
Change Recipients' Reactions to Organizational Change: A 60-Year Review of Quantitative Studies

The Journal of Applied Behavioral Science
47(4) 461–524
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DOI: 10.1177/0021886310396550
<http://jabs.sagepub.com>



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Abstract

This study reviews quantitative empirical studies of change recipients' reactions to organizational change. The authors reviewed studies published between 1948 and 2007, out of which 79 met the criteria of being quantitative studies of change recipients' reactions to an organizational change. Through an inductive review, the authors unravel a model of (a) explicit reactions to change, in which these reactions are conceptualized as tridimensional attitudes; (b) reaction antecedents that comprise prechange antecedents (viz., change recipient characteristics and internal context) and change antecedents (viz., change process, perceived benefit/harm, and change content); and (c) change consequences, including work-related and personal consequences. On the basis of their review the authors conclude by proposing directions for future research and practical managerial implications.

Keywords

change research, change recipients, reactions to organizational change

Since 1974 (Friedlander & Brown, 1974), literature reviews on the topic of organizational change and development have been published primarily in two journals (i.e., the *Annual Review of Psychology* and the *Journal of Management*). Some of these

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reviews were intended to define the emerging field of organizational development (OD; see Alderfer, 1977; Faucheux, Amado, & Laurent, 1982; Friedlander & Brown, 1974). Others summarized the then-contemporary trends of change interventions and the applications of these change interventions to unique organizational settings, including international contexts (see Faucheux et al., 1982; Sashkin & Burke, 1987; Woodman, 1989).

Most of the research covered in previous organizational change reviews (see Alderfer, 1977; Armenakis & Bedeian, 1999; Faucheux et al., 1982; Friedlander & Brown, 1974; Pasmore & Fagans, 1992; Porras & Silvers, 1991; Sashkin & Burke, 1987; Weick & Quinn, 1999; Woodman, 1989) focused on how *organizations* prepare for, implement, and react to organizational change. At the heart of events, however, and a main determinant of the extent to which any change can succeed, is how *change recipients* react to organizational change. Although a consideration of change recipients' reactions to change is embedded within many of the works on organizational change, the focus in most has been at the *organizational* level. There exists, however, a related, yet distinct, line of research in which the focus has been on reactions of the *individuals* (i.e., change recipients) to organizational change (Judge, Thoresen, Pucik, & Welbourne, 1999). This line of research is based on the growing consensus about the key role that change recipients' reactions to change have in determining the change's potential to succeed (e.g., Bartunek, Rousseau, Rudolph, & DePalma, 2006). Indeed, a surge of recent studies of organizational change demonstrated the meaningfulness of change recipients' attitudes toward change for understanding the organizational change process (e.g., Caldwell, Herold, & Fedor, 2004; Fugate, Kinicki, & Prussia, 2008; Oreg, 2006; Rafferty & Griffin, 2006).

As is often the case, however, different researchers have taken on different perspectives, which in this case, has led to a disintegrated and convoluted picture of the field. Much of the problem stems from the jingle-jangle fallacies (Block, 1995), by which different constructs are given the same label by different researchers (i.e., the jingle fallacy) and equivalent constructs are offered different labels (i.e., the jangle fallacy). An integrative review of this literature would therefore be appropriate for offering a clearer depiction of the field's state at this time.

Accordingly, in this article, we summarize research on change recipients' reactions to organizational change. As we explain below, for our review to be manageable, we restricted it to quantitative investigations of change recipients' reactions to organizational change. Our aim was to provide an overarching view of change recipients' reactions, and to propose an organizing structure for the various study themes. Our review complements previous reviews and is distinct in seven important ways. First and foremost, as noted above, our focus is on studies of change recipients rather than on the more broadly defined category of organization change. Second, we extend the insights of previous review authors by developing a coding scheme for integrating the findings and classifying the key variables, and propose a model consisting of change recipients' *explicit* reactions to organizational change (i.e., cognitive, affective, and behavioral), *prechange antecedent* categories (i.e., change recipient characteristics,

internal context), *change antecedent* categories (i.e., change process, perceived benefit/harm, and change content), and *change consequences* (i.e., work-related and personal outcomes). Third, each of the previous reviews covered a relatively restricted time period. We, on the other hand, identified research studies published between 1948 and 2007. Fourth, for both practical reasons, given the large number of studies on reactions to change, and to form a pool of studies that would more naturally lend themselves for comparisons and classification, we included in our analysis only studies that used quantitative research methodology. Fifth, our review can assist organizational change researchers in the design of change investigations by identifying variables to select in assessing organizational change. This could be beneficial to researchers in helping them decide whether they want to replicate earlier findings or investigate new variables. Sixth, the tables provided in our review offer a compendium of the variables used in examining reactions to change and research context descriptors. Seventh, we provide a valuable analysis of the 79 articles pointing out useful information for groups of articles as well as for specific articles we found to be unique.

Method

Selection of Studies

To identify studies for our review, we searched the literature using terminology typically associated with organizational change. Specifically, in the *PsychInfo* and *Proquest* databases, we conducted an electronic search of the abstracts for the terms *reactions to change*, *resistance to change*, *openness to change*, *attitudes toward change*, *willingness to change*, *readiness to change* and *receptivity to change*. This initial search yielded more than 600 articles published (a) as early as 1948 (Coch & French, 1948) and (b) in many diverse journals, which complemented those that typically publish organizational change research.

Furthermore, we manually searched 10 journals known to have published empirical articles on organizational change, for the period 1980 through 2007, which resulted in an additional 78 articles that were not identified in the electronic search. Our selection of journals included the following: *Academy of Management Journal*, *Human Relations*, *The Journal of Applied Behavioral Science*, *Journal of Applied Psychology*, *Journal of Management*, *Journal of Management Studies*, *Journal of Organizational Behavior*, *Journal of Organizational Change Management*, *Organization Science*, and *Personnel Psychology*. Thus, the total number of studies we considered for our analysis approximated 700.

Many of the articles found were quickly discarded from our pool after a reading of the abstract revealed that they were clearly not relevant for our review (e.g., articles on pigeons' resistance to change in Pavlovian learning tasks). Based on the abstract and the method section of each of the remaining articles, we discarded works that (a) were not in the context of organizational change, (b) addressed change only conceptually or hypothetically and did not pertain to an actual organizational change, and (c) did not

assess any form of change recipient reaction to the change. Given the large amount of articles that remained, we then decided to further restrict our review to include only quantitative studies. The number of articles that met our criteria amounted to 79, which spanned the period 1948 through 2007.

Coding Scheme

The preliminary scheme with which we began coding was based on previous categorizations of reactions to change (e.g., Armenakis, Harris, & Mossholder, 1993; Oreg, 2006; Piderit, 2000; Vakola, Tsousis, & Nikolaou, 2004). However, previous reviews did not focus on change recipient reactions and typically incorporated only a small set of variables. Thus, our review and coding process were primarily inductive in nature. Rather than impose a preexisting scheme on our assessment of the articles, we modified the scheme as we gained information during the review. Thus, on a number of occasions, category titles were refined and new categories were added when a sufficient body of empirical work justified this. After making each of these modifications, we recoded the articles to fit the updated coding scheme.¹ An example of an article coded using the final coding scheme is presented in Table 1. For each article, one of the three authors of this article read and coded the article based on the coding scheme that existed at the time, submitted the completed form to each of the other authors, who after reading the article assessed the coding for each category. When appropriate, the coding form was modified and the article and all previous articles were recoded. In those cases where disagreements were identified, each disagreement was discussed until an agreement was reached.

A Model of Change Recipient Reactions to Organizational Change

Through our review of these 79 articles, we inductively developed the model of change recipient reactions presented in Figure 1. We emphasize that Figure 1 was developed by content analyzing the information provided in Tables 2 to 4. Within each category of our model are examples of relevant variables. The antecedent categories consist of prechange antecedents (i.e., change recipient characteristics and internal context), and change antecedents (i.e., change process, perceived benefit/harm, and change content). The variables comprising these antecedent categories have been linked with individuals' explicit reactions (namely, affective, cognitive, and behavioral reaction components) to an organizational change, and/or in some cases with the longer-term, indirect, impact of an organizational change, consisting of (a) work-related, and (b) personal, consequences. Thus, the model is intended to depict the relationships among antecedents, explicit reactions, and consequences of an organizational change. We found it to be an effective guide for organizing the variables in the studies we reviewed. The complete set of variables in our analysis is available in Tables 2 to 4.

Table 1. Sample of Coded Article

Reference	Cunningham, Woodward, Shannon, MacIntosh, Lendrum, Rosenbloom & Brown (2002). Readiness for organizational change: A longitudinal study of workplace, psychological and behavioural correlates. <i>Journal of Occupational and Organizational Psychology</i> , 75(4), 377-392.	
Organizational context	Large Canadian teaching hospital	
Change content	Yearlong reengineering program; work redesign	
Research design (longitudinal, cross sectional, etc.)	Longitudinal	
Type of data (self-report, interview, archival, etc.)	Self-report	
Sample (managers/ executives, operative change recipients, etc.)	654 (Time 1)/528 (Time 2) hospital change recipients, from a large variety of occupations (e.g., nurses, physiotherapists)	
Change recipient characteristics	Job-change self-efficacy, active approach to problem solving, depression, emotional exhaustion	
Internal context (e.g., organizational conditions)	Job demands, decision latitude, social support, org. staff relations, service quality, attention to quality improvement, staff competence (the latter four were conceptualized as "potential for improvement" [potential benefits of change])	
Change process (how the change is/was implemented)		
Perceived benefits/harm of change (e.g., personal economic, social, political impact on change recipient)	Risks of change (job insecurity, job interference)	
Change content (what was the change about)		
Explicit reactions	Affective	
	Cognitive	Readiness for organizational change (Time 1)
	Behavioral	Readiness for organizational change (Time 1), participation in reengineering (Time 2)
Change consequences		
Findings	Active job and active approach to job problem solving were the best predictors of readiness. Change recipients in active positions with more control over challenging jobs reported a higher readiness for organizational change scores and were more likely to participate in organizational redesign	
Notes:		

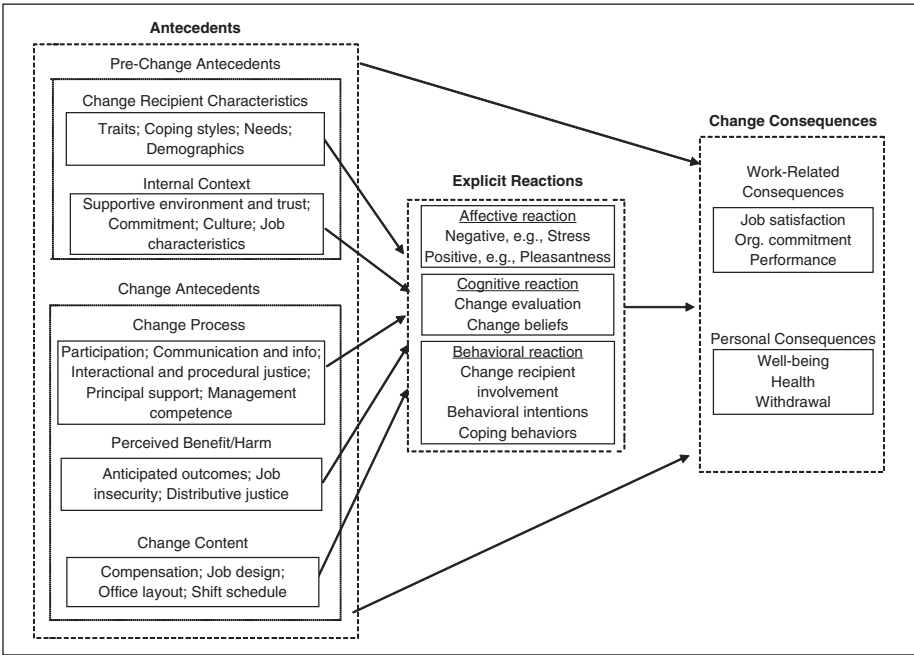


Figure 1. Antecedents, explicit reactions, and change consequences of organizational change
Note. The variables in each box constitute only a sample of the relevant variables in each category.

The structure of our review follows our model depicted in Figure 1. First, we define the term *reactions to change*. We should point out that throughout this review we use the terms *explicit reactions* interchangeably with *reactions*. We distinguish between explicit change recipient reactions to the change, which we label *explicit reactions to organizational change* and more indirect change recipient consequences, which we refer to as *change consequences*. We emphasize that all the studies included in our analysis described the participants as *employees* (except Lau & Woodman, 1995, which included both employees and undergraduate students), which means they were on a payroll rather than students participating in a simulation exercise. In the second part, we describe the types of variables that have been considered as antecedents of the explicit reactions, and in the third part we review findings on the change consequences. Finally, we discuss the practical implications of our findings and offer recommendations for future research on change recipients' reactions to organizational change.

Explicit Reactions to Organizational Change²

One of the first problems we encountered as we reviewed the studies was that researchers have used a variety of ways for conceptualizing change recipients' reactions to organizational changes, with little consistency in the terms used or their definitions.

Table 2. Classification of Explicit Reactions Using the Tripartite Conceptualization, on the Basis of the Scales Used

Reaction component	Reference	Variable	Sample items
Affective	Amiot et al. (2006)	Stressfulness of the merger	"Concern over promotion prospects," "Concern about having to learn new procedures" (participants rated how difficult they found each concern to be)
	Armenakis et al. (2007)	Normative commitment to change ^a	Used the Herscovitch and Meyer scale. Sample items: "I would feel guilty about opposing this change," "I feel a sense of duty to work toward this change"
	Armstrong-Stassen (1998)	Emotional reaction to the change	"Angry," "worried," "fearful"
	Ashford (1988)	Emotional discharge, stress	Emotional discharge: "how often [you] shared worries and concerns with others"; Stress: "tired," "depressed," "restless"
	Bartunek et al. (2006)	Pleasantness and activation	Items from Whissell's <i>Dictionary of Affect in Language</i> . Sample items were not provided.
	Begley and Czajka (1993)	Stress	"How stressful do the changes make you feel?"
	Bordia et al. (2006)	Change-related stress	Respondents rated how stressful the changes were using four bipolar dimensions such as "not at all stressful" to "extremely stressful" and "not at all upsetting" to "extremely upsetting"
	Cartwright and Cooper (1993)	Potential sources of stress	"Role ambiguity," "work overload"
	G.B. Cunningham (2006)	Normative commitment to change ^a	Used the Herscovitch and Meyer scale. Sample items: "I would feel guilty about opposing this change," "I feel a sense of duty to work toward this change"
	Fugate et al. (2002)	Negative emotions	Negative emotions: "anger," "resentment"

(continued)

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
	Herscovitch and Meyer (2002)	Normative commitment to change ^a	"I would feel guilty about opposing this change," "I feel a sense of duty to work toward this change"
	Kiefer (2005)	Negative emotions	"Anger," "mistrust," "frustration"
	Martin et al. (2005)	Perceived change-related stress, psychological well-being during the change	Perceived change-related stress: participants rated the degree of "stress," "disruption," "difficulty," and "extent of upset" with respect to the change process; psychological well-being: "Felt constantly under strain"
	K. I. Miller and Monge (1985)	Anxiety	"Anxious," "worry," "concern"
	V. D. Miller et al. (1994)	Anxiety	"I feel anxious about the implementation of work teams," "the thought of working in the work teams worries me"
	Mossholder et al. (1995)	Affect (evaluation) toward the changes	Affect was assessed by using Whissell's <i>Dictionary of Affect in Language</i> to code open-ended questions about their feelings during the change. Examples of words coded are "confusion," "problems," and "calm"
	Mossholder et al. (2000)	Affect (pleasantness and arousal) toward the changes	Affect was assessed by using Whissell's <i>Dictionary of Affect in Language</i> to code open-ended questions about their feelings during the change. No sample items were provided
	Oreg (2003)	Affective response to the change	"I'm worried about what things will be like after the [change]," "I'm overwhelmed by all the things that need to be done because of the [change]"
	Oreg (2006)	Affective reaction to the change	"I was afraid of the change," "I had a bad feeling about the change"
	Parsons et al. (1991)	Equipment satisfaction (the change involved the adoption of new equipment)	"All in all, I am pretty happy with the equipment"

continued

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
Cognitive	Paterson and Cary (2002)	Change anxiety	Respondents rated “the extent to which the changes made participants feel in control of their lives, insecure about their jobs, confident about their careers, and anxiety over the future”
	Pierce and Dunham (1992)	Stress and fatigue	Stress and fatigue were assessed with a physiological and psychological symptoms of a fatigue scale and a stress scale. Sample items were not provided
	Armenakis et al. (2007)	Affective commitment, ^b Organizational Change Recipients’ Beliefs Scale (OCRBS; discrepancy, appropriateness, efficacy, principal support, and valence)	Affective commitment: Used the Herscovitch and Meyer scale. Sample item: “This change is a good strategy for this organization,” “I think that management is making a mistake by introducing this change” (reverse coded); Appropriateness OCRBS dimension: “I believe the proposed organizational change will have a favorable effect on our operations,” “The change that we are implementing is correct for our situation”
	Ashford (1988)	Cognitive redefinition, cognitive avoidance	Cognitive redefinition: “I try to look at the restructuring as an opportunity.”; Cognitive avoidance: “I don’t even think about the restructuring,” “I focus on my current job and try to think about the restructuring as little as possible”
	Axtell et al. (2002)	Openness to change	Items included “the extent to which [employees] welcome the introduction of new technology,” “whether [employees] would rather such changes not take place” (reverse coded)

continued

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
	Bartunek et al. (1999)	Rating of the change effectiveness	"In general, the NFDC has been effective in the network," "In general, the NFDC has had positive effects on my school"
	Bernerth et al. (2007)	Change commitment	"I believe in the value of this change," "I think management is making a mistake by introducing this change"
	G. B. Cunningham (2006)	Affective commitment to change ^b	Used the Herscovitch and Meyer scale. Sample item: "This change is a good strategy for this organization," "I think that management is making a mistake by introducing this change" (reverse coded)
	Gaertner (1989)	Support for the current business strategy	"I am encouraged by the direction I see this company taking today," "This company's future does not look bright"
	Herscovitch and Meyer (2002)	Affective commitment to change ^b	"I believe in the value of this change," "This change serves an important purpose"
	Holt et al. (2007)	Readiness for change (includes four subscales, only one of which, the appropriateness dimension, taps the attitude toward the change)	"I think that the organization will benefit from this change," "It doesn't make much sense for us to initiate this change"
	Iverson (1996)	Attitude toward the OER (items appear to tap the cognitive component)	The impact of budget cuts on tendering and closure of some services. Is the hospital a better place to work since the OER?
	Lam and Schaubroeck (2000)	Behavioral beliefs (about the change)	"The [post-change] Fill-Gap approach helps me serve my customers better," "The [post-change] Fill-Gap approach is something I like to do"

continued

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
Behavioral/ intentional	Lok et al. (2005)	Process improvement effectiveness (continuous improvement, reengineering, benchmarking)	"We have increased the number of employees involved in Continuous Improvement programs in the last three years," "Our Continuous Improvement programs contribute to bottom-line improvement"
	Oreg (2003)	Cognitive response to the change	"I don't really think the [change] was necessary," "The [change] will do us all good"
	Oreg (2006)	Cognitive reaction to change	"I believed the change would make my job harder" (reverse coded), "I believed that the change would benefit the organization"
	Parsons et al. (1991)	Decision satisfaction, training dissatisfaction, skill deficiency, equipment inconvenience; work impact	"I feel the equipment purchase decision process was done well by the task force"
	Walker et al. (2007)	Affective responses to change ^b	"The change serves an important purpose"
	Wanberg and Banas (2000)	Openness toward change (positive view of the changes)	"Overall, the proposed changes are for the better," "I think the changes will have a negative effect on the clients we serve"
	Ashford (1988)	Information seeking, inquiry for feedback, monitoring for feedback	Two items were used to assess how characteristic or uncharacteristic it was for each individual to seek information about the restructuring and its impact. A monitoring scale and an inquiry scale were used to measure how frequently respondents sought feedback on performance and potential for advancement. Sample items were not provided

continued

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
	Bartunek et al. (1999)	Behavioral change	Behavioral change was assessed via two means. First, by analyzing archival records and looking for cases where employees had written about innovations they had carried out (pp. 467-468). Second, by asking about the degree to which employees had been taking part in the postchange committees ("Have you served on a committee in your own home school that addresses faculty/staff development?")
	Bovey and Hede (2001)	Intentions to resist the change	A scale was developed for measuring the "behavioral intentions toward the organizational change" (p. 539). Sample items were not provided
	Coyle-Shapiro (1999)	Participation in the change (i.e., TQM)	Employees were asked to indicate the extent to which they were "participating in the activities of the intervention." This provided an index of cooperation with the change
	C. E. Cunningham et al. (2002)	Participation in reengineering	Employees were asked whether they participated in seven possible reengineering (i.e., postchange) activities
	G. B. Cunningham (2006)	Coping with change	"I think I cope with change better than most of those with whom I work"
	Daly and Geyer (1994)	Intention to remain because of the change	"I've become more interested in looking for another job since the relocation occurred"
	Fedor et al. (2006)	Commitment to change (defined as: "a behavioral intention to work toward success of the change")	"I am doing whatever I can to help this change be successful," "I am fully supportive of this change"

continued

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
	Herold et al. (2007)	Change commitment	"I am doing whatever I can to help this change be successful," "I have tried (or intend to try) to convince others to support this change"
	Herscovitch and Meyer (2002)	Behavioral support for the change	For measuring behavioral support for the change, "a 101-point behavioral continuum constructed to reflect a range of resistance and support behavior" (p. 478); behavioral support was also measured through measures of compliance (e.g., "I comply with my organization's directives regarding the change"), cooperation (e.g., "I try to keep myself informed about the change"), and championing (e.g., "I try to overcome co-workers' resistance toward the change")
	Hornung and Rousseau (2007)	Change commitment	"I am personally committed to bringing issues to the attention of the Councils," "I am personally committed to speaking up at the Councils when requested"
	Jones et al. (2005)	System usage	"In a typical week, how many times do you utilize the [postchange] system?"
	Judge et al. (1999)	Coping with change	"When dramatic changes happen in this company, I feel I handle them with ease," "When changes happen in this company, I react by trying to manage the change rather than complaining about it"
	Lam and Schaubroeck (2000)	Compliance with the change (both self-report and supervisor ratings)	"How often have you practiced this [post-change] quality guideline: give personal attention?"

continued

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
	Madsen et al. (2005)	Readiness for change	"My willingness or openness to work more because of the change is (Very Unlikely to Very Likely)," "My willingness or openness to support change is (Very Unlikely to Very Likely)"
	V. D. Miller et al. (1994)	Willingness to support the change	Right now, I am somewhat resistant to the proposed changes in work teams
	Oreg (2003)	Change of course schedule, adoption of new software system, behavior/functioning at work following a change	The Enrollment Procedures Questionnaire asked whether the students had pre-enrolled for courses, and if so, whether they had added or dropped any courses from their schedule during the changing period; a number of questions regarding the adoption and use of a new system; postchange behavior/functioning at work: "When possible, I try to work out of the office as much as I can these days"
	Oreg (2006)	Behavioral reaction to change	"I looked for ways to prevent the change from taking place," "I protested against the change"
	Paterson and Cary (2002)	Acceptance of change	Used scale from V. D. Miller et al. (1994)
	Peach et al. (2005)	Intentions to support change	Items involved questions about the extent to which employees intended to carry out specific supportive change behaviors
	Sagie and Koslowsky (1994)	Change acceptance	Sample items are not provided
	Stanley et al. (2005)	Intentions to resist the change, resistance/support for change	Intentions to resist: "I will resist any efforts to impose this change"; resistance/support for change was assessed using the behavioral continuum developed by Herscovitch and Meyer (2002, see above)

continued

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
Confounded reactions	van Dam (2005)	Attitudes toward job changes (changing job content, changing department, relocation, turnover)	"I am not willing to change my job content," "I object to performing my job in one of the other hospitals"
	Wanberg and Banas (2000)	Openness toward change (change acceptance)	"I am somewhat resistant to the changes," "I am quite reluctant to accommodate and incorporate these changes into my work"
	Amiot et al. (2006)	Coping strategies	Scale includes both cognitive and behavioral items. Cognitive: "Think about challenges I can find in the merger"; Behavioral: "Try to work faster if I can"
	C. E. Cunningham et al. (2002)	Readiness for organizational change	Scale included both cognitive and behavioral items. Cognitive: "program does not need changing"; Behavioral: "We are trying to make sure we keep changes/improvements my program/area has made"
	Eby et al. (2000)	Readiness for change	"employees here are resistant to change," "employees here act as agents of change"
	Fugate et al. (2002)	Negative appraisal	Scale includes items that could be considered both affective and cognitive items (e.g., "the change is threatening," "the change is harmful")
	Giacquinta (1975)	Innovation receptivity	Scale items were adjective pairs, some of which appear to be affective ("tense" vs. "relaxed"), and others cognitive ("good" vs. "bad")
	Jones et al. (2005)	User satisfaction with postchange system	"Are you satisfied with the accuracy of the system," "Does the system provide information that meets your needs?"

continued

Table 2. (continued)

Reaction component	Reference	Variable	Sample items
			(continued)
	Lau and Woodman (1995)	Specific attitude toward change	Scale includes items for all three attitude components: "I enjoy changes like this," "I think the change in bonfire tradition is excellent," "If I can, I will do my best to help this happen"
	V. D. Miller et al. (1994)	Openness toward change	Scale includes both cognitive and behavioral items: "Right now, I am somewhat resistant to the proposed change in work teams," "From my perspective, the proposed changes in the work teams will be for the better"
	Paterson and Cary (2002)	Acceptance of change	V. D. Miller et al.'s (1994) Openness toward change scale was used, which included cognitive and behavioral items
	Shapiro and Kirkman (1999)	Resistance to change	Some of the sample items provided were behavioral (e.g., "resist," "comply"), some appeared to be more affective in nature (e.g., "feel frustrated," or "feel eager")
	Susskind et al. (1998)	Openness to change	Some items were cognitive: "I think the implementation of the recent downsizing positively effects how I accomplish my work," others were behavioral/intentional: "I am quite reluctant to consider changing the way I now do my work"

Note. NFDC = Network Faculty Development Committee; OER = Operational Efficiency Review; TQM = Total Quality Management.

a. Despite its label, the items comprising this normative commitment scale involve affective content (what employees feel about the change), which is why we classified it here as an affective reaction.

b. Despite its label, the items comprising this affective commitment scale involve cognitive content (what employees think about the change), which is why we classified it here as a cognitive reaction.

Sometimes different terms were used for describing the same phenomenon (the “jangle” fallacy, Block, 1995), and at other times the same term was given to constructs with diverse definitions (the “jingle” fallacy, Block, 1995). As a means for organizing the concepts used, we define explicit reactions to change by employing Piderit’s (2000) tripartite definition of resistance to change, which includes affective, cognitive, and behavioral components of the reactions to the change (see Figure 1). By considering how recipients’ reactions to change were measured, we classified explicit reactions in each of the studies reviewed into affective, cognitive, or behavioral reactions. As noted above, regarding the jingle–jangle fallacies, the names of the variables used to capture the change recipients’ reactions often suggest several possible classifications into Piderit’s tripartite conceptualization. Thus, we turned to the actual scales used for tapping these variables in determining how to classify variables (see Table 2). Our main criterion for considering a variable to be an *explicit reaction* was that it pertains directly to how change recipients feel (affect), what they think (cognition), or what they intend to do (behavior) *in response to the change*.

Affective Reactions

A first set of studies we reviewed focused on change recipients’ affective reactions to change (e.g., Armstrong-Stassen, 1998; Ashford, 1988; Martin, Jones, & Callan, 2006). A number of these studies focused on *negative* reactions, such as the stress experienced by change recipients as a result of the change (Amiot, Terry, Jimmieson, & Callan, 2006; Ashford, 1988; Begley & Czajka, 1993; Bordia, Jones, Gallois, Callan, & Difonzo, 2006; Cartwright & Cooper, 1993; Martin, Jones, & Callan, 2005). Other forms of psychological distress have also been considered, including anxiety (e.g., K. I. Miller & Monge, 1985; V. D. Miller, Johnson, & Grau, 1994; Oreg, 2006; Paterson & Cary, 2002), fatigue (Pierce & Dunham, 1992), and negative emotions (Kiefer, 2005). Contrary to the negative frame of psychological distress, some studies used a *positive frame* and measured factors such as pleasantness (Bartunek et al., 2006; Mossholder, Settoon, Armenakis, & Harris, 2000; Mossholder, Settoon, Harris, & Armenakis, 1995), change-related satisfaction (Jones, Jimmieson, & Griffiths, 2005; Parsons, Liden, O’Connor, & Nagao, 1991), and affective aspects of organizational change commitment (Walker, Armenakis, & Bernerth, 2007).

Cognitive Reactions

A second set of studies considered the cognitive aspects of change recipients’ explicit reactions to change (see Figure 1). The scales used in these studies to tap recipients’ reactions to the change pertained to recipients’ assessment of the change’s value for themselves, for the organization, or both. For example, in one study, one of the aspects considered in change recipients’ reactions to the change was the degree to which change recipients had a positive view of the change (“Overall, the proposed changes are for the better,” Wanberg & Banas, 2000). Following a cognitive approach

to viewing organizational change, Bartunek et al. (2006) conceptualized change recipients' reactions to organizational change using terms such as *sensemaking*, that is, what do the change recipients believe the change means, and *effectiveness* (Bartunek, Greenberg, & Davidson, 1999; for a similar view of the effectiveness concept, see also Lok, Hung, Walsh, Wang, & Crawford, 2005). Although the terms that researchers have used may not explicitly indicate this, in our examination of the scales used to measure recipient reactions, we found several additional terms that appear to involve a cognitive conceptualization, such as *decision satisfaction* (Parsons et al., 1991), *change commitment* (Bernerth, Armenakis, Feild, & Walker, 2007), *support for the business strategy* (Gaertner, 1989), *openness to the change* (Axtell et al., 2002), and *perceived fairness* (Daly & Geyer, 1994), as well as several others (C. E. Cunningham et al., 2002; Iverson, 1996; Oreg, 2006).

Behavioral Reactions

A third set of studies focused on behavioral reactions (see Figure 1). In these studies, behavioral reactions to change were conceptualized either as explicit behaviors in response to the change or as reported intentions to behave. In a number of studies, researchers measured the degree to which change recipients became actively involved in activities that were encouraged as part of the change (Bartunek et al., 1999; Coyle-Shapiro, 1999; C. E. Cunningham et al., 2002; Jones et al., 2005; Lam & Schaubroeck, 2000; Oreg, 2003). Contrary to acceptance and involvement behaviors, others focused on withdrawal behaviors such as quitting intentions *due to the change* (Daly & Geyer, 1994; Martin et al., 2005).

Other studies explicitly analyzed change recipients' behavioral intentions to resist or support the change (Bovey & Hede, 2001; Madsen, Miller, & John, 2005; V. D. Miller et al., 1994; Oreg, 2006; Paterson & Cary, 2002; Peach, Jimmieson, & White, 2005; Sagie & Koslowsky, 1994; Stanley, Meyer, & Topolnysky, 2005). For example, in one study the "behavioral intention to resist" the change was measured with a scale including 20 items, such as "undermine," "oppose," or "support," in response to which change recipients were asked to rate their intentions (Bovey & Hede, 2001). Contrary to the studies cited with respect to the affective or cognitive component of change recipients' explicit reactions to change, several of the studies on behavioral reactions used a change commitment scale consisting of items such as "I am doing whatever I can to help this change be successful" or "I have tried (or intend to try) to convince others to support this change" (Herold, Fedor, & Caldwell, 2007, p. 946), all of which explicitly pertain to individuals' behaviors or intentions in response to the change (Fedor, Caldwell, & Herold, 2006; Herold et al., 2007; Herscovitch & Meyer, 2002; Hornung & Rousseau, 2007).

Finally, a number of studies looked at *coping* as a behavioral outcome representing change recipients' explicit reactions to change (Amiot et al., 2006; G. B. Cunningham, 2006; Judge et al., 1999). These studies either considered individuals' stress-related

coping strategies or individuals' reported functioning given the conditions of change (G. B. Cunningham, 2006; Judge et al., 1999).

Multiple Reactions³

Although not with the expressed purpose of tapping separate reaction components, several of the studies we reviewed assessed more than a single component. For example, Bartunek et al. (1999) assessed both the cognitive evaluation of the change (i.e., rating of change effectiveness) as well as the behavioral response to it (i.e., participation in postchange activities). In another study, both affective (i.e., change-related stress) and behavioral (i.e., absenteeism and intentions to quit *in direct response to the change*) responses were considered (Martin et al., 2005). In a few cases, all three explicit reaction components were included as distinct constructs (Ashford, 1988; Herscovitch & Meyer, 2002; Oreg, 2003, Study 7), and in only one case was this done explicitly with the purpose of separately measuring each of the three change reaction components (Oreg, 2006).

Confounded Reactions

In a number of cases, it was not possible to classify the explicit reaction to change variable to either of the reaction components. This is because in many of the studies the reactions to change were not assessed with a tridimensional definition of reactions in mind. Therefore, measures of reactions to change in these studies combined items that tap different components (C. E. Cunningham et al., 2002; Eby, Adams, Russell, & Gaby, 2000; Fugate, Kinicki, & Scheck, 2002; Giacquinta, 1975; Lau & Woodman, 1995; Shapiro & Kirkman, 1999; Susskind, Miller, & Johnson, 1998). In other studies, questions about the reaction to change were very general (e.g., "employees here are resistant to change," Eby et al., 2000) and thus do not tap any particular component (affect, cognition, behavior) of the reaction toward change. The relationships sought in these studies were therefore between the hypothesized antecedents and change recipients' overall orientation toward the specific change.

Antecedents of Change Recipient Reactions to Change⁴

It is important to note that the above summary of findings deals with change recipients' explicit reactions to change. The antecedents to explicit reactions are appropriately conceptualized as the *reasons* for the reactions rather than the reaction itself (see Figure 1). These involve variables that predict either change recipients' explicit reactions (as reviewed above), or the indirect, and often longer-term change consequences (these will be reviewed below). Depicted in Figure 1 are the five primary antecedent categories we identified in our review: (a) change recipient characteristics, (b) internal context, (c) change process, (d) perceived benefit/harm, and (e) change content (see Table 3).

Table 3. Antecedents Variables Considered in Articles Reviewed

Antecedent category	Variable	References
Recipient characteristics	Personality traits	
	(1) Locus of control; (2) personal control	(1) Fried et al. (1996); Holt et al. (2007); Judge et al. (1999); Lau and Woodman (1995); Naswall et al. (2005) (2) Ashford (1988); Fugate et al. (2002); Martin et al. (2005); Paulsen et al. (2005); Wanberg and Banas (2000)
	Self-efficacy	Amiot et al. (2006); Armenakis et al. (2007); Ashford (1998); C. E. Cunningham et al. (2002); Eby et al. (2000); Herold et al. (2007); Holt et al. (2007); Hornung and Rousseau (2007); Judge et al. (1999); Logan and Ganster (2007); Martin et al. (2005); Peach et al. (2005); Wanberg and Banas (2000)
	Positive and negative affectivity	Begley and Czajka (1993); Fugate et al. (2002); Holt et al. (2007); Iverson (1996); Judge et al. (1999); Naswall et al. (2005)
	Tolerance for ambiguity	Ashford (1988); Judge et al. (1999); Walker et al. (2007)
	Dispositional resistance to change	Oreg (2003); Oreg (2006)
	Self-esteem	Ashford (1988); Giacquinta (1975); Judge et al. (1999); Wanberg and Banas (2000)
	Attitude toward change	Holt et al. (2007); Lau and Woodman (1995)
	Openness to experience	Jones et al. (2005); Judge et al. (1999)
	Other predispositions:	(1) Stanley et al. (2005); (2) Wanberg and Banas (2000); (3) Rafferty and Griffin (2006); (4) Rafferty and Griffin (2006); (5) Lau and Woodman (1995); (6) Bordia et al. (2004); (7) Fried et al. (1996); (8) Holt et al. (2007); (9) Hornung and Rousseau (2007); (10) Judge et al. (1999); (11) C. E. Cunningham et al. (2002); (12) Ashford (1988); (13) Gopinath and Becker (2000); (14) Giacquinta (1975); (15) Giacquinta (1975); (16) Caldwell et al. (2004); (17) Coyle-Shapiro (1999); (18) Eby et al. (2000)
	(1) cynicism; (2) optimism; (3) neuroticism; (4) conscientiousness; (5) dogmatism; (6) uncertainty; (7) helplessness; (8) rebelliousness; (9) initiative; (10) risk aversion; (11) depression; (12) freedom from self-denigration; (13) dispositional impression management; (14) orientation toward	

(continued)

Table 3. (continued)

Antecedent category	Variable	References
	teacher–pupil relationship; (15) attitude toward education; (16) mastery of motivational orientation; (17) ability to contribute; (18) preference for working in teams	
Coping styles		Bovey and Hede (2001); Cartwright and Cooper (1993); Fugate et al. (2002)
Needs		
	Higher order needs	Bhagat and Chassie (1980); Coyle-Shapiro and Morrow (2003); V. D. Miller et al. (1994)
	Need for feedback	Johnson et al. (1996)
	Need for privacy	K. I. Miller and Monge (1985)
	Need for interdependence	K. I. Miller and Monge (1985)
	Need for affiliation	V. D. Miller et al. (1994)
Demographics		
	Age	Begley and Czajka (1993); Bordia et al. (2004); Caldwell et al. (2004); Coyle- Shapiro (1999); Coyle-Shapiro (2002); Giacquinta (1975); Hornung and Rousseau (2007); Iverson (1996); Jones et al. (2005); Kiefer (2005); Madsen et al. (2005); Martin et al. (2005); Parsons et al. (1991); Peach et al. (2005); Rafferty and Griffin (2006); Spreitzer and Mishra (2002); Weber and Weber (2001)
	Gender	Armstrong-Stassen (1998); Begley and Czajka (1993); Bordia et al. (2004); Coyle-Shapiro (1999); Giacquinta (1975); Hornung and Rousseau (2007); Iverson (1996); Jones et al. (2005); Kiefer (2005); Madsen et al. (2005); Martin et al. (2005); Morgeson et al. (2006); Parsons et al. (1991); Peach et al. (2005); Spreitzer and Mishra (2002)
	Tenure	Begley and Czajka (1993); Coyle-Shapiro (1999); Coyle-Shapiro (2002); Hornung and Rousseau (2007); Iverson (1996); Kiefer (2005); Madsen et al. (2005); Martin et al. (2005); Morgeson et al.

(continued)

Table 3. (continued)

Antecedent category	Variable	References
	Organizational status	(2006); Peach et al. (2005); Rafferty and Griffin (2006); Spreitzer and Mishra (2002); Weber and Weber (2001) Armstrong-Stassen (1998); Giacquinta (1975); Iverson (1996); Martin et al. (2005); Parsons et al. (1991); Zalesny and Farace (1987)
	Other demographics: (1) education; (2) marital status; (3) no. of children; (4) employment status; (5) computer experience; (6) survivor/victim; (7) income (8) elderly dependents; (9) job type; (10) care of family members; (11) job centrality; (12) career opportunity; (13) personal conditions; (14) empowerment; (15) religion; (16) exposure to technology; (17) emotional exhaustion	(1) Begley and Czajka (1993); Hornung and Rousseau (2007); Madsen et al. (2005); Parsons et al. (1991); Spreitzer and Mishra (2002); Weber and Weber (2001); (2) Begley and Czajka (1993); C. E. Cunningham et al. (2002); Madsen et al. (2005); (3) C. E. Cunningham et al. (2002); Giacquinta (1975); Madsen et al. (2005); Spreitzer and Mishra (2002); (4) Martin et al. (2005); (5) Parsons et al. (1991); (6) Fried et al. (1996); Paulsen et al. (2005); (7) C. E. Cunningham et al. (2002); Spreitzer and Mishra (2002); (8) Spreitzer and Mishra (2002); (9) Coyle-Shapiro (1999); (10) C. E. Cunningham et al. (2002); Iverson (1996); (11) Gaertner (1989); (12) Gaertner (1989); (13) Kiefer (2005); (14) Spreitzer and Mishra (2002); (15) Giacquinta (1975); (16) Axtell et al. (2002); (17) C. E. Cunningham et al. (2002)
Internal context	Supportive environment/trust (1) Management support (2) social support	(1) Coyle-Shapiro and Morrow (2003); Iverson (1996); Martin et al. (2005); Peach et al. (2005); Rafferty and Griffin (2006); (2) C. E. Cunningham et al. (2002); Fugate et al. (2002); Madsen et al. (2005); Wanberg and Banas (2000)
	Trust in management	Eby et al. (2000); Oreg (2006); Spreitzer and Mishra (2002); Stanley et al. (2005)
	Trust in colleagues	Coyle-Shapiro and Morrow (2003); Eby et al. (2000)
	Organizational commitment	Begley and Czajka (1993); Covin et al. (1996); Coyle-Shapiro and Morrow (2003); Coyle-Shapiro (1999); Coyle-

(continued)

Table 3. (continued)

Antecedent category	Variable	References
		Shapiro (2002); Herscovitch and Meyer (2002); Lau and Woodman (1995); Madsen et al. (2005); Lee and Peccei (2007); van Dam (2005)
	Organizational culture and climate	Cartwright and Cooper (1993); C. E. Cunningham et al. (2002); Iverson (1996); Jones et al. (2005); Martin et al. (2005)
	Job characteristics	Bhagat and Chassie (1980); C. E. Cunningham et al. (2002); Eby et al. (2000); Hornung and Rousseau (2007); Iverson (1996); Weber and Weber (2001)
	Miscellaneous factors	
	(1) Job control/power;	(1) Logan and Ganster (2007); Peach et al. (2005); (2) van Dam (2005); (3) Covin et al. (1996); Iverson (1996); Lam and Schaubroeck (2000); van Dam (2005);
	(2) job value, alternatives, investment;	(4) Ashford (1988); Iverson (1996); Lee and Peccei (2007); Shapiro and Kirkman (1999); (5) Iverson (1996); Kiefer (2005);
	(3) job satisfaction;	(6) V. D. Miller et al. (1994); (7) Covin et al. (1996); Lam and Schaubroeck (2000);
	(4) uncertainty;	(8) Gaertner (1989); Holt et al. (2007); C. E. Cunningham et al. (2002); Jones et al. (2005); Stanley et al. (2005);
	(5) role ambiguity, conflict, overload;	(9) Fedor et al. (2006); Rafferty and Griffin (2006); (10) Covin et al. (1996); Holt et al. (2007); (11) C. E. Cunningham et al. (2002); Lam and Schaubroeck (2000); (12) Lam and Schaubroeck (2000); Martin et al. (2005); (13) Lee and Peccei (2007); (14) Covin et al. (1996);
	(6) turnover intentions;	(15) Cartwright and Cooper (1993); (16) Lok et al. (2005); (17) Bernerth et al. (2007); Gaertner (1989); Walker et al. (2007); Stanley et al. (2005); (18) Coyle-Shapiro (1999); Iverson (1996); Kiefer (2005); (19) Eby et al. (2000); Lok et al. (2005); Morgeson et al. (2006);
	(7) management/ staff competence;	(20) Lee and Peccei (2007); (21) V. D. Miller et al. (1994); (22) V. D. Miller et al. (1994); (23) Armenakis et al. (2007)
	(8) change turbulence, frequency;	
	(9) communication;	
	(10) product, service quality;	
	(11) customer satisfaction;	
	(12) perceived organizational support;	
	(13) teamwork;	
	(14) merger and acquisition (i.e., acquirer vs. acquired firm);	
	(15) organizational type;	
	(16) organizational structure/strategy;	
	(17) organizational cynicism;	
	(18) organizational justice;	
	(19) organizational systems;	
	(20) organization based self-esteem;	
	(21) organizational identification;	
	(22) organizational information;	
	(23) discrepancy	

(continued)

Table 3. (continued)

Antecedent category	Variable	References
Change process	Participation	Amiot et al. (2006); Axtell et al. (2002); Bartunek et al. (1999); Bartunek et al. (2006); Coch and French (1948); Coyle-Shapiro (2002); Daly and Geyer (1994); Eby et al. (2000); Hatcher and Ross (1991); Holt et al. (2007); Korsgaard et al. (2002); Lau and Woodman (1995); Lok et al. (2005); Parsons et al. (1991); Paterson and Cary (2002); Sagie and Koslowsky (1994); Steel and Lloyd (1988); Wanberg and Banas (2000)
	Communication	Amiot et al. (2006); Axtell et al. (2002); Bordia et al. (2004); Gaertner (1989); Gopinath and Becker (2000); Johnson et al. (1996); Lau and Woodman (1995); K. I. Miller and Monge (1985); V. D. Miller et al. (1994); Oreg (2006); Paterson and Cary (2002); Peach et al. (2005); Schweiger and DeNisi (1991); Wanberg and Banas (2000)
	Interactional and procedural justice	Armenakis et al. (2007); Armstrong-Stassen (1998); Bernerth et al. (2007); Caldwell et al. (2004); Coyle-Shapiro (2002); Daly and Geyer (1994); Daly (1995); Fedor et al. (2006); Gopinath and Becker (2000); Herold et al. (2007); Korsgaard et al. (2002); Paterson and Cary (2002); Shapiro and Kirkman (1999); Spreitzer and Mishra (2002)
	Principal support	Armenakis et al. (2007); Caldwell et al. (2004); Coyle-Shapiro (2002); Eby et al. (2000); Gaertner (1989); Lam and Schaubroeck (2000); Logan and Ganster (2007); Lok et al. (2005); Paterson and Cary (2002); Peach et al. (2005); Wanberg and Banas (2000)
	Management change competence	Amiot et al. (2006); Rafferty and Griffin (2006)
	Other change process	
	(1) Attention to change recipients;	(1) Gaertner (1989); (2) Armenakis et al. (2007); Gaertner (1989); (3) Stanley et al. (2005); (4) Ashford (1988);
	(2) appropriateness of change; (3) change specific	(5) Bordia et al. (2006)

(continued)

Table 3. (continued)

Antecedent category	Variable	References
Perceived benefit/harm	cynicism; (4) uncertainty about change; (5) change-related rumors	
	Anticipation of negative or positive outcomes	Armenakis et al. (2007); Ashford (1988); Coyle-Shapiro (2002); Gaertner (1989); Holt et al. (2007); Hornung and Rousseau (2007); K. I. Miller and Monge (1985); Peach et al. (2005); Wanberg and Banas (2000)
	Job insecurity about change	Armstrong-Stassen (1998); Naswall et al. (2005); Oreg (2006); Paulsen et al. (2005)
	Distributive justice	Armenakis et al. (2007); Bernerth et al. (2007); Fried et al. (1996); Paterson and Cary (2002); Shapiro and Kirkman (1999); Spreitzer and Mishra (2002)
	Other perceived benefit/harm (1) risk; (2) job factors; (3) organizational impact; (4) career impact; (5) financial rewards; (6) transformational change	(1) C. E. Cunningham et al. (2002); Giacuinta (1975); (2) Axtell et al. (2002); Bartunek et al. (2006); Caldwell et al. (2004); Fedor et al. (2006); Fried et al. (1996); Hall et al. (1978); Herold et al. (2007); Morse and Reimer (1956); Oreg (2006); Susskind et al. (1998); van Dam (2005); (3) Daly (1995); Bartunek et al. (2006); Coyle-Shapiro (2002); Coyle-Shapiro (1999); Gaertner (1989); Herold et al. (2007); Lam and Schaubroeck (2000); Susskind et al. (1998); (4) Bartunek et al. (2006); Fried et al. (1996); Johnson et al. (1996); Paterson and Cary (2002); (5) Johnson et al. (1996); (6) Rafferty and Griffin (2006)
Change content	Compensation system	Hatcher and Ross (1991)
	Downsizing	Johnson et al. (1996)
	Office design	Zalesny and Farace (1987)
	Work schedule	Pierce and Dunham (1992)
	Job redesign	Morgeson et al. (2006)
	Organizational practices	Latona and LaVan (1993)
	Merger	Kiefer (2005)
	Extent of change	Caldwell et al. (2004); Herscovitch and Meyer (2002); Lau and Woodman (1995)

We distinguish here between *prechange* antecedents, which constitute conditions that are independent of the organizational change and which existed prior to the introduction of the change (i.e., recipient characteristics and internal context), and *change* antecedents, which involve aspects of the change itself that influence change recipients' explicit reactions (i.e., change process, perceived benefit/harm, and change content).

Change Recipient Characteristics

A large portion of studies on change recipient explicit reactions considered characteristics of the recipient that predict and help explain their reactions. These studies highlighted the fact that individuals are predisposed to respond in certain ways when encountering change, across different change situations. As depicted in Figure 1, the change recipient characteristics include differences in individuals' personality traits, coping styles, motivational needs, and demographics (e.g., Ashford, 1988; C. E. Cunningham et al., 2002; Judge et al., 1999).

Personality traits. One trait that has been linked with reactions to change is locus of control (Rotter, 1966). In a number of studies, an internal locus of control—reflecting individuals' beliefs that they are responsible for their own fate—was positively correlated with positive reactions to organizational change (e.g., Fried, Tiegs, Naughton, & Ashforth, 1996; Holt, Armenakis, Feild, & Harris, 2007; Lau & Woodman, 1995; Naswall, Sverke, & Hellgren, 2005). For example, managers with an internal locus of control were less likely to report experiences of losing control over their jobs during an organizational acquisition (Fried et al., 1996). Similarly, the tendency to make internal attributions was negatively related to levels of mental health complaints, job dissatisfaction, and job-induced tension, and positively related to emotional adjustment under conditions of job insecurity (Naswall et al., 2005).

Several researchers tested the effects of change recipients' change-related sense of control on their reactions to organizational change (e.g., Martin et al., 2005; Wanberg & Banas, 2000). Results confirmed that an increased sense of control over the change yields improved reactions to the change, including greater acceptance of change (Wanberg & Banas, 2000), higher psychological well-being and job satisfaction (Martin et al., 2005), and lower psychological strain (Ashford, 1988; Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004; Paulsen et al., 2005).

In other works, researchers argued that change recipients' self-efficacy is related to their reactions to organizational changes. Whereas some of these researchers considered a generalized self-efficacy concept (Judge et al., 1999), which is a stable aspect of one's personality, others focused on a more specific and malleable self-efficacy that is particularly change related (e.g., change-related self-efficacy, role-breadth self-efficacy; Ashford, 1988; Herold et al., 2007; Hornung & Rousseau, 2007; Wanberg & Banas, 2000). Overall, higher levels of self-efficacy were associated with increased change acceptance (Wanberg & Banas, 2000), higher levels of readiness to change, increased engagement in the change (C. E. Cunningham et al., 2002), increased commitment to the change (Herold et al., 2007), and a greater

likelihood of using problem-focused coping strategies, with improved coping and adjustment to the change (Amiot et al., 2006; Ashford, 1988; Judge et al., 1999; Martin et al., 2005).

Related to both self-efficacy and perceptions of control, another set of change recipient characteristics involved individuals' dispositional affective states. Namely, positive and negative affectivity were linked with change recipients' reactions to change. Positive affectivity was related to coping with change (Judge et al., 1999), acceptance of organizational change (Iverson, 1996), and readiness for organizational change (Holt et al., 2007). In fact, in one study positive affectivity was found to be one of the strongest and most consistent dispositional variables related to coping with change (Judge et al., 1999). Correspondingly, change recipients prone to negative or pessimistic thinking were more likely to experience negative outcomes in the context of organizational change. Specifically, they were more likely to suffer from job-induced tension, mental health-related symptoms, and job dissatisfaction (Begley & Czajka, 1993; Naswall et al., 2005). More directly related to change recipients' change reactions, negative emotions were strongly associated with negative appraisals of a merger (Fugate et al., 2002). In one study, however, depression and emotional exhaustion were unexpectedly linked with higher readiness and willingness to participate in an organizational reengineering program (C. E. Cunningham et al., 2002).

Other traits linked with change recipient reactions to change include tolerance for ambiguity (Ashford, 1988; Walker et al., 2007), dispositional resistance to change (Oreg, 2003, 2006), dispositional cynicism (Stanley et al., 2005), openness to experience (Judge et al., 1999), and neuroticism and conscientiousness (Rafferty & Griffin, 2006), all of which have been shown to correlate with change recipients' explicit reactions to, or consequences of, organizational change.

Coping styles. A number of studies examined individuals' coping styles in the context of organizational change (e.g., Cartwright & Cooper, 1993; Fugate et al., 2002). In one study, change recipients who adopted a problem-focused coping style reported greater readiness for the organizational change, increased participation in the change process, and an overall greater contribution to it (C. E. Cunningham et al., 2002). In another study, use of maladaptive defense mechanisms, such as denial, dissociation, and isolation yielded greater behavioral resistance to an organizational change in comparison with the use of adaptive mechanisms, such as humor and anticipation (Bovey & Hede, 2001). In yet another study, change recipients in organizations undergoing a merger tended to be more engaged in problem solving rather than emotion-focused coping throughout various stages of the merger (Amiot et al., 2006).

Needs. Another group of studies focused on individuals' motivational needs as antecedents of their reactions to change. Individuals driven by higher order needs, such as achievement and growth, were more willing to engage in continuous organizational improvement in the context of implementing a total quality management program (Coyle-Shapiro & Morrow, 2003), to participate in organizational restructuring (V. D. Miller et al., 1994) and to experience positive affective reactions to their job

during changes to their work schedules (Bhagat & Chassie, 1980). Similarly, change recipients high in personal initiative—a disposition consisting of an active and autonomous orientation—tended to evaluate the outcomes of an organizational change more positively (Hornung & Rousseau, 2007). In another study, a mastery motivational trait, reflecting a learning orientation, moderated the relationship between change process and the degree to which individuals' person–job fit was perceived as being altered in the context of a variety of organizational changes (Caldwell et al., 2004).

Demographic variables. Beyond differences in individuals' personal dispositions, several demographic variables were also linked with change recipients' reactions to change. Specifically, tenure, level of education, and union membership were linked with acceptance of organizational change (Iverson, 1996). Whether or not one is a manager has been shown to influence perceptions of the change process, with managers perceiving the process to be fairer; however, managerial status was not related to the ultimate reaction to the change (Armstrong-Stassen, 1998). Similarly, one's position in the organization (conceptualized as status) was associated with receptivity to innovation (Giacquinta, 1975). In another study, change recipients' ages moderated the relationship between perceived change fairness and perceived person–organization fit, with older change recipients exhibiting a weaker relationship between the two (Caldwell et al., 2004). Other demographic variables were considered as potential antecedents of change reactions, yet did not yield significant findings. These included gender (Armstrong-Stassen, 1998), domestic demands (C. E. Cunningham et al., 2002), and job level (Parsons et al., 1991). Although not establishing hypotheses for such variables, researchers in several other studies controlled for demographic variables in their analyses (e.g., Begley & Czajka, 1993; Bordia et al., 2004; Coyle-Shapiro, 1999, 2002; Kiefer, 2005; Madsen et al., 2005; Martin et al., 2005; Morgeson, Johnson, Campion, Medsker, & Mumford, 2006; Naswall et al., 2005; Rafferty & Griffin, 2006; Spreitzer & Mishra, 2002; Zalesny & Farace, 1987).

Overall, studies that considered change recipient characteristics as antecedents of reactions to organizational change outnumbered the other four antecedent categories. Apparently, researchers have been most interested in exploring dispositional sources of change recipients' reactions to change. A particular focus has been given to personality characteristics such as self-efficacy and locus of control. There have also been a number of studies that examined the role of neuroticism. Interestingly, these three factors (self-efficacy, locus of control, and neuroticism) are three of the four dispositions that comprise the construct of *core-self evaluations*, which pertains to individuals' deeply rooted beliefs about the self. From the research we reviewed, it appears that these core beliefs have an important role in shaping change recipients' reactions to organizational changes. Far less attention has been given to change recipients' coping styles and motives, which address the questions of how change recipients deal with change, and why they deal with it as they do.

Internal Context

Beyond individuals' personal preexisting attributes, many of the studies we reviewed included variables that involve aspects of the prechange organizational environment (viz., internal context, see Figure 1).

Supportive environment and trustworthy management. Change recipients who reported holding high levels of trust in management, who perceive management as supportive, and who feel respected, were more receptive to suggested changes and reported a greater willingness to cooperate with the change (Coyle-Shapiro & Morrow, 2003; C. E. Cunningham et al., 2002; Eby et al., 2000; Kiefer, 2005; Wanberg & Banas, 2000). Contrarily, organizational members who perceived their work environment as generally unsupportive were more likely to possess cynical reactions, suffer from negative emotions, and ultimately reject the change (Kiefer, 2005; Martin et al., 2005; Stanley et al., 2005).

A number of works addressed the importance of a trusting relationship not only between management and change recipients but also among colleagues (e.g., work team members and opinion leaders (Coyle-Shapiro & Morrow, 2003; Eby et al., 2000; Iverson, 1996). Some studies showed that social support in general (and not specifically during the change process) and the extent to which significant others (e.g., opinion leaders) have been supportive, increased the level of comfort that change recipients experienced with respect to the change and their intentions to support it, and decreased emotional exhaustion due to the change (C. E. Cunningham et al., 2002; Eby et al., 2000; Fugate et al., 2002; Madsen et al., 2005; Peach et al., 2005).

Organizational commitment. Change recipients who are committed to their organization, accept its values, are willing to exert effort on its behalf, and wish to remain in it (Mowday, Steers, & Porter, 1979). Several studies showed that committed change recipients tended to report higher levels of readiness to change and change acceptance (Iverson, 1996; Madsen et al., 2005; Shapiro & Kirkman, 1999). Furthermore, organizational commitment served as a buffer, dampening the detrimental influence of change-related stress on change recipients' job satisfaction, intentions to remain in the organization, and work-related irritation (Begley & Czajka, 1993).

However, in a study on job changes, higher commitment (as well as higher job satisfaction) prior to the change actually yielded reactions that were *less* positive toward the change compared with the reactions of those who were less committed to the organization (van Dam, 2005). The rationale provided for this finding was that those who were committed to, and satisfied with, the old way of doing things would be less willing to change things in comparison with those who disapproved of the current mode. This suggests an important distinction between commitment to the job and the organization's current mode of operation and commitment to those who initiate and apply the change.

Organizational culture and climate. Another factor that was found relevant for change recipients' reactions to change was the general atmosphere in which change was applied. Perceiving the working environment in positive terms was found to predict

change recipients' readiness for change, openness to change, and adjustment to it (V. D. Miller et al., 1994). Similarly, a positive communication climate, or the existence of an "information environment," also predicted change recipients' readiness to change (Armenakis, Bernerth, Pitts, & Walker, 2007; Holt et al., 2007). In other studies, cultural fit predicted reactions to the change. Specifically, the degree to which the organization's existing cultural values were aligned with the change vision and objectives predicted change recipients' readiness to change (Jones et al., 2005). In another study, the degree of perceived fit between the cultures of two merging organizations was negatively correlated with change-related stress (Cartwright & Cooper, 1993). Similarly, the degree of alignment between the organization's structure, strategy, and technology was linked with the effectiveness of the change implementation and organizational performance (Lok et al., 2005).

Job characteristics. The degree to which one's job allowed for the use of a variety of skills was also related to favorable perceptions of the change recipients' readiness for change (Eby et al., 2000). Similarly, those change recipients who were involved in psychologically demanding jobs that allowed high decision latitude, reported higher readiness for change, participated more in change, and felt they made a greater contribution to the change (C. E. Cunningham et al., 2002). Increases in skill variety, task identity, task significance, autonomy, and feedback of one's job were linked with higher general satisfaction, growth satisfaction, internal work motivation, increased meaningfulness and responsibility as a result of the change (Bhagat & Chassie, 1980), and increased readiness for change (Weber & Weber, 2001). Similarly, autonomy was linked to proactivity (Hornung & Rousseau, 2007) and organizational commitment (Iverson, 1996), both of which were related to acceptance of organizational change.

Miscellaneous factors. In addition to the factors above, a variety of other organizational characteristics were linked with positive reactions to the change. Such factors include the degree of perceived participation at work and the existence of flexible policies (Eby et al., 2000); perceived organizational integrity (Bernerth et al., 2007; Walker et al., 2007); perceived organizational constraints, such as an unmanageable workload and lacking necessary information (Kiefer, 2005); perceived organizational capabilities and competencies (Gaertner, 1989; Holt et al., 2007; Stanley et al., 2005); and in the context of mergers, being a member of the acquiring, versus acquired, organization (Covin, Sightler, Kolenko, & Tudor, 1996).

Overall, the factor that yielded perhaps the most consistent and strongest relationship (i.e., strongest effect size) with change reactions is the extent to which change recipients trust management (e.g., Eby et al., 2000; Oreg, 2006; Stanley et al., 2005). Another interesting finding from our analysis has to do with the relationship between commitment and reactions to change. Interestingly, it is not clear what one should predict when considering the relationship between the two. This is because commitment can predispose individuals to both support change initiatives and resist them. On one hand, a highly committed employee may want to preserve things as they are and will therefore resist a change to the organization. On the other hand, a highly committed employee may support change because he or she will feel commitment toward the

change agent (e.g., management). In all but one of the studies in our review, this latter conceptualization was presumed and supported. Nevertheless, van Dam's (2005) rationale and findings of a negative relationship between commitment and support for change suggests that under certain conditions the former dynamic may also be relevant. These conditions may depend on the particular organizational aspects employees are committed to as well as on the change practices used in designing and implementing the change. Future studies could directly explore the variables that moderate the relationship between commitment and reactions to change.

Six of the studies reviewed in this section addressed factors related to organizational culture and climate, such as the fit between existing and change values or a positive communication climate, both of which were found to be associated with positive reactions to change (e.g., Cartwright & Cooper, 1993; Jones et al., 2005; V. D. Miller et al., 1994). However, despite the centrality and prevalence of research on organizational culture and climate overall, evidence that links culture and climate with recipients' reactions to organizational change remains limited.

Change Process

Perhaps the most frequently studied category of antecedents to reactions to change involved the manner in which change was implemented (see Figure 1). Forty-two of the studies in our review included variables that pertained to the *process* through which change was managed and sought to use these variables for explaining change recipients' reactions to the change. We classified these variables into five process categories: participation, communication and information, interactional and procedural justice, principal support during the change, and management change competence.

Participation. Among the most prevalent variables considered in this category, with 14 studies in our review to have assessed it, was participation, starting with Coch and French's (1948) classic study at the Harwood Manufacturing Corporation. Studies on participation focused on the effect of the degree to which change recipients were involved in planning and implementing the change. Such participation creates a sense of agency, contribution, and control over the change (Armenakis & Bedeian, 1999). As a rule, change recipients who experienced high levels of participation tended to report higher readiness and acceptance of change, appraised change as less stressful and exhibited overall support for the change (Amiot et al., 2006; Coch & French, 1948; Coyle-Shapiro, 2002; Holt et al., 2007; Sagie & Koslowsky, 1994; Steel & Lloyd, 1988). Participation during the change process was also linked with the experience of positive emotions, a greater understanding of the meaning of change, realizing possible gains associated with the change and greater involvement in implementing behavioral changes (Bartunek et al., 1999; Bartunek et al., 2006). In addition, participation contributed to change recipients' sense of competence, improved interpersonal trust, and increased attachment to the organization (Steel & Lloyd, 1988). Similarly, involvement in the early stages of the change decreased change recipients' change-related stress and withdrawal behaviors (Parsons et al., 1991).

Communication and information. Closely related to participation, another variable studied had to do with the amount and quality of change information with which change recipients were provided. Additional information and realistic, supportive and effective communication during change, was associated with several positive reactions, such as greater change acceptance and support for the change (Axtell et al., 2002; Gaertner, 1989; Wanberg & Banas, 2000). In addition, communication about the change was linked with a number of other responses (such as lower levels of anxiety and uncertainty, increased trust in management) and consequences (such as decreased turnover intentions; Ashford, 1988; Bordia et al., 2004; Gopinath & Becker, 2000; Johnson, Bernhagen, Miller, & Allen, 1996; K. I. Miller & Monge, 1985; V. D. Miller et al., 1994; Paterson & Cary, 2002). Correspondingly, lack of communication during the change can lead to uncertainty, which may be a key source of change recipients' difficulties during change implementation (Schweiger & DeNisi, 1991).

In one study, however, contrary to what was hypothesized, additional information about the change corresponded with *negative* evaluations of the change (Oreg, 2006). The rationale provided for this finding was that it is not merely the amount of information that determines reactions to change but also the *content* of this information. Alongside the value for change recipients in receiving additional information, sometimes learning more about the change can give change recipients all the more reason to resist it. Thus, the overall picture concerning the role of information may be more complex than has been initially proposed.

Interactional and procedural justice. Beyond the substance and details about the change that are conveyed through change communications, information and participation alleviate resistance to change through their impact on change recipients' perceptions of justice (Oreg, 2006; see also discussion of this issue in Oreg & van Dam, 2009). In particular, several studies linked interactional and procedural justice with reactions to organizational change (Armenakis et al., 2007; Bernerth et al., 2007; Paterson & Cary, 2002). In addition to interactional justice, procedural justice was associated with higher acceptance, readiness, and commitment to organizational change (Korsgaard, Sapienza, & Schweiger, 2002).

Principal support during change. The principals who affect an organizational change are change agents and opinion leaders. Some works highlighted the effect of principal support during the change on change recipients' reactions to change (Amiot et al., 2006; Daly & Geyer, 1994; Eby et al., 2000). Such support is distinct from a general supportive atmosphere, as discussed in the previous section, and refers to specific support that is provided as part of the change implementation. In one study, principal support during change was associated with higher readiness to change and lower perceived negative effects of the change (Logan & Ganster, 2007). In addition, principal support was shown to influence affective and behavioral resistance to an organizational restructuring (Oreg, 2006). Contrary to other studies on support, in one study, of multiple organizations, management support was assessed by aggregating change recipients' support ratings to the organizational level. This aggregate assessment of

management support was found to be critical in influencing change recipients' adaptation in changing role demands (Caldwell et al., 2004).

Management change competence. Several studies addressed the degree to which management was perceived as competent and effective in managing the change. Two studies found perceived management commitment to the change and its perceived effectiveness in managing it to yield positive outcomes, such as better implementation of the change (Lok et al., 2005) and lower levels of change recipient stress (Amiot et al., 2006). In another study, change recipients who perceived that the change had been implemented after deliberation and planning exhibited less psychological uncertainty and more favorable reactions toward the organization (Rafferty & Griffin, 2006). Finally, the degree to which management was perceived as "change competent" was negatively associated with change recipients' skepticism toward the change (Stanley et al., 2005).

Overall, the studies linking change process to change reactions are consistent in demonstrating that a participative and supportive process, with open lines of communication, and management that is perceived as competent and fair in its implementation of the change, is effective in producing positive reactions toward the change. Most of the studies in this category focused on the variables of participation and information, whereas a small number of studies explored the role of management's competence in implementing the change.

Perceived Benefit/Harm From the Change

A key determinant of whether change recipients will accept or resist change is the extent to which the change is perceived as personally beneficial or harmful (see Figure 1). Anticipated benefit and harm constitute straightforward and sensible reasons change recipients may have for supporting or resisting a particular change (Dent & Goldberg, 1999; Nord & Jermier, 1994). Indeed, in 34 of the studies we reviewed, at least one variable pertained to the personal impact change recipients perceived the change to have. As would be expected, these studies demonstrate that when change is perceived as personally beneficial, change recipients exhibited a more positive reaction to it. We elaborate below on the various types of variables that have been considered within this category.

Anticipation of negative or positive outcomes. On several occasions, researchers considered change recipients' reactions to changes that entail negative outcomes, such as downsizing, a greater workload, increased job complexity, or loss of job control. In these cases, change recipients tended to experience greater stress and psychological withdrawal (Ashford, 1988; Axtell et al., 2002; Fried et al., 1996), were less open to accept changes (C. E. Cunningham et al., 2002), and exhibited lower levels of job satisfaction and involvement (Hall, Goodale, Rabinowitz, & Morgan, 1978) and lower levels of perceived person–job fit (Caldwell et al., 2004; Susskind et al., 1998), following the change.

In contrast, other studies explored the effects of anticipated *positive* outcomes, including more interesting and challenging work, increased personal development or improved employability, and increased pay (Bartunek et al., 2006). A number of works showed that anticipation of a positive outcome following the change was associated with greater readiness and acceptance of the change and higher commitment and willingness to participate in it (van Dam, 2005). In other works, perceived benefits from change were related to change recipients' postchange job attitudes, such that there was a positive relationship with organizational commitment and job satisfaction and a negative one with turnover intentions (Fedor et al., 2006; Herold et al., 2007; Rafferty & Griffin, 2006; Wanberg & Banas, 2000).

Job insecurity. In a number of studies, researchers were interested in the impact of specific change-related outcomes. In five of the studies we reviewed, particular attention was paid to perceived threats to job security. Overall, perceived job insecurity was associated with greater job dissatisfaction, mental health complaints, job-induced tension, and emotional exhaustion (Naswall et al., 2005; Paulsen et al., 2005). Job insecurity was also associated with greater affective resistance to the change (Oreg, 2006) and less support for it (Gaertner, 1989). Greater uncertainty with one's job future and potential for career development following a change were also positively correlated with change recipients' turnover intentions (Fried et al., 1996; Johnson et al., 1996).

Distributive justice. Distributive justice, reflecting the perceived fairness of the outcomes resulting from the change, has also been shown to influence change recipients' reactions to change (Armenakis et al., 2007; Bernerth et al., 2007; Paterson & Cary, 2002). Specifically, anticipation of distributive injustice during change was significantly correlated with change recipients' cynicism, anxiety, and resistance to change, as well as with organizational commitment, commitment to change, and turnover intentions (Armenakis et al., 2007; Bernerth et al., 2007; Shapiro & Kirkman, 1999; Spreitzer & Mishra, 2002).

In all these studies, as expected, variables reflecting anticipated positive outcomes were associated with positive (or less negative) reactions to the change and those reflecting anticipated negative outcomes were associated with negative (or less positive) reactions. Beyond reiterating the relevance of the personal impact of the change, several of the studies in this category contribute to our understanding of reactions to change by exploring a variety of paths through which perceived benefit and harm ultimately influence change recipients' reactions. These include both examinations of mediated paths and moderated relationships. Specifically, in five of the studies, the perceived benefit/harm mediated relationships between other antecedents and the ultimate reaction to change (Bartunek et al., 2006; Fried et al., 1996; Giacquinta, 1975; Hornung & Rousseau, 2007; Johnson et al., 1996). In other words, perceived benefits/harm were found to be a more proximal determinant of change recipients' reactions than other antecedents, such as recipient characteristics (e.g., Hornung & Rousseau, 2007) or the change process (e.g., Johnson et al., 1996). In yet other studies, perceived benefit/harm (e.g., change favorability) moderated, rather than mediated, the relationships between other antecedents (e.g., change process) and the reaction to change

(Daly, 1995; Fedor et al., 2006; Gaertner, 1989), such that when change was favorable, weaker relationships tended to emerge between the other antecedents and the reaction to change. In other words, when change is perceived as beneficial, reactions to it tend to become favorable regardless of the other change antecedents. We draw this conclusion tentatively, however, considering that only few studies explored this possibility.

Change Content

A small number of studies considered the mere nature or type of change as a possible determinant of change recipient reactions to it. These studies explored the possibility that beyond the *manner* in which change was managed or the *implications* that change was expected to have, the content of the change may also affect change recipients' reactions. To examine the impact of change content, studies compared change recipient reactions with different pre- and postchange situations, or with different types of organizational changes. Some of the changes, such as a shift from piece-rate compensation to gain-sharing bonuses (Hatcher & Ross, 1991), or the implementation of a *change recipient involvement program* (Latona & La Van, 1993), yielded positive change consequences, such as more favorable job attitudes and improved performance. Others assessed changes that yielded negative outcomes. In one study, after shifting from the use of traditional work groups to semiautonomous teams, change recipients reported positive change consequences, such as exerting greater effort at work, making better use of their skills, and more effectively solving problems (Morgeson et al., 2006).

Such comparisons of pre- and postchange reactions were also conducted with respect to changes in the objective working environment and conditions. In a government agency, changing from traditional offices to an open-plan office design yielded negative responses, such as decreased trust in management and job satisfaction, in particular among clerical and managerial change recipients (Zalesny & Farace, 1987). A change from a rotating 8-hour shift schedule to a 12-hour compressed shift schedule yielded positive job attitudes, decreased stress, and improved performance, among police personnel (Pierce & Dunham, 1992).

Some studies operationalized content as the *degree* or perceived *meaningfulness* of change. For example, perceptions of change as *ongoing* were associated with negative emotions, such as anger, mistrust, and frustration (Kiefer, 2005). Furthermore, in several organizations undergoing a variety of different types of change, the perceived *extent* of change moderated the relationship between perceived change process and reactions to change, such that high extent of change yielded weaker relationships between change process and reactions to change (Caldwell et al., 2004). Moreover, change schema, defined and measured, among other aspects, by the degree to which the change is perceived as meaningful, impactful, and salient, mediated the relationship between change recipients' personal orientations and their reactions toward the organizational change (Lau & Woodman, 1995).

Contrary to each of our other antecedent categories, only very few (nine) of the studies in our review explored the role of change content. This is likely influenced by the greater logistic difficulties that studying the impact of content entail. To study content, at least two organizational changes need to be compared. This typically requires access to more than a single organization, which is often difficult to secure. Not only that, but for a study of change content to yield valid findings, the researcher must be attentive to the sources of internal invalidity (see Cook, Campbell, & Peracchio, 1990), otherwise any difference found could be attributed to extraneous factors. Unfortunately, these obstacles are likely to continue to be a challenge in studying the impact of change content on reactions to change.

Change Consequences⁵

Whereas most of the studies in our review focused on the explicit reactions to the change, and although several considered both the explicit and immediate reactions to the change and the postchange attitudes toward the organization (e.g., Armstrong-Stassen, 1998; Paterson & Cary, 2002; Wanberg & Banas, 2000), some studies focused only on the postchange attitudes toward the organization as outcomes (see Figure 1). In these studies, the various antecedents (e.g., change process, internal context) were directly linked to change recipient orientation toward the organization following the change.

Work-Related Consequences

Numerous studies we reviewed investigated change recipient orientations toward the job or the organization as the change outcome. Researchers in these studies were interested in how the change situation influenced change recipients' subsequent attitudes or behaviors toward the organization. Studies on change consequences were identified with each of the antecedent categories presented above, yet most considered the change process (e.g., Armenakis et al., 2007; Holt et al., 2007; Oreg, 2006; Paterson & Cary, 2002) and recipient characteristics (e.g., Fried et al., 1996; Judge et al., 1999; Logan & Ganster, 2007).

The consequence most frequently considered was organizational commitment (e.g., Cartwright & Cooper, 1993; Fedor et al., 2006; Gopinath & Becker, 2000; Oreg, 2006; Shapiro & Kirkman, 1999; see Table 4 for the complete list, including related concepts, such as attachment to the organization, Spreitzer & Mishra, 2002, and organizational identification, Johnson et al., 1996). At a close second came studies on job satisfaction (e.g., Amiot et al., 2006; Axtell et al., 2002; Gardner, Dunham, Cummings, & Pierce, 1987; Judge et al., 1999), followed by studies on turnover or intentions to leave the organization (Coch & French, 1948; Fried et al., 1996; Gardner et al., 1987; Schweiger & Denisi, 1991). Other related constructs were investigated, such as motivation (e.g., Pierce & Dunham, 1992), organizational citizenship behavior (Shapiro & Kirkman, 1999), and morale (Paterson & Cary, 2002). In several studies, more than one of these

Table 4. Change Consequences in Articles Reviewed

Outcome category	Variables	Articles
Work-related consequences	Satisfaction	Amiot et al. (2006); Axtell et al. (2002); Begley and Czajka (1993); Bordia et al. (2004); Cartwright and Cooper (1993); Gardner et al. (1987); Holt et al. (2007); Judge et al. (1999); Lam and Schaubroeck (2000); Logan and Ganster (2007); Martin et al. (2005); Morse and Reimer (1956); Mossholder et al. (2000); Naswall et al. (2005); Oreg (2006); Paulsen et al. (2005); Pierce and Dunham (1992); Rafferty and Griffin (2006); Schweiger and DeNisi (1991); Steel and Lloyd (1988); Wanberg and Banas (2000); Zalesny and Farace (1987)
	Job satisfaction	
	Work satisfaction	
	Satisfaction with change	
	Commitment/Identification	
	Organizational commitment	
	Identification	Amiot et al. (2006)
	Intentions to quit	
		Begley and Czajka (1993); Bordia et al. (2004); Coch and French (1948); G. B. Cunningham (2006); Fried et al. (1996); Gardner et al.

(continued)

Table 4. (continued)

Outcome category	Variables	Articles
		(1987); Holt et al. (2007); Johnson et al. (1996); Korsgaard et al. (2002); Lam and Schaubroeck (2000); Martin et al. (2005); Mossholder et al. (2000); Oreg (2006); Rafferty and Griffin (2006); Schweiger and DeNisi (1991); Shapiro and Kirkman (1999); Spreitzer and Mishra (2002); Steel and Lloyd (1988); Wanberg and Banas (2000)
	Job involvement	Hall et al. (1978); Mossholder et al. (2000); Pierce and Dunham (1992)
	Work outcomes	
	Job performance	Gardner et al. (1987); Hall et al. (1978); Hatcher and Ross (1991); Schweiger and DeNisi (1991); Steel and Lloyd (1988); Morse and Reimer (1956)
	Effectiveness	Logan and Ganster (2007); Pierce and Dunham (1992); Sagie and Koslowsky (1994)
	Effort	Morgeson et al. (2006)
	Trust	
	In the organization	Schweiger and DeNisi (1991); Steel and Lloyd (1988)
	In management	Gopinath and Becker (2000); Kiefer (2005); Paterson and Cary (2002); Weber and Weber (2001); Zalesny and Farace (1987)
	In supervisor	Korsgaard et al. (2002)
	Motivation	
	Extrinsic	Judge et al. (1999)
	Intrinsic	Armenakis et al. (2007); Bhagat and Chassie (1980); Gardner et al. (1987)
	Productive/counterproductive work behavior	
	OCB	Shapiro and Kirkman (1999)
	Withdrawal	Kiefer (2005)

(continued)

Table 4. (continued)

Outcome category	Variables	Articles
	Absenteeism	Martin et al. (2005); Schweiger and DeNisi (1991)
	Climate	
	Teamwork	Coyle-Shapiro and Morrow (2003); Hatcher and Ross (1991)
	Continuous improvement orientation	Coyle-Shapiro (2002)
	Leadership	Latona and LaVan (1993)
	Performance	Lok et al. (2005)
	Morale	Paterson and Cary (2002)
	Support and readiness to change	Weber and Weber (2001)
	Communication	Zalesny and Farace (1987)
	Other work-related consequences	
	(1) Style of coping with the merger	(1)Armstrong-Stassen (1998);
	(2) P-J fit, P-O fit perceived fit, after the change, between person and job and between person and organization	(2) Caldwell et al. (2004);
	(3) Perceived organizational obligations, change recipient obligations	(3) Korsgaard et al. (2002);
	(4) Perceived role-ambiguity, perceived role-conflict	(4) Mossholder et al. (1995);
	(5) Work-schedule-related interference with personal activities, work-schedule attitudes	(5) Pierce and Dunham (1992);
	(6) Equipment usage amount (hours per week, usage breadth, equipment inconvenience	(6) Parsons et al. (1991); (7) Steel and Lloyd (1988); (8) Daly (1995)
	(7) Personal competence	
	(8) Procedural fairness	
Personal consequences	Psychological health	
	Anxiety and stress	Axtell et al. (2002); Begley and Czajka (1993); Parsons et al. (1991); Schweiger and DeNisi (1991)
	Irritation and tension	Begley and Czajka (1993); Naswall et al. (2005); Wanberg and Banas (2000)
	Depression	Axtell et al. (2002); Begley and Czajka (1993)

Table 4. (continued)

Outcome category	Variables	Articles
	Psychological withdrawal	Fried et al. (1996); Parsons et al. (1991)
	Psychological uncertainty	Rafferty and Griffin (2006)
	Physiological health	
	Health complaints	Begley and Czajka (1993); Cartwright and Cooper (1993); Naswall et al. (2005)
	Exhaustion and strain	Bordia et al. (2004); Paulsen et al. (2005)
	Personal growth	
	Psychological well-being	Martin et al. (2005)
	Psychological success	Hall et al. (1978)
	Self-actualization and growth	Morse and Reimer (1956)
	Leisure satisfaction	Pierce and Dunham (1992)

outcomes was considered. Beyond postchange attitudes toward the *organization*, several studies focused on more behaviorally oriented *job*-related outcomes, including job performance and indices of adjustment to the new job situation (e.g., Hall et al., 1978; Judge et al., 1999; Lok et al., 2005; Sagie & Koslowsky, 1994).

Other work-related consequences studied pertain to the internal context following the change. Variables considered here as outcomes were often the same as those assessed as antecedents in other studies. For example, in several studies trust in management was viewed as an indirect consequence of the change (e.g., Kiefer, 2005; Paterson & Cary, 2002; Zalesny & Farace, 1987), rather than an antecedent of the reactions to change. Other studies analyzed the perceived job characteristics, such as perceived job control, meaningfulness of work, perceived career outcomes, or the degree of fit between the person and the job, as an indirect consequence of the change (e.g., Bhagat & Chassie, 1980; Bordia et al., 2004; Caldwell et al., 2004; Judge et al., 1999).

Personal Consequences

A smaller set of studies considered the personal consequences that change had for change recipients. Specifically, several of the studies we reviewed included variables that pertained, in one way or another, to change recipients' psychological well-being. In addition to explicit assessments of mental health and somatic health complaints (Begley & Czajka, 1993; Cartwright & Cooper, 1993; Naswall et al., 2005), these studies included assessments of depression (Axtell et al., 2002; Begley & Czajka, 1993), anxiety (Axtell et al., 2002), stress or strain (Bordia et al., 2004; Parsons et al.,

1991; Schweiger & Denisi, 1991), psychological withdrawal (Fried et al., 1996; Parsons et al., 1991), work-related irritation (Begley & Czajka, 1993; Wanberg & Banas, 2000), perceived psychological success or personal growth (Hall et al., 1978; Morse & Reimer, 1956), leisure satisfaction (Pierce & Dunham, 1992), emotional exhaustion (Paulsen et al., 2005), and perceived control and uncertainty (Bordia et al., 2004; Rafferty & Griffin, 2006).

As a rule, consistent with findings examining antecedents of the reactions to *change*, these studies found that as the conditions within which the change was applied were more favorable (e.g., supportive atmosphere, trustworthy management), as the change process was more inclusive (e.g., high participation), and as change recipients' personalities were more resilient and change oriented, change recipients' attitudes and behaviors toward the organization and toward their jobs, as well as their psychological well-being following the change, had improved. Thus, as would be expected, the impact the various antecedents had on the explicit reactions to change were comparable with their impact on the change consequences.

As noted above, several of the studies in our review considered both the explicit reaction to change and the change consequences. However, most of them did not distinguish between the two, and considered all the outcome variables as forms of the reaction to change. Nonetheless, a number of studies *did* explicitly distinguish between the two and suggested and demonstrated that the explicit reactions to change *mediated* the relationships between the antecedents and the change consequences (Amiot et al., 2006; G. B. Cunningham, 2006; Judge et al., 1999; Kiefer, 2005; Lok et al., 2005; Oreg, 2006; Paterson & Cary, 2002; Wanberg & Banas, 2000). Thus, in one study, for example, managers' effectiveness in coping with an organizational change (i.e., a behavioral reaction) mediated the relationships between their personality (e.g., risk aversion) and work-related attitudes, such as job satisfaction and organizational commitment (Judge et al., 1999).

Change recipients' attitudes toward an organizational change mediated the relationships of both personality and context variables with job satisfaction, continuance commitment, and turnover intentions (Oreg, 2003; Wanberg & Banas, 2000). Furthermore, change recipients' emotions with respect to the change mediated the relationships between the working conditions, the supportiveness of the organization (i.e., organizational treatment), and change recipients' personal status in the organization on one hand and trust in the organization and organizational withdrawal on the other.

We found some studies in which the antecedent considered was the explicit reaction to change and the outcome was the change consequences. For example, Mossholder et al. (1995, 2000) examined the relationship between affect toward the change, assessed with open-ended questions (coded using the *Dictionary of Affect in Language*, Whissell & Dewson, 1986), and work-related outcomes (e.g., optimism about the organization, the perceived autonomy in the organization, job satisfaction, organizational commitment, and turnover intentions). In another study, G. B. Cunningham (2006) considered coping with change (i.e., a behavioral reaction) as a mediator between change commitment and turnover intentions.

Research Context Descriptors and Studies' Methodologies

Table 5 provides the research context descriptors of the 79 studies. These include type of organization, type of change implemented, research design, sample composition, and sample size. The type of organization within which organizational change was investigated varied considerably. In some instances, researchers disguised the organizations by using general descriptors such as *private sector* or *public sector organizations*. Others were slightly more descriptive (e.g., airlines, telecommunications, hospitals, automobile parts manufacturer, and military organization). As can be seen, many different types of organizations have been studied. The types of change described in the studies were also quite varied. Many were in organizations engaged in a merger or divestiture, downsizing, technological change, and work redesign. It should be emphasized, as discussed above, that of the 79 studies in our review, only 9 investigated change content as an explicit reaction antecedent. The other 70 studies simply described the organizational change being implemented, but did not measure the change attributes. The job classifications of the research samples were quite varied and included operative-level workers, managers, pilots, nurses, police, military personnel, and school teachers. Sample sizes ranged from a low of 22 to 2,845. Mean sample size was approximately 254.

Nearly 50% of the research designs in the 79 studies were longitudinal, 3 employed comparison/controlled groups, and one of these used a randomized experimental/control group design. The vast majority of studies relied solely on self-reports, for all variables. We identified only seven studies that supplemented self-reports with archival data, such as absenteeism or turnover (Bartunek et al., 1999; Gardner et al., 1987; Hatcher & Ross, 1991; Morse & Reimer, 1956; Schweiger & DeNisi, 1991; Spreitzer & Mishra, 2002; Wanberg & Banas, 2000). Three additional studies reported independent ratings, namely, customer satisfaction and supervisor rating of subordinates (Gardner et al., 1987; Judge et al., 1999; Lam & Schaubroeck, 2000). We discuss the implications of these methodological approaches below.

Discussion

Unlike previous reviews of organizational change research, the last of which was published in 1999, our focus in the present review was exclusively on change recipient reactions to organizational change. We covered a 60-year period of quantitative research on the topic and considered approximately 700 published articles on organizational change. We summarized and coded literally hundreds of variables included in the 79 articles we reviewed, all of which are presented in Tables 2 to 5. We used these variables to inductively construct our model (see Figure 1) consisting of prechange antecedents (i.e., change recipient characteristics and internal context), change antecedents (i.e., change process, perceived benefit/harm and change content),

Table 5. Research Context Descriptors

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Amiot et al. (2006)	Airlines	Merger	Longitudinal	Pilots and Flight Engineers	T-1 = 662; T-2 = 465
Armenakis et al. (2007)	Study 2 (S2) = Medical Division; Study 3 (S3) = Durable Goods Manufacturer; Study 4 (S4) = Public Service Organization	S2 = team-based culture; S3 = company spinoff; S4 = merger	Cross-sectional	S2 = admin., technical, and scientific employees	S2 = 117; S3 = 117; S4 = 247
Armstrong-Stassen (1998)	Fortune 100 company	Downsizing	Cross-sectional	Clerical, technicians, supervisors	N = 236
Ashford (1988)	Telecommunications company	Company divestiture	Cross-sectional and longitudinal	Employees	T-1 = 180; T-2 = 83
Axtell et al. (2002)	U.K.-based distribution company	Technological change	Longitudinal	Managers, engineers, and operators	T-1 = 325; T-2 = 227
Bartunek et al. (1999)	Independent schools	Empowerment	Longitudinal	Participants, nonparticipants and change agents	N = 315
Bartunek et al. (2006)	Hospital	Shared governance-decentralization	Cross-sectional	Nurses	N = 501
Begley and Czajka (1993)	Hospital	Divisional consolidation	Longitudinal		N = 82
Bernerth et al. (2007)	Automobile parts manufacturer	Spin off from parent	Cross-sectional	Operative employees	N = 117
Bhagat and Chassie (1980)	Aircraft manufacturing company	Transition to 4-day work week	Longitudinal	Managers and nonmanagers	N = 65

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Bordia et al. (2006)	Hospital	Restructuring, privatization, relocation, technological change	Cross-sectional	Nurses, medical staff	N = 1,610
Bordia et al. (2004)	Hospital	Restructuring and relocation	Cross-sectional	Staff members	N = 222
Bovey and Hede (2001)	9 different public/private sector organizations	Restructuring; reorganization of systems; technological change	Cross-sectional	Employees	N = 615
Caldwell et al. (2004)	34 work units in 21 organizations, e.g., transportation, technology, consumer products, government	Extent of change, consequences of change, individual job impact	Cross-sectional	Employees	N = 282-299
Cartwright and Cooper (1993)	U.K. Building Societies	Merger	Cross-sectional	Middle managers	N = 157
Coch and French (1948)	Harwood Manufacturing Corporation	Changes in work methods and jobs	Field experiment	Plant employees	Not indicated
Covin et al. (1996)	Fortune 500 company	Merger	Cross-sectional	Employees	N = 2845
Coyle-Shapiro and Morrow (2003)	U.K. supplier of electrical components	TQM program	Longitudinal	Employees	T-1 = 186; T-2 = 166; T-3 = 118
Coyle-Shapiro (1999)	U.K. supplier of electrical components	TQM program	Longitudinal	Employees	T-1 = 186; T-2 = 166; T-3 = 118

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Coyle-Shapiro (2002)	U.K. supplier of electrical components	T-1 = TQM; T-2 = profit sharing	Longitudinal	Study 1: Operators, craftsmen, engineers, purchase controllers; administrators Study 2: T-1 = 186; T-2 = 141	Study 1: T-1 = 166; T-2 = 118. Study 2: T-1 = 186; T-2 = 141
C. E. Cunningham et al. (2002)	Canadian hospital	Reengineering, work redesign	Longitudinal	Hospital employees	N = 654
G. B. Cunningham (2006)	Athletic departments	Significant organizational changes	Cross-sectional	Employees	N = 299
Daly (1995)	7 private sector orgs	Relocation	Cross-sectional	Employees	N = 183
Daly and Geyer (1994)	7 private sector orgs	Relocation; change in strategy and structure	Cross-sectional	Employees	N = 171
Eby et al. (2000)	National sales organization	Organizational change; segmented sales teams	Cross-sectional	Employees and managers	N = 117
Fedor et al. (2006)	34 organizations	Significant work unit changes	Cross-sectional; longitudinal	Employees	N = 806
Fried et al. (1996)	Fortune 500 service company	Merger; including downsizing, relocation	Longitudinal	Middle managers	N = 91
Fugate et al. (2002)	Aerospace company	Merger—downsizing, restructuring, etc.	Longitudinal	Employees	T-1 = 216; T-2 = 138; T-3 = 119; T-4 = 81
Gaertner (1989)	Information services	Change in business strategy—reorganization with downsizing, technological change, change in product line	Longitudinal	Employees	T-1 = 147; T-2 = 789

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Gardner et al. (1987)	Insurance company	23 job improvement teams used to identify technostructural job changes	Randomized exp/control group design	Clerical personnel	Exp group = 300; control group = 160
Giacquinta (1975)	Elementary schools	Sex education curriculum	Cross sectional	Educators—board member, administrators, teachers	N = 66
Gopinath and Becker (2000)	Chemical company	Sale of division, downsizing, layoffs	Longitudinal	Survivors	T-1 = 314; T-2 = 318; matched pairs = 144
Hall et al. (1978)	Canadian transportation ministry	Reorganization, new administrators, relocations, job redesign, 4-day work week	Longitudinal	Employees	T-1 = 233; T-2 = 233; T-3 = 162. T-1 and T-2 and T-3 = 153
Hatcher and Ross (1991)	Automotive supplier	Gain sharing	Longitudinal	Employees	T-1 = 147; T-2 = 147; questionnaires were not matched
Herold et al. (2007)	25 organizations in finance, manufacturing, education, consumer products, and technology	Work unit changes—technology, reorganization, strategy, relocation, outsourcing, leadership, and downsizing	Cross-sectional	Employees	Personal change surveys = 287; organizational change surveys = 266

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Herscovitch and Meyer (2002)	Hospitals	Mergers of departments, technological change, modifications to shift work, and hiring health care aids	Cross-sectional	Nurses	Study 2 = 157; Study 3 = 108
Holt et al. (2007)	Government organization and private sector organization	Change in organizational structure	Cross-sectional	Employees	Study 1 = 264; Study 2 = 228
Hornung and Rousseau (2007)	Hospital	Shared leadership and decentralization of decision making	Longitudinal	Health care personnel, technical personnel and administrators	T-1 = 166; T-2 = 207
Iverson (1996)	Australian hospital	Restructuring jobs, technological change, increasing efficiency	Cross-sectional	Hospital employees	N = 761
Johnson et al. (1996)	Insurance company	Downsizing	Modified time series design	Employees	T-1 = 64; T-2 = 44; T-3 = 37
Jones et al. (2005)	Australian state government department	Technological change	Longitudinal	Employees	T-1 = 156; T-2 = 98; T-1 = T-2 = 67
Judge et al. (1999)	Shipping company, banks, university, manufacturing company	Reorganization, downsizing, mergers and acquisitions, business divestments, changes in top management	Cross-sectional	Middle- and upper-level management	N = 514
Kiefer (2005)	Company offering HR online (Germany, Switzerland, and Austria)	Merger	Longitudinal	Employees	T-1 = 155; T-2 = 76

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Korsgaard et al. (2002)	Electric generation plants	Reengineering	Longitudinal	Employees	T-1 = 144; T-2 = 141; T-1 + T-2 = 104
Lam and Schaubroeck (2000)	Hong Kong bank	Service quality initiative	Longitudinal	Bank tellers	T-1 = 159; T-2 = 159; T-3 = 159; N = 159
Latona and La Van (1993)	Electronic instrumentation manufacturer	Employee involvement program	Longitudinal	Employees	T-1 = 22; T-2 = 22
Lau and Woodman (1995)	Public university	Change in university tradition	Cross-sectional	Undergraduate students; university staff	N = 346;
Lee and Peccei (2007)	Korean bank	Restructuring: Downsizing, salary reductions, salary and promotion systems	Cross-sectional	Employees	undergrads = 331; staff = 15 N = 910
Logan and Ganster (2007)	Trucking company	Empowerment intervention	Longitudinal	Project managers	Experimental group = 38; comparison group = 30
Lok et al. (2005)	Australian private sector organizations	Reengineering, benchmarking, and continuous improvement	Cross-sectional	Employees	N = 260
Madsen et al. (2005)	3 private sector and 1 nonprofit organizations	Continuous change	Cross-sectional	Employees and managers	N = 454

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Martin et al. (2005)	Public sector organization (PSO) and public sector hospital (H)	Relocation, job changes, downsizing, multidisciplinary teams	Cross-sectional	Employees; hospital staff	PSO = 779; H = 877
K. I. Miller and Monge (1985)	State department of education	Open architecture	Cross-sectional	Employees	N = 146
V. D. Miller et al. (1994)	Insurance company	Restructuring including interdependent teams, involving new roles and status levels	Cross-sectional	Managers, analysts, tele counselors	N = 168
Morgeson et al. (2006)	Printing company	Semi-autonomous teams	Longitudinal	Employees	T-1 = 914; T-2 = 1,030
Morse and Reimer (1956)	A department of a large nonunionized industrial organization	Changes in rank-and-file and upper management decision-making discretion	Field experiment	Employees	Approximately 200 (an exact figure was not provided)
Mossholder et al. (1995)	Fortune 100 company	Restructuring and downsizing	Cross-sectional	Managers	N = 173
Mossholder et al. (2000)	Fortune 100 company	Restructuring and downsizing	Cross-sectional	Managers	N = 173
Naswall et al. (2005)	Hospital	Cost reduction and productivity increase	Cross-sectional	Nurses	N = 512
Oreg (2003)	University	Student schedule change, technological change, relocation	Cross-sectional	Undergrad/grad students, faculty, and staff	3 samples: N1 = 44, N2 = 47, N3 = 48 and 43 (T1 and T2)

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Oreg (2006)	Defense organization	Merger and restructuring	Cross-sectional	Managers and nonmanagers	N = 177
Parsons et al. (1991)	Insurance trade association	Technological change	Longitudinal	Employees	T-1 = 105; T-2 = 82; T-3 = 62 N = 71
Paterson and Cary (2002)	Australian public sector organization	Restructuring to semiautonomous work teams and downsizing	Cross-sectional	Employees	N = 71
Paulsen et al. (2005)	Australian hospital	Relocation, restructuring to teams, and downsizing	Longitudinal	Employees	T-1 = 222; T-2 = 189; T-3 = 117 N = 149
Peach et al. (2005)	Australian governmental organizations	Relocation	Cross-sectional	Managers and nonmanagers	N = 149
Pierce and Dunham (1992)	Police department	Revised work shift and compressed work week schedule	Longitudinal	Uniformed police personnel	T-1 = 74; T-2 = 67; T-1 + T-2 = 50
Rafferty and Griffin (2006)	Australian public sector organizations	Change in top leader; restructuring; downsizing; changes in the HR function	Longitudinal	Employees	T-1 = 207; T-2 = 168
Sagie and Koslowsky (1994)	Israeli public sector organizations—national tax authority (A), educational institution (B), and 3 elementary schools (C-E)	A—MBO; B—restructuring, downsizing, job redesign; C-E—job redesign, participation of teachers, parents and community	Cross-sectional	Employees from all organizations	N = 249

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Schweiger and DeNisi (1991)	Two manufacturing plants	Merger	Longitudinal-experimental plant and comparison plant	Employees	(continued) T-1; T-2; T-3; T-4. Experimental plant = 82; comparison plant = 86 N = 492
Shapiro and Kirkman (1999)	Two Fortune 500 companies	Self-managed work teams	Cross-sectional	Operative employees	N = 350
Spreitzer and Mishra (2002)	Aerospace company	Downsizing	Cross-sectional	Engineers, sales, admin	N = 350
Stanley et al. (2005)	S-1 = Various organizations; S-2 = Energy company	Organizational changes, including restructuring and culture change	S-1 = cross-sectional; S-2 = longitudinal	Employees	S-1 = 65; S-2, T-1 = 712; S-2, T-2 = 637
Steel and Lloyd (1987)	U.S. Air Force	Quality circles (QCs)	Longitudinal; experimental and comparison groups	Military and civilian employees	N = 213; QC group = 25; comparison group = 188
Susskind et al. (1998)	Hospital company	Downsizing	Longitudinal	Employees from accounting, finance, marketing, engineering, etc.	T-1 = 97; T-2 = 97; T-3 = 97
van Dam (2005)	Dutch hospitals	Merger; relocation of employees, job redesign	Cross-sectional	Nurses, medical assistants, administrative assistants	N = 953

continued

Table 5. (continued)

Article	Type of organization	Type of change	Research design	Sample composition	Sample size
Walker et al. (2007)	Auto parts manufacturer	Spinoff	Cross-sectional	Operative employees	N = 117
Wanberg and Banas (2000)	U.S. government agency	Radical reorganization	Longitudinal and cross-sectional	Employees	T-1 = 173; T-2 = 133
Weber and Weber (2001)	Fire department	Organizational change under a new chief	Longitudinal	Employees	T-1 = 86; T-2 = 78; T-1 + T-2 = 56
Zalesny and Farace (1987)	Governmental agency	Open architecture office	Longitudinal	Employees	T-1 = 426; T-2 = 372; T-1 + T-2 = 247

Note. TQM = Total Quality Management.

explicit reactions (i.e., affective, cognitive and behavioral attitude components), and change consequences (i.e., work-related and personal consequences).

We believe our review, the tables we provide, and the resulting model offer at least four benefits to researchers in the field. First, Tables 2 to 4 provide a compendium of variables (including sample items from the scales used in each of the studies) that have been used to quantitatively assess organizational change. Researchers can scrutinize these tables for potential scales that can be used in assessing organizational change. Second, our model and these tables (a) describe our classification scheme of pre-change antecedents, change antecedents, explicit reactions, and change consequences; (b) facilitate the comparison of findings; and (c) organize and integrate an otherwise disjointed body of literature. Thus, researchers can use these tables to review studies and capitalize on others' experiences in assessing change when designing their own research. Third, these tables and our review provide the necessary information for a change researcher to design a *comprehensive* assessment of a change effort.

Finally, we believe our tables and review highlight important construct distinctions that have been previously overlooked and emphasize the importance of ensuring good fit between the nominal and operational definitions used in studies of reactions to change. Related to this point is that our model and review will sensitize researchers to the importance in being specific about their intent in assessing variables. For example, is the objective of a study to assess organizational commitment as internal context or as change consequence? This question deserves conscious deliberation.

Theoretical Implications and Directions for Future Research

Despite the variety of factors that have already been considered in extant research on change reactions, our review revealed several gaps that remain to be filled and a number of problems that make it difficult to compare and integrate findings from different studies. First, given the inconsistency in how terms have been used in the research on reactions to change, researchers should be clear about the distinction between pre-change antecedents, change antecedents, explicit reactions, and change consequences, and reflect these distinctions in the terminology used. For example, variables such as organizational commitment and job satisfaction can be prechange antecedents as well as change consequences. In a related vein, researchers should acknowledge the distinction between the three reaction components and be explicit about the particular component(s) they aim to investigate. They may find the model we present in Figure 1 useful in organizing and classifying the variables on which they choose to focus.

A related point involves the particular distinction between explicit reactions and change consequences. We found in our review several instances where researchers did not make this distinction and considered both to be comparable outcomes of an organizational change. As we accumulate more research findings on change recipient reactions, we need to be more specific in designing research to investigate whether explicit reactions are different from change consequences. And, in what instances might they differ?

Third, greater attention needs to be given to the match between the nominal definitions provided and the scales used to tap variables. For example, if the researcher intends to assess an explicit reaction to an organizational change, such as, organizational *change* commitment (Herscovitch & Meyer, 2002), then the scale items should be specific about assessing commitment toward the *change*. On the other hand, if organizational commitment (Meyer & Allen, 1991) is intended to be an indirect consequence *resulting* from the change, it should be construed and measured accordingly.

Fourth, as indicated above, a majority of the studies in our review were based on cross-sectional data, and almost all of them were based on self-report data from a single source, thus subjecting findings to the potential of mono-method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; see exceptions in Caldwell et al., 2004 and Judge et al., 1999). Furthermore, because of survey anonymity, many of the longitudinal studies considered in our review could not tie change recipients' responses in Time 1 to their responses in Time 2, which restricted longitudinal findings to overall trends and prohibited the analysis of trends at the individual level. Although researchers can still use statistical procedures (Green & Feild, 1976) for assessing group change under conditions of anonymity (see Armenakis & Zmud, 1979, for an application of this procedure in a field setting), future work should use longitudinal designs that allow for tracing changes at the individual level, and should aim to collect multisource data, including data that are based on objective indicators, to supplement self-report information. This will allow for a clearer and perhaps more accurate picture of the change process. At the least, when data from different sources cannot be obtained, researchers should apply procedures that can assess the degree of mono-method bias in one's data (e.g., Lindell & Whitney, 2001). In those instances, where a researcher employs a longitudinal design, at a minimum the sources of internal invalidity (see Cook et al., 1990; Stone-Romero, 2010) should be discussed. The importance of those sources that cannot be discounted should be acknowledged and limitations in drawing cause and effect conclusions should be explained.

Fifth, the vast majority of studies explored change processes that occurred in a single organization (or department). This prevents the consideration of variables (e.g., antecedents) at the organizational level, such as change content. A main reason for the limited amount of studies with organization-level variables is that such studies require data from multiple organizations, which are logistically difficult to obtain. Nevertheless, a small number of the studies we reviewed were based on data from several organizations, each undergoing a different type of change (Caldwell et al., 2004; Fedor et al., 2006; Herold et al., 2007). Although these studies indeed allow for the examination of organization-level antecedents and provide findings that can be generalized across types of change content, data in future studies, from comparable organizations, simultaneously undergoing the same type of change, could nicely complement previous work by allowing for a cleaner assessment of antecedents, without confounding antecedents with type of organization and type of change. Such data can be sought from companies with multiple branches, undergoing a company-wide change, or in the

public sector, in which a government-initiated change simultaneously influences numerous organizations.

Sixth, although change recipient reactions have been extensively addressed, studies have generally ignored the role of the change agents' responses to these reactions. How managers and change agents respond to change recipients' reactions is likely to have a direct influence on the change progress and on the ultimate success of the change initiative. Furthermore, in their current focus on change recipients' reactions, many researchers seem to imply some fault on the recipients' part, whereby they serve as an obstacle in change agents' path toward benefiting the organization. A similar point was raised by Dent and Goldberg (1999) in their critique of researchers' use of the term *resistance to change*, which overlooks the possibility that, at least some of the time, the emergence of resistance reflects fault with the change agent, or the change itself, rather than the employee. Accordingly, transferring at least part of the research focus to the change agents' actions and reactions could help introduce into the literature a different perspective on change recipients' role vis-à-vis that of the change agent.

Seventh, although change researchers studied a plethora of antecedent variables, the analysis of their interrelationships, including mediation and moderation effects, requires much greater attention. Although some conceptual work has been devoted to proposing the variables that might moderate the impact of organizations on individuals' responses to change, little empirical work has been conducted to test such propositions. One promising point of departure could be to test Woodman and Dewett's (2004) propositions concerning the moderating role of changeability (the degree to which or the ease by which some individual characteristics might be changed), depth (the magnitude of change), and time (different changes take differing amounts of time).

More broadly, although we introduce in our model one general set of relationships among antecedent categories, reactions, and consequences, it is likely that additional, more complex, causal paths may exist among these categories. For example, some antecedents may serve as mediators between other antecedents and recipients' reactions. One such mediated relationship may consist of perceived benefit/harm mediating the relationship between change process and recipients' reactions. In other words, the reasons for which the change process may ultimately influence recipients' reactions is because of the influence that process has on recipients' perceptions of the benefit/harm from the change. Similarly, some antecedents may serve as moderators of the relationship between other antecedents and recipients' reactions. Recipient characteristics, for example, may moderate the relationship between the remaining four antecedent categories and recipient reactions, through their impact on recipients' perceptions. Yet another possible elaboration of our proposed path model may include reversed paths of influence, such that recipients' reactions influence some of the antecedent categories. For example, following the influence of the change process on employees' reactions, these reactions may in turn influence how change agents manage the process at the later stages of the change. Given that change is dynamic and often continuous, such reciprocal paths of influence seem very likely. Thus, alongside the

research that the model we present in Figure 1 may elicit, such additional sets of relationships should also be considered.

Finally, two interesting complexities that were revealed in our review are worthy of further investigation. One concerns the type of organizational commitment studied and its role in influencing reactions to change. Whereas some studies found a positive relationship between commitment and change reactions (e.g., Iverson, 1996), van Dam (2005) hypothesized and found a negative relationship. This suggests that greater attention should be devoted to asking about the target of change recipients' commitment. Different effects are expected when organizational commitment is conceptualized as referring to managers versus when it is conceptualized as referring to organizational routines, norms, and values. In the former, it would indeed be expected that commitment will be positively associated with a favorable approach toward a management-initiated change, whereas in the latter situation change is likely to be perceived as a threat to those committed to the "old ways of doing things," thereby yielding a negative relationship between commitment and support for change.

A second complexity we identified has to do with the role of information about the change in explaining the reaction to change. Whereas most studies found that information alleviates resistance (e.g., V. D. Miller et al., 1994), in one study (Oreg, 2006), information was *positively* related to resistance. The explanation provided to this latter finding was that the impact of information is likely to depend on the *content* of this information. Furthermore, the degree to which individuals perceive themselves as having control over the outcome is also likely to moderate the effect of information on the reaction to change. Additional information without the ability to change anything may lead to increased frustration, and thus resistance, rather than support. Therefore, future studies on information and reactions to change should take into consideration possible moderators that will reveal a more complex picture than has been considered to date.

Practical Implications

Taken together, results from the studies in our review suggest a number of directions for organizations to follow when aiming to increase support for proposed organizational changes. First and foremost, the internal context and the change process antecedent categories offer the most straightforward prescriptions for change management. Each factor within these antecedent categories prescribes a practical direction for organizations to adopt in improving change recipients' responses to change. For example, the consistent finding concerning the link between organizational trust and support for change highlights the special significance of trust in times of change. Furthermore, increasing change recipient involvement in the change and setting change recipients at greater ease, by allowing participation and ensuring a just process, have been shown to go a long way in alleviating resistance. Therefore, beyond the overall importance of trust and commitment, managers should invest special attention in creating a supportive and trusting organizational culture if they expect change recipients' support and cooperation in times of change. Given that creating such an atmosphere requires an ongoing process that typically takes a long time, an important first step will be the adoption of a supportive and participatory change process.

Second, findings on the dispositional characteristics associated with positive reactions to change present the possibility for organizations to select change recipients on the basis of these dispositions for positions or assignments in which successfully dealing with change is key. In addition, change agents and HR specialists can provide special training and support to those individuals who have a harder time coping with change. Furthermore, the focus on change recipient characteristics has also highlighted the importance of opinion leaders in successfully implementing change (Lam & Schaubroeck, 2000).

Finally, change recipients are naturally concerned with the personal impact that the change will have on them. If perceived risks/costs outweigh benefits, change recipients will understandably tend to resist change. This may seem obvious, but findings demonstrate that managers are often oblivious to how change recipients will respond to the change and do not give enough thought to change recipients' perspectives. As a start, global and local change agents need to be clear, early on, about the precise ramifications the change program will have for change recipients. More importantly, however, change agents must give special consideration to these ramifications and aim to understand and incorporate change recipients' perspectives in the design of the change. Practically, they should carefully plan the change effort and make every effort to explain how any threat can be dealt with, and at the same time introduce and highlight the personal benefits change could have for employees, beyond its importance for the organization.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interests with respect to the authorship and/or publication of this article.

Funding

The authors received no financial support for the research and/or authorship of this article.

Notes

1. Our inductive approach prohibited us from computing an intercoder agreement index. Furthermore, a very broad variety of variables have been considered in the different studies, with little overlap in variables across studies. This prevented us from conducting a more quantitatively based meta-analysis.
2. For each theme we discuss in the narrative for Explicit Reactions to Organizational Change, we provide citations of specific studies as examples. The complete list of relevant studies, however, is included in Table 2.
3. The studies in this section appear in more than one location in Table 2. Each study will appear once for every reaction component (i.e., affective, cognitive, and behavioral/intentional) that was examined in it.
4. For each theme we discuss in the narrative for Antecedents of Change Recipients' Reactions to Change, we provide citations of specific studies as examples. The complete list of relevant studies, however, is included in Table 3.
5. For each theme we discuss in the narrative for Change Consequences, we provide citations of specific studies as examples. The complete list of relevant studies, however, is included in Table 4.

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