tendency to comply with authority, identification with the collective offers those who value conservation a greater sense of security and, correspondingly, lower levels of anxiety. Contrarily, those who emphasize openness to change values, and therefore give more weight to their autonomy and self-direction (e.g., Schwartz, 1992), tend to rely on themselves rather than the collective for relieving the anxiety that may accompany uncertainty (Roccas et al., 2010). Yet identification as an anxiety-reducing mechanism requires that the collective with which one identifies (e.g., the organization) is perceived as able to provide the security sought. An important aspect that relates to this point is the manner in which the change is implemented. We address this point next.

Uncertainty Reduction During Imposed Versus Voluntary Change

As noted above, one of the primary factors to have been linked with identification following change has to do with the manner in which the change was managed (for a review, see Drzensky & van Dick, 2013). Overall, when implemented in organizations, changes implemented through open communications and a participative decision-making style tend to yield greater post-change identification. One of the likely reasons that employee participation in implementing change increases identification with the collective (i.e., the organization) is the sense of autonomy and volition that a participative process provides, contrary to the alienation and loss of control that often accompany unilaterally imposed changes. Indeed, the loss of control associated with imposed change has been highlighted as one of the primary sources of resistance to change (Conner, 1992). The degree to which changes are voluntary versus imposed should therefore have a substantial impact on how individuals respond to them (Oreg & Sverdlik, 2011; Sverdlik & Oreg, 2009).

A key difference between imposed and voluntary changes has to do with how collectives (and their leadership) normatively function and with what members of these collectives come to expect of the collective. Imposed change presents a clear prescription of what leaders expect from followers and provides clear guidelines and structure. Moreover, having change imposed (rather than presented as optional) corresponds with the image of a confident and decisive change agent. Such confidence is precisely what those who look to the collective for relieving anxiety will be seeking. We therefore suggest that for these individuals, when change is imposed, increasing identification with the collective can reduce change-related anxiety. Contrarily, when change is voluntary, individuals have the option of choosing among alternative behaviors. The behavior prescribed by the collective's leadership is therefore less straightforward than when change is imposed (Sverdlik & Oreg, 2009). Overall, less structure is provided and less confidence is conveyed in leaders' actions. Therefore, identification in these conditions will be a less effective means of reducing anxiety among those who look to the collective for structure and guidelines.

This distinction in how the two types of change are experienced bears relevance for our discussion above about values and identification. As noted, under conditions of uncertainty, conservation values have been positively, and openness values negatively, associated with identification with the collective (Roccas et al., 2010). Yet we argue that a prerequisite of these relationships is that the collective is perceived as being able to offer security and relieve the anxiety that individuals experience. We therefore propose that in the context of organizational change, these relationships between values and identification should emerge only when change is imposed, but not when voluntary. Accordingly, we hypothesize the following:

Hypothesis 1a: Change type (imposed/voluntary) will moderate the relationship between conservation values and identification following a change, such that conservation and

identification will be positively related only when change is imposed.

Hypothesis 1b: Change type (imposed/voluntary) will moderate the relationship between openness values and identification following a change, such that openness and identification will be negatively related only when change is imposed.

As noted above, however, we hypothesize these patterns of relationships under the assumption that change recipients are experiencing anxiety. Our framework on the joint effect of change type and values on identification assumes that high-conservation individuals increase identification when change is imposed because such identification allows them to relieve their change-related anxiety. Anxiety is therefore a prerequisite to the interactions indicated above. We therefore wish to demonstrate that the moderation effect predicted in Hypotheses 1a and 1b will strengthen when the anxiety experienced is higher. In other words:

Hypothesis 2a: There will be a three-way interaction among anxiety, type of change (imposed/voluntary), and conservation, such that the two-way interaction hypothesized in Hypothesis 1a will be stronger as levels of anxiety increase.

Hypothesis 2b: There will be a three-way interaction among anxiety, type of change (imposed/voluntary), and openness, such that the two-way interaction hypothesized in Hypothesis 1b will be stronger as levels of anxiety increase.

To test our hypotheses, we conducted three studies. As noted above, in Hypotheses 1a (1b) we expect that conservation (openness) will be positively (negatively) related to identification only when change is imposed. We therefore began, in a pilot field study, by demonstrating the relationships between values and identification following an imposed organizational change. We then tested Hypotheses 1a and 1b directly, in a lab experiment (Study 1). Finally, we replicated the tests of Hypotheses 1a and 1b in another experiment (Study 2) in which we also tested the three-way interactions described in Hypotheses 2a and 2b (see Figure 1).
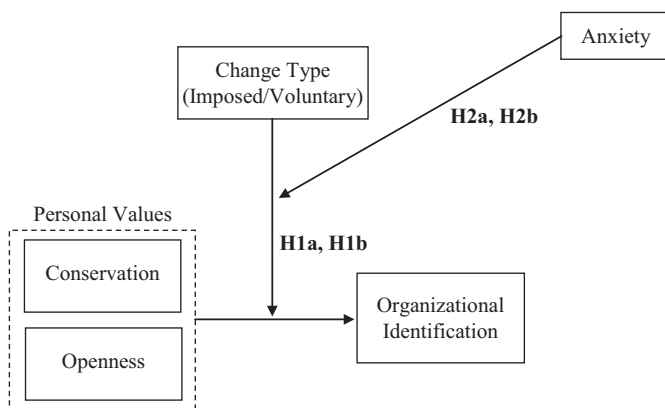

Figure 1 The research model.

PILOT STUDY

The Study's Context

The change in this study involved the relocation of a university's campus from a central city to a more peripheral one.[1] One of the main motivations for the present relocation was to include all academic and administrative departments in one location, rather than being dispersed as they were in the previous location. Furthermore, the relocation was to a new facility, with new buildings and the latest teaching technological advances. The change therefore involved both potential advantages and some disadvantages, such as more commuting time to and from work for most of the employees.

Method

Participants and Procedure. Questionnaires were sent via email to 500 employees, who constituted the permanent staff at the university. Given that our interest was in employees' identification following the change, we wanted to control for their pre-change identification with the organization as a baseline. Questionnaires were therefore administered twice: five months before the relocation had taken place (Time 1) and again two months following the relocation (Time 2). One hundred seventeen employees provided data in Time 1 and 192 provided data in Time 2. Sixty-one of these participants provided complete data in both Times 1 and 2. Data from this latter group were those used for the present study. Corresponding with the distribution of employee demographics in the university, 67% were female (68% were female university-wide), the mean age was 40.1 years ($SD = 11.0$; 45.5 was the mean age university-wide), and 73.3% were full-time employees (63% university-wide). Forty-three percent were members of the academic staff (45% university-wide), and the rest were administrative employees. Aside from questions about variables not related to the present study, participants in Time 1 were asked about their personal values and their identification with the university. In Time 2 they were asked again about their identification with the university. The *t*-tests comparing the demographics (e.g., age, percentage of female participants), personal values, and identifications of participants who took part only in Time 1 and those who also participated in Time 2 indicated no significant differences.

Measures. *Personal values* were measured with the 46-item version of Schwartz's Value Survey (SVS; Schwartz, 1992). Respondents were asked to rate the importance they attributed to value items as "guiding principles" in their lives on a 9-point Likert scale ranging from –1 (*opposite to my values*), through 0 (*not important*) to 7 (*of supreme importance*). The asymmetry of the scale reflects the natural distribution of distinctions that individuals make when thinking about the importance of values, observed in pretests when building the scale (Schwartz, 1992). The SVS has been used in hundreds of studies and has successfully replicated the conceptualized value structure

(Schwartz et al., 2012). Of the scale items, 14 (e.g., social order, obedience, family security) tapped conservation values (reliability coefficient alpha = .81), and eight (e.g., freedom, creativity) tapped openness to change values (reliability coefficient alpha = .69). In line with Schwartz's (1992) guidelines for the measurement of values, to remove the effect of individual differences in the scale's use, value scores were corrected by subtracting individuals' mean value score from the conservation and openness scores. This procedure was applied in all three studies.

Identification with the organization was measured using three items from the Roccas et al. (2008) identification scale. The scale has been validated in multiple contexts, including social (e.g., Ein-Dor & Hirschberger, 2013; Sagiv et al., 2012), political (e.g., Jia, Karpen, & Hirt, 2011), and organizational (e.g., Roccas et al., 2008). In the present study, we used the items representing the commitment dimension of the scale, which is most strongly associated with pro-group behavior. The items were "I am glad to contribute to the university," "I am strongly committed to the university," and "I like to help the university." Respondents were asked to rate the degree to which they agreed or disagreed with each of the items on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The scale was tested in previous studies and found to be a reliable and valid measure of identification (Roccas et al., 2006; for a review, see also Roccas et al. 2008). The scale's reliability coefficient alpha in the present study was .84 in Time 1 and .85 in Time 2.

Results and Discussion

Means, standard deviations, and correlations among the variables in this study are presented in Table 1. As can be seen, in line with Schwartz's theory, conservation correlated negatively with openness to change. Not surprisingly, identification in Time 1 correlated strongly with identification in Time 2. The correlations between values and identification in Time 2 (but not in Time 1) were marginally significant and in the expected directions.

To test the imposed condition of Hypothesis 1, we conducted two multiple regression analyses (once for conservation and once for openness) with values predicting identification in Time 2, controlling for identification in Time 1. Time 1 identification constitutes the baseline, prior to the change. Controlling for it allows us to assess the degree of identification following the organizational change, beyond one's baseline. The results are presented in Table 2. As hypothesized, values predicted identification following the change, controlling for their Time 1 baseline identification. Specifically, conservation values (top panel of Table 2) were (marginally) positively, and openness values (bottom panel) negatively, related to identification in Time 2.

Thus, consistent with the uncertainty-reduction paradigm, in the context of an imposed change, the more individuals value conservation, and the less they value openness, the greater their identification following the change. Given, however, that this study included only an imposed change, it is not clear whether our results are a function of the imposed nature of the change or would perhaps emerge in a voluntary change as well. In other words, this pattern of relationships may be manifested following any change, regardless of the manner in which it was implemented. We therefore conducted Study 1, in which we manipulated the type of change and contrasted the results of an imposed change to those of a voluntary one.

STUDY 1

As a first step in testing the moderation effect hypothesized in Hypotheses 1a and 1b, we returned to a different data set, collected in an earlier study of values and change (Sverdlik & Oreg, 2009). The predictors in that study were participants' values and the type of change implemented. As part of a separate (unpublished) study conducted at the same time, we also had data on participants' organizational identification. We therefore merged the two data sets to allow us to test our hypothesized moderation effects.

Method

Participants and Procedure. Participants were 104 psychology undergraduate students at an Israeli university, who

Table 1 Pilot Study: Descriptive Statistics and Correlations for the Variables

Variable	Mean	SD	1	2	3
1. Openness[a]	.27	.71			
2. Conservation[a]	−.30	.52	−.64**		
3. Identification Time 1	4.70	.77	.02	.08	
4. Identification Time 2	4.87	.71	−.19	.22†	.71**

Note. N = 61.
[a]As indicated in the Method section, value scores were ipsatized, in line with Schwartz's (1992) guidelines.
†p = .09. **p < .01.

Table 2 Pilot Study: Regression Analyses With Values Predicting Identification Following the Change

Variable	B	Std. Err.	β
Conservation			
Identification Time 1	.65	.08	.70**
Conservation	.23	.12	.17†
Openness			
Identification Time 1	.66	.08	.71**
Openness	−.21	.09	−.20*

Note. N = 61.
†p = .07. *p < .05. **p < .01.

participated in the study in return for course credit, for whom we had data on both their values and identification. The majority of the participants were female (91.3%). The mean age was 27.44 years (*SD* = 5.51). In the course of their degree, typically at the beginning of their studies, students at this university participate in three hours of research. This is done in one block of time, in which they take part in several independent studies. The present study included three parts. Other tasks, not related to these three, were interspersed in between and constituted filler tasks for the present study. Students were led to believe that each of the three parts of our study belonged to a different, independent, study.

In Part 1, participants completed a questionnaire about their personal values. In Part 2 they underwent the experimental manipulation, in which they were given scenarios about alleged changes to be implemented in the university's teaching methods in the following year (described below). Finally, they participated in Part 3, in which they were asked about their identification with the university. These questions were presented as part of an overall survey aimed at assessing students' attitudes toward the university. No reference was made during this part to the changes described in Part 2, which was, allegedly, independent of the following studies.

The Experimental Manipulation. Participants were randomly assigned to either the imposed or voluntary change condition. They were then introduced to three changes that the university's management was allegedly proposing for the following school year. The changes involved the introduction of study material in English (instead of Hebrew), the use of video-recorded courses in place of frontal lectures, and the assignment of papers in courses where exams had been typically used. Although the changes were not really initiated by the university, they were realistic, and similar changes had been initiated at this university in the past. Moreover, changes in the language of instruction and the mode of instruction (frontal vs. prerecorded lectures) have already been implemented in other universities in Israel, making them particularly believable. In the imposed condition, participants were told that the decision about the changes had been made by the university and that they would take place in the following school year. In the voluntary condition, participants were informed about the new proposed procedures and were told that each student has the option of choosing whether or not to adopt them. At the end of the experiment, participants were thanked for their participation and were debriefed, revealing the fact that the changes presented would not actually be initiated.

Measures. *Values* in this study were measured with the Portrait Value Questionnaire (PVQ; Schwartz et al., 2001), which has been shown to be equivalent to the SVS (used in the pilot study) for the measurement of personal values. The scale includes 40 short descriptions of hypothetical individuals, describing goals and aspirations that reflect the individuals' values. In response to each description, participants are asked

to rate the degree to which they are similar to the hypothetical individual described on a scale ranging from 1 (*not like me at all*) to 6 (*very much like me*). Conservation values were assessed with 13 of the items and openness to change values with seven of them. Sample items include "She thinks it is best to do things in traditional ways. It is important to her to keep up the customs she has learned" (conservation) and "It is important to her to be independent. She likes to rely on herself" (openness). Cronbach's alphas in this study were .77 for conservation and .80 for openness to change.

Identification with the university was measured using six items from the Roccas et al. (2008) identification questionnaire, representing both the commitment (e.g., "I am glad to contribute to the university") and importance (i.e., viewing the group as part of one's self-definition; e.g., "It is important to me that I view myself as a member of this group") dimensions of identification. Together, these dimensions represent the attachment aspect of identification (Roccas et al., 2006), and thus represent a more inclusive operationalization of identification than was used in the pilot study. The scale's reliability coefficient alpha in the present study was .89.

Results and Discussion

Means, standard deviations, and correlations of the variables in Study 1 are presented in Table 3. To test Hypotheses 1a and 1b, that change type moderates the relationship between values and identification, we followed Aiken and West's (1991) procedure for testing two-way interactions. Specifically, we ran two multiple regression analyses (one for each hypothesis) with the centered value (conservation or openness), the type of change, and the product of the two, as predictors of identification. The results of these analyses are presented in Table 4. As hypothesized, the interaction between conservation and change type significantly predicted identification (see top panel of Table 4). In the top panel of Figure 2 we present the pattern of relationships between conservation and identification in the imposed and voluntary conditions. As can be seen, in line with our predictions, the relationship between conservation and identification in the imposed change condition was positive and significant (simple slope = 0.30, $t[102]$ = 2.3,

Table 3 Study 1: Descriptive Statistics and Correlations for the Variables

Variable	Mean	SD	1	2	3
1. Change type (voluntary = 0, imposed = 1)	.47	.50			
2. Openness[a]	.41	.65	−.03		
3. Conservation[a]	−.60	.53	−.04	−.70**	
4. Identification	4.0	.94	.10	.05	−.01

Note. *N* = 104.
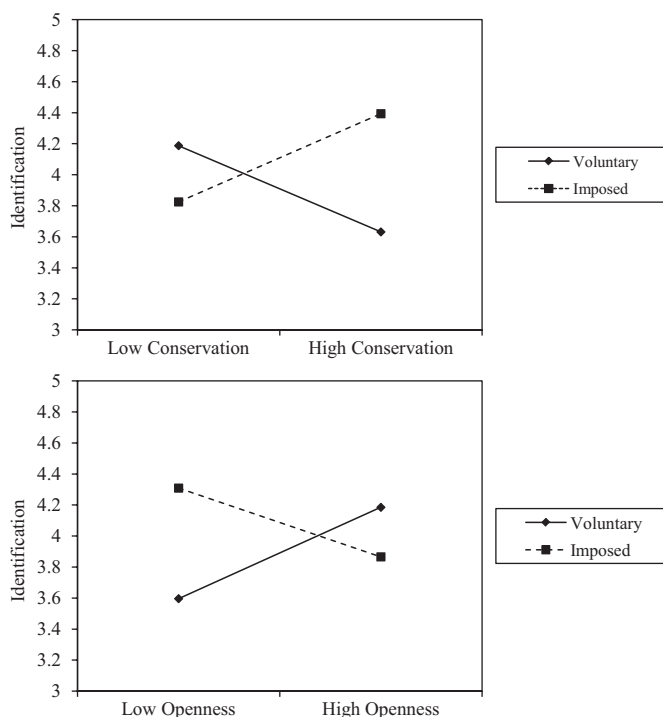[a]As indicated in the Method section, value scores were ipsatized, in line with Schwartz (1992).
**p < .01.

Table 4 Study 1: Interaction Analysis for Values and Change Type Predicting Identification

Variable	B	Std. Err.	β
Conservation			
Change Type (voluntary = 0, imposed = 1)	.20	.18	.11
Conservation	−.26	.12	−.28*
Change Type × Conservation	.56	.18	.40**
Openness			
Change Type (voluntary = 0, imposed = 1)	.20	.18	.10
Openness	.28	.12	.30*
Change Type × Openness	−.51	.18	−.36**

Note. $N = 104$.
*$p < .05$. **$p < .01$.

Figure 2 Plots of interactions between values and change type predicting identification in Study 1: top panel for conservation, bottom panel for openness to change.

$p < .05$). Contrarily, in the voluntary condition, conservation was *negatively* related to identification (simple slope = −0.26, $t[102] = −2.12$, $p < .05$).

Also as hypothesized, the reverse pattern of relationships emerged for openness (bottom panel of Table 4). The interaction between openness and change type was negatively associated with identification ($\beta = −.36$, $p < .01$), and the pattern of relationships between variables was such that openness was negatively related (one-tailed test) to identification only in the imposed condition (bottom panel of Figure 2; simple slope = −0.24, $t[102] = −1.76$, $p = .08$). Contrarily, in the voluntary

condition, the relationship between openness and identification was *positive* (simple slope = 0.28, $t[102] = 2.27$, $p < .05$). We thus found support for both Hypotheses 1a and 1b.

Our hypotheses focused on the contrast between value effects in imposed vis-à-vis voluntary change, and we did not predict a particular pattern of relationships in the voluntary condition. Nevertheless, the effects found correspond with the overall positive reaction that open individuals have toward change. Furthermore, we can speculate that the increased identification of those who emphasize openness (and de-emphasize conservation), and thus appreciate autonomy and novelty, may result from the greater variety of alternatives that voluntary change offers (e.g., one could either maintain the present mode of action or adopt the change). In other words, the greater fit between this kind of change and individuals with these particular value priorities might explain these individuals' greater identification. We offer this explanation, however, tentatively and would require additional evidence before offering it more conclusively.

Our findings thus far support our predictions about the relationships between values and identification following imposed versus voluntary change. Specifically, they correspond with uncertainty-identity theory as an explanation of individuals' identification with their organizations following an imposed change. Nevertheless, the key function of anxiety in this process has to this point only been assumed. To more directly assess its role, by testing Hypotheses 2a and 2b about the moderating role of anxiety, we conducted Study 2.

STUDY 2

As conceptually established above, we expect in Hypotheses 2a and 2b that the interaction pattern that emerged in Study 1 among values, change type, and identification will be stronger among individuals experiencing higher levels of anxiety. We therefore followed the method used in Study 1 and supplemented it with a measure of participants' experienced anxiety.

Method

Participants and Procedure. As in Study 1, psychology undergraduates ($N = 113$) were asked to provide feedback about a number of changes in the university's teaching methods. In addition, they reported how anxious they are about the proposed changes. Following a number of filler tasks, lasting 20–120 minutes,[2] participants were asked to report their identification with the university, as part of an allegedly different study. The majority of the sample was female (75.2%), and the mean age was 28.04 years ($SD = 6.62$).

The experimental manipulation was the same as that used in Study 1, with the exception that only two, rather than three, changes were presented. These were the introduction of study material in English and the introduction of video-recorded courses instead of frontal lectures.

Measures. *Values* and *identification* were measured with the same scales as in Study 1. The scales' coefficient alphas were .77 for conservation, .53 for openness, and .90 for identification. Although the reliability index for openness is below the accepted .7 threshold, it is within the expected range for personal values (between .50 and .80; Schmitt, Schwartz, Steyer, & Schmitt, 1993).

Anxiety was measured with four items designed for the present study: "Thinking about the change makes me scared," "Thinking about the change makes me worried," "The change makes me feel less safe," and "Overall, I feel concerned about the change." Participants were asked to report the degree to which they agreed or disagreed with each of the statements on a scale ranging from 1 (*entirely disagree*) to 6 (*entirely agree*). Each item was rated twice, once with respect to each of the two changes presented. The scale's coefficient alpha was .93 in response to the change involving the introduction of English

material and .96 in response to the introduction of video-recorded courses. Participants' anxiety scores were created by averaging their eight responses.

Results and Discussion

Table 5 presents means, standard deviations, and correlations of the variables in Study 2. We first wanted to retest Hypotheses 1a and 1b. We followed the same procedure as in Study 1. The two left columns of results in Table 6 present the two multiple regression results for testing the moderation hypotheses. As can be seen, for both conservation (top panel: $\beta = .27$, $p < .05$) and openness (bottom panel: $\beta = -.27$, $p < .05$), the interaction between values and change type was significant. In Figure 3 we present the patterns or relationships among values, change type, and identification. Replicating the hypothesized results in Study 1, the relationship between conservation and identification (top panel of Figure 3) was positive only in the imposed condition (simple slope = .28, $t[112] = 2.29$, $p < .05$), and the relationship between openness and identification (bottom panel of Figure 3) was negative only in the imposed condition (simple slope = $-.28$, $t[112] = -2.47$, $p < .05$). Although, as in Study 1, the slopes in the voluntary condition were in the opposite direction of those in the imposed condition, unlike Study 1 they were not significant.

After replicating the findings in support of Hypotheses 1a and 1b, we now turned to test the three-way interactions hypothesized in Hypotheses 2a and 2b.

In line with Aiken and West's (1991) recommendations for testing three-way interactions, each analysis (one for Hypothesis 2a and the other for 2b) consisted of a multiple regression

Table 5 Study 2: Descriptive Statistics and Correlations for the Variables

Variable	Mean	SD	1	2	3	4
1. Change type (voluntary = 0, imposed = 1)	.45	.50				
2. Openness[a]	.21	.66	−.14			
3. Conservation[a]	−.21	.57	.08	−.76**		
4. Anxiety	3.08	1.10	.21*	−.25**	.19*	
5. Identification	4.01	.81	.05	−.12	.09	.14

Note. N = 113.
[a]As indicated in the Method section, value scores were ipsatized, in line with Schwartz (1992).
*p < .05; **p < .01.

Table 6 Study 2: Two-Way and Three-Way Interaction Analyses for Values, Change Type, and Anxiety Predicting Identification

Conservation	Two-Way Interaction		Three-Way Interaction	
	β	Std. Err.	β	Std. Err.
Change Type (voluntary = 0, imposed = 1)	.04	.15	−.02	.16
Conservation	−.09	.10	−.14	.10
Change Type × Conservation	.27*	.16	.28*	.16
Anxiety			.24†	.11
Change Type × Anxiety			−.20	.16
Conservation × Anxiety			−.09	.09
Change Type × Conservation × Anxiety			.24*	.15
Total R^2	.05		.12	

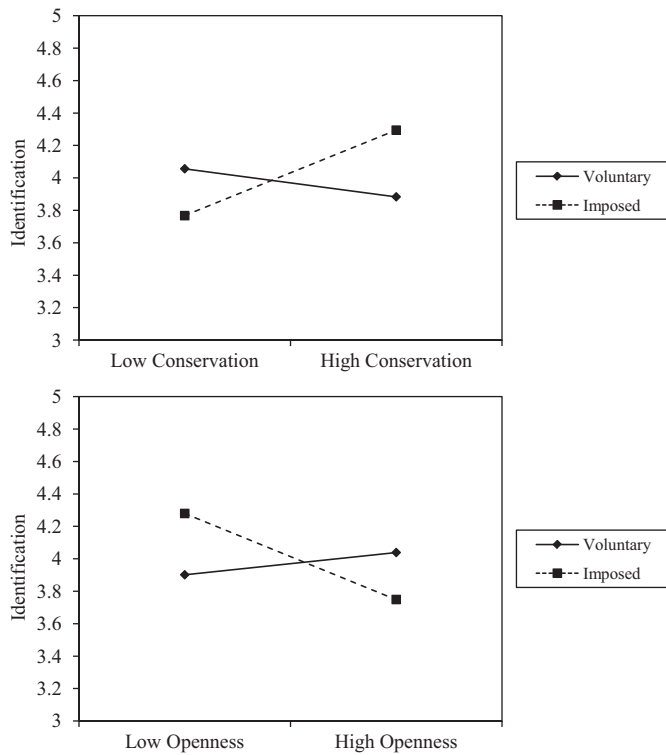| Openness to change	β	Std. Err	β	Std. Err
Change Type (voluntary = 0, imposed = 1)	.03	.15	−.04	.15
Openness	.07	.10	.22	.11
Change Type × Openness	−.27*	.15	−.35**	.16
Anxiety			.25*	.11
Change Type × Anxiety			−.20	.15
Openness × Anxiety			.22	.11
Change Type × Openness × Anxiety			−.36**	.15
Total R^2	.06		.15	

Note. †p < .07. *p ≤ .05. **p ≤ .01.

Figure 3 Plot of interaction between values and change type predicting identification in Study 2: top panel for conservation, bottom panel for openness to change.
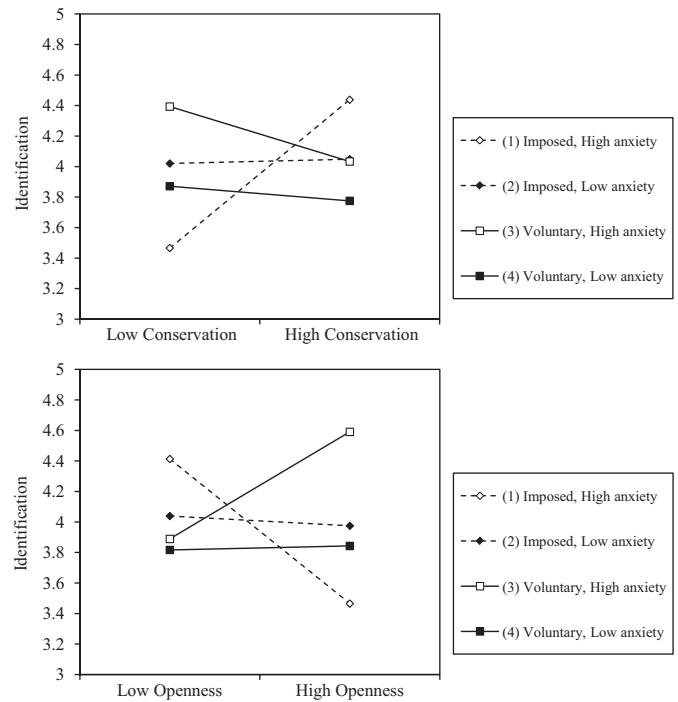

Figure 4 Plot of three-way interaction between values, change type, and anxiety level predicting identification in Study 2: top panel for conservation, bottom panel for openness to change.

with the centered value, the change type, anxiety, the three two-level interaction terms, and the three-way interaction term, predicting identification. In the right columns of results in Table 6, we present the results of these analyses. The only main effect that was at least marginally significant was that of anxiety, which was positively related to identification in both analyses (β = .24, p < .07 in the top panel, and β = .25, $p \leq$ .05 in the bottom panel). The value by change type interaction terms remained significant, as in the two-way interaction analysis (left column), with a positive interaction for conservation (top panel: β = .28, p < .05) and a negative one for openness (bottom panel: β = –.35, p < .01).

As hypothesized, the three-way interaction terms were significant for both conservation (top panel: β = .24, p < .05) and openness (bottom panel: β = –.36, p < .01). To interpret the interaction effect we graphed the relationships among values (for conservation in the top panel of Figure 4, and for openness in the bottom panel), change type, anxiety, and identification. As can be seen in both panels, the expected difference in slopes across imposed and voluntary changes emerged only when anxiety was high; values for slope difference tests were t(112) = 3.46, p < .01 for openness, and t(112) = 3.07, p < .01 for conservation. More specifically, as expected, the relationship between conservation and identification was significant and positive (simple slope = .49, t[112] = 3.07, p < .01), and the relationship between openness and identification was sig-

nificant (simple slope = –.47, t[112] = –3.35, p < .01), and negative, only when the change was imposed and only when anxiety was high. Thus, our findings in this study reconfirm the relationships between values and identification under imposed change. Furthermore, our findings with respect to anxiety support our rationale about anxiety exacerbating the identification process of individuals undergoing imposed change.

With respect to the (not hypothesized) effects of values on identification in voluntary change, whereas these were significant in Study 1, they were not in the present study, despite being in the same direction as in Study 1. We address this finding further in the General Discussion.

GENERAL DISCUSSION

In the present studies we show how values and type of change interact to explain group identification following the change. We incorporate uncertainty-identity theory (Hogg, 2007; Hogg & Abrams, 1993) as a mechanism that explains how identification following change is formed. Specifically, we demonstrate that in the context of imposed (pilot study and Studies 1–2) but not voluntary (Studies 1–2) change, the more people emphasize conservation values, and the less they emphasize openness to change values, the more they identify with the collective following a change. Moreover, we provide evidence that the experience of change-related anxiety is a prerequisite

to the emergence of these relationships among values, type of change, and identification (Study 2).

By incorporating a person-situation perspective, our studies answer recurring and recent calls for integrative frameworks to explain human responses in general, and behavior in organizations in particular (e.g., Endler, 1973; House, Shane, & Herold, 1996; Oswald & Hough, 2011). In so doing, our framework integrates the dispositional literature on reactions to change (e.g., Judge et al., 1999; Oreg, 2003) with the literature on the change process (e.g., Bartunek, Rousseau, Rudolph, & DePalma, 2006; Coyle Shaipro, 2002) and demonstrates how different people respond to different types of changes. Specifically, our findings suggest that while imposed change elicits greater identification among those who value security, conformity, and tradition (i.e., conservation), it actually elicits alienation (less identification) among those who value autonomy and stimulation (i.e., openness). These differences in identification following change did not emerge when the change was voluntary. The fact that in our studies participants' identification with the university was assessed as part of a separate study, allegedly independent of the study in which the changes were described, suggests that the effects of change exceed the immediate and explicit context of change.

The pattern that emerged for voluntary change was somewhat inconsistent across studies. Although in Study 1 the slopes were significant, and in the opposite direction of those in the imposed condition, they were not significant in Study 2. They were, however, still in the opposite direction to that in the imposed condition, and they neared significance among individuals experiencing higher levels of anxiety. Following Study 1, we tentatively proposed that the greater identification in the voluntary condition of those who value openness to change might have to do with the greater fit that voluntary change presents for these individuals. The enhanced pattern in high anxiety suggests that such fit may be a particularly important prerequisite for identifying when people are anxious and, therefore, have fewer resources available for dealing with person-organization discrepancies. Although anxiety was not measured in Study 1, this explanation suggests that anxiety in Study 1 was at least minimal, and sufficient for yielding the significant, reversed slopes in the voluntary condition. Future work dedicated to understanding the process of voluntary change could more explicitly consider this possibility.

The present findings follow earlier research in which we investigated the unique characteristics of imposed change (Oreg & Sverdlik, 2011; Sverdlik & Oreg, 2009). In these earlier studies, the context of imposed change was shown to elicit internal conflicts in the form of ambivalence toward the change. Specifically, individuals who value stability are torn between their adverse reaction to change, on the one hand, and their loyalty and tendency to comply with those initiating the change (e.g., management), on the other. Our present findings propose one means through which identification may help these individuals resolve their ambivalence. By identifying with the organization, individuals both maintain, and even enhance, their support of the collective while simultaneously relieving the adverse effects of the change.

Beyond their relevance to understanding how people respond to change, our conceptual framework and findings also lay out new possible directions in the study of identification. Recent studies predicting identification in organizations demonstrate that, overall, trusting and supportive leadership and environments tend to be associated with high levels of identification with the organization (Gibney, Zagenczyk, Fuller, Hester, & Caner, 2011; Schaubroeck, Peng, & Hannah, 2012; Walumbwa, Avolio, & Zhu, 2008). These studies, however, consider only the overall effect that such conditions have on individuals and set aside the possibility of different responses by different people. An interactionist approach suggests that whereas the overall effects of supportive leadership and environments may indeed be positive, they may not necessarily be uniform across individuals. Some individuals may benefit from these environments more than others. Specifically, considering Schwartz's values framework, one might speculate that contrary to individuals who value self-transcendence (e.g., benevolence), who would be particularly appreciative of a supportive organizational environment, the identification of those who value self-enhancement (e.g., achievement and power) may be more influenced by other acts and signals on the part of the organization, such as by opportunities for advancement in the organization (Roccas, 2003).

How those high in conservation respond to imposed change is somewhat paradoxical considering that, in the aim of reducing anxiety, these individuals are increasing their identification with the same entity that created the anxiety to begin with. This resonates with the psychodynamic concept of *identifying with the aggressor*, said to be "one of the ego's most potent weapons in its dealings with external objects which arouse its anxiety" (Freud, 1936, p. 110). When individuals feel weak and threatened (as those high in conservation must feel when a change is imposed on them), identifying with the threatening entity may serve as an effective means of reducing anxiety and regaining one's sense of control and power (de Vries, Doyle, & Loper, 1994). The motivation to reduce change-related anxiety may override any hostility that is experienced toward the change agent for initiating the change, resulting in increased identification.

Similarly, our findings for conservation could also correspond with theories of fairness perceptions, such as fairness heuristics theory (van den Bos, 2001) and the relational model of authority (Tyler & Lind, 1992), which have been used to explain relationships between fairness and a variety of outcomes, including identification. These theories, combined with our findings, would suggest that those high in conservation perceive imposed change as fairer than those who are low in conservation. Such a notion could be tested directly in future research.

A potential limitation of our studies, in particular the pilot study, is that data for both predictor and criterion were collected from a single source, using the same methodology,

which can sometimes yield what is known as mono-method, or single-source, bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff & Organ, 1986). This potential problem is mitigated, however, by several factors. First, in the pilot study, the collection of data on the predictor and criterion was separated temporally, a few months apart, which should substantially restrict the bias. More importantly, our main findings involve the interaction effects demonstrated in Studies 1 and 2. Beyond the fact that the moderator in these studies was experimentally manipulated (rather than measured), it is by now well established that method variance not only does not inflate product (i.e., interaction) terms in moderated regression analyses (Evans, 1985), but may actually attenuate such effects (Siemsen, Roth, & Oliveira, 2010), suggesting that the present findings may be conservative estimates of the actual interaction among change type, values, and identification.

Another limitation has to do with the fact that although our findings correspond with the role we attribute to identification in attenuating anxiety, this assumption was not tested directly. We refer to uncertainty-reduction theory as an explanation for the process through which individuals' post-change identification is formed, yet to more conclusively establish that changes in identification indeed result from individuals' motivation to cope with change-related anxiety, future research should directly assess the anxiety experienced at different stages of the organizational change.

A third limitation has to do with the generalizability of our findings. All of our studies were conducted in a university context, and in Studies 1 and 2, we used the same kinds of changes, thus raising some question about the degree to which our results would replicate in other contexts. Similarly, the changes we used involved both potential advantages and disadvantages for change recipients and did not consider changes that were purely beneficial or detrimental. However, given that our findings correspond with our theoretical formulations, which were not established with a particular change context in mind, we see no reason to believe that our findings result from the particular context we used. One could just as well consider our theoretical framework for understanding individuals' identification with their country when they relocate, or for understanding a change in the family (e.g., the birth of a new child), in which case one could predict the degree of identification with the family. Future research should nevertheless empirically determine whether our results are indeed generalizable to other contexts.

Beyond their conceptual implications, we believe our findings are also informative from an applied perspective, for those responsible for implementing change. First and foremost, change agents should be aware of differences in how imposed versus voluntary change influences different kinds of change recipients. At least for some changes, becoming familiar, in advance, with recipients' personal values could help change agents more effectively implement change such that they could not only restrict feelings of alienation following the change, but even enhance followers' identification with the collective

(e.g., group, organization). For example, when a given change does not require that it is uniformly and mandatorily implemented, change agents may wish to highlight the voluntary nature of the change specifically to those who value openness to change. Contrarily, they should give special attention to providing clear and well-structured guidelines to those who value conservation. When change cannot be made voluntary, however, agents should at least be able to anticipate those cases in which change recipients' identification is likely to waver following the change, and seek alternative routes to bolstering it.

Notes

1. The present study is part of a broader research project for which we collected data at two points in time. Part of the data from Time 1, with a focus on hypotheses different from those tested here, has been published (Oreg & Sverdlik, 2011; Sverdlik & Oreg, 2009).
2. These filler tasks were administered as part of separate studies, run by other researchers. In addition to the analyses we report below, we also reran all analyses while controlling for the duration of the filler tasks, and the results were unchanged.

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