

# **The Changing Workplace and Its Effects**

## ***A Longitudinal Examination of Employee Responses at a Large Company***

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The present study explores the multiple ways employees are affected by pervasive and complex organizational change. Across a 10-year period, the authors surveyed 525 white- and blue-collar workers on four separate occasions during which time the company experienced, for example, a difficult financial period, several large downsizing events, the implementation of new technologies, and a move toward a “flatter” managerial structure. At Time 4, shortly after the organization experienced a substantial economic turnaround, the authors found that most but not all of the job and organizational attitudes returned to Time 1 levels. Many of the measures of health and various indices of the work–family relationship however showed both positive and negative lasting effects. These findings are discussed in light of current thinking regarding worker engagement and the psychological contract between workers and organizations.

**Keywords:** *workplace change; layoffs; employee resilience; worker or employee well-being; organizational commitment*

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**W**ork, for many Americans, has changed significantly over the past 25 years. Two scholars, in a recent comprehensive overview of research on work, go so far as

to conclude that we now have a “radically transformed American workplace” (O’Toole & Lawler, 2006, p. 78) even as they acknowledge the evolutionary nature as well as the complexity and diversity of the changes and their effects. The locus for many of the most wrenching changes has been large corporations subject to global competition, what O’Toole and Lawler (2006) call “Global Competitor” organizations. Many of these corporations have had to grapple with several major developments simultaneously. Increased and intensified international competition, new information and communication technologies, and the enhanced power of outside investors are just three of the more powerful external forces that have compelled managers to restructure their organizations and change their business practices. Researchers, managers, and employees have become familiar with a new lexicon to describe these changes: downsizing, reengineering, core competencies, outsourcing, and offshoring, for example. Despite the frequency with which these terms are used, they often fail to connote what it is like for those working in these large corporations to live through these turbulent times.

Our purpose in this article is to describe what living through these changes is like from the surviving employees’ point of view. Tracking the work-related attitudes and sense of well-being of a cohort of several hundred individuals as they experience a roller coaster 10-year journey (1997 to 2006)—marked first by their company’s loss of market share, poor financial performance, and multiple waves of mass layoffs and then by market success, soaring profits, and rehiring—can help us answer several important questions about the psychological consequences of such changes. Do employee attitudes remain stable over time, or do they move in line with changes in the organization? Did the increased automation and lean processes the company introduced, for example, improve workers’ satisfaction and involvement with their work? Did the repeated cycles of mass layoffs fray their sense of loyalty and trust in the corporation beyond repair? Are we witnessing the establishment of a fundamentally new psychological contract between employers and workers, one that is more “market-like, distant, and transactional” as some have claimed (Pfeffer, 2006)? Or is it possible to restore a sense of trust and commitment when the tough times seem to be over? What happened to the self-assessed health and well-being of these employees as they experienced 10 years of repeated waves of mass layoffs and significant restructuring? And even if corporate recovery leads to more contented employees,

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have their experiences produced a reassessment of the importance of work in their lives and a shift in commitment away from work?

### **Organizational Change and Its Impact on Employees**

The literature on organizational change is large, covering, among other issues, the factors that lead managers to initiate change, the efficacy of different modes of implementing change, resistance to change among employees, and the effects of change on performance and employee attitudes to the organization and to the job. (For a review of studies conducted in the 1990s, see Armenakis & Bedeian, 1999; for a more recent overview, see Poole and Van de Ven, 2004.) What many researchers agree on is that organizations are increasingly engaging in multiple changes simultaneously and that these are often not discrete events but rather part of an ongoing process (Kiefer, 2005; Pettigrew, Woodman, & Cameron, 2001). Moreover, the effects of these multiple and ongoing changes produce complex and often ambivalent results. For example, change can lead to both an improvement in product quality and productivity but also to lower morale and commitment among the workforce (Gilmore, Shea, & Useem, 1997). It is also possible that assessment of the impact of organizational change may be incomplete or even faulty if measured too soon after the changes (Beer & Eisenstat, 1996). Hence there is a widespread call by researchers in the field for longitudinal research that captures the complexity and evolutionary nature of employee responses to organizational change (Pettigrew, 1990; Piderit, 2000; Van de Ven & Huber, 1990).

Our aim in this article is to focus on the effects on employee attitudes of multiple, episodic, and ongoing changes at one large company. We will not rigorously examine the rationale provided by the company for the changes or assess the effectiveness or fairness of how these changes were implemented.<sup>1</sup> Rather, acknowledging that “organizations change the people who reside in them” (Woodman & Dewett, 2004), we track the job attitudes (e.g., job satisfaction), organizational attitudes (e.g., trust in the integrity of management), experiences of family and work (e.g., work to family conflict), and mental and physical health (e.g., depression) of a cohort of surviving workers at four separate time periods: 1997, late 1999/early 2000, 2003, and 2005. As noted earlier, our overarching question was one of exploring the multiple ways surviving employees are affected—both positively and negatively—by such pervasive and complex organizational change. Assuming that employees might show evidence of some negative impacts during the company’s difficult times, we are also interested in exploring whether or not surviving employees “bounce back” following the company’s recovery.

Although we accept that large organizations typically adopt programs and practices to influence the attitudes and behaviors of their employees via, for example, the socialization of new hires, organizational change initiatives, and training programs (Woodman & Dewett, 2004), we assume in this article that exceptional, episodic events, like mass layoffs or a major merger, also are more likely to affect employee attitudes and behavior. Moreover, because of their dramatic and disruptive nature, these episodic events are more likely to create “an emotional stir-up” (Lewin, as cited

in Weick & Quinn, 1999) within the organization and the possibility of deeper attitudinal and behavioral change among employees. We therefore pay particular attention to what happens to employees' sense of commitment and devotion to their work roles as compared to other important spheres of their lives, such as family, friends, and leisure activities in view of the widespread belief that both the terms of the psychological contract between employer and employee and traditional family and home arrangements and obligations seem to be undergoing substantial revision. Several authors are pointing to declining levels of trust in top management, commitment to company goals, and engagement with work among workers (Coffman, 2002; Pfeffer, 2006; Yankelovich, 2006). Others are describing major changes in family roles and in the allocation of time between work and nonwork domains among the labor force (Hochschild, 1997; Jacobs & Gerson, 2004).

Our underlying theoretical stance is that major changes in individuals' situations are powerful enough to produce significant changes in these individuals' attitudes and sense of well-being. This view has been challenged in the research literature by studies showing that people tend, in the long run, to adapt to extraordinary and even traumatic life circumstances like the death of a close relative or the onset of a severe disability and return to their "set" psychological state or their former levels of life satisfaction (Easterlin, 2003; Kahneman & Krueger, 2006). Kahneman and Krueger (2006) suggest that adaptation to highly difficult circumstances occurs as time causes a shift of attention away from the difficult situation or event (e.g., a mass lay-off) as it loses its novelty and toward other, less painful situations and activities. Our longitudinal panel study should be able to shed some light on whether employees adapt to and recover from disruptive organizational change and on whether there might be some psychological changes that appear to be more durable.

As we will describe in the following section, the company we studied experienced several major, disruptive changes during the decade of our research. The company merged with a rival, initiated an ongoing reengineering and restructuring process, and engaged in repeated mass layoffs. As the number of large companies enacting such organizational changes has increased, so has the number of studies examining the effects of these changes on employees. We cannot review this large literature in this article, but simplifying greatly, we can say that mass layoffs and mergers and acquisitions seem to produce a host of negative psychological responses in the surviving workforces. Layoff survivors, for example, tend to become more insecure about their jobs, less likely to innovate and take risks, less committed to their organization, and less trusting of top management (Grunberg, Anderson-Connolly, & Greenberg, 2000; Knudsen, Johnson, Martin, & Roman, 2003; Tombaugh & White, 1990). They also seem to have more health-related problems (Grunberg, Moore, & Greenberg, 2001; Vahtera, Kivimäki, & Pentti, 1997). Similar negative outcomes, including also increased anxiety and anger at the loss of old identities, have been reported for employees in companies that have merged or been acquired (Seo & Hill, 2005). The effects of restructuring or reengineering processes are more complex, depending on the particular dimension of the process one examines. For example, the increased intensity of work that is associated with lean manufacturing practices tends to increase stress and symptoms of poor health, whereas the greater use of

computers and autonomous work groups seems to have more beneficial effects (Anderson-Connolly, Grunberg, Greenberg, & Moore, 2002).

However, much of the research on the effects of major organizational change has been cross-sectional, rarely following a cohort of employees over time. The findings of such studies therefore cannot accurately describe the duration of the effects on employees or how these same employees would react to subsequent positive organizational changes. One of the few exceptions is a study that examines the effects of downsizing over time by surveying managers on three occasions over 16 months after layoffs (Allen, Freeman, Russell, Reizenstein, & Rentz, 2001). Using work role transition theory as a guiding framework they found that while most of the survivors' attitudes (e.g., satisfaction with job security, role overload and role clarity, turnover intentions, and job involvement) were worse 4 months after the downsizing, they had returned to their predownsizing levels 1 year after the event. They explained this rebound in attitudes in terms of the stages individuals go through in response to stressful life events; initially reacting negatively to the shock and stress of the layoffs but subsequently and gradually adjusting to the new situation. A similar stage model of reactions has been advanced by Seo and Hill (2005) to understand employee responses to the stress produced by mergers and acquisitions. Both studies posit an initial, anxiety-laden anticipatory phase prior to the change that then gives way to intense negative reactions as the event occurs. As the event recedes into the past and individuals learn to adjust to the new situation, there is a gradual stabilization of attitudes, often at the pre-event level. The underlying assumption here is that time heals, as seems to happen after most traumatic occurrences, either because the stressful event fades into the past and/or because individuals revert to their equilibrium or normal psychological state. It is not clear what the theory would predict if individuals were confronted with multiple stressful events, sometimes simultaneously and sometimes sequentially, as is the case with the employees in our sample. Does time alone heal their wounds, or does it also take major positive developments in the organization's practices and fortunes to assure the recovery? To the best of our knowledge, no other study addresses this important question.

Finally, we need to emphasize that this article is primarily concerned with describing changes in attitudes and orientations over time rather than seeking to analyze and rigorously test hypotheses about factors that might be causing the changes. During this period there were changes in the way workers' work was organized (due to the introduction of new technologies and new processes), the structure and size of the company (due to a controversial merger), top management (several senior managers were replaced), the company's employment level (due to repeated mass layoffs and rehiring), and the financial health of the company (from low profitability or losses and a low stock price to strong sales, profit growth, and historically high stock prices). Some of these changes are deeply interrelated, and we will not attempt to disentangle their independent effects or their relative causal weight in the changes in attitudes that we report in this article. Our more modest aim is to present trends in real time in the reaction of employees as they lived through this combination of changes. It is rare that studies can track a large number of employees on a varied set of measures over such a long period, especially on a group that has experienced such

a tumultuous decade, and it is this feature of our study that we believe makes a useful contribution to the literature on the effects of layoffs and workplace change more generally.

### **Brief Description of the Company**

The workers from whom we gathered these data are employed at a large designer and manufacturer of advanced technology products on the West Coast.<sup>2</sup> The division of the company we have studied has a long history of employment fluctuations, primarily as a function of the repeated, cyclical variation in work orders. Employees were accustomed to cycles of layoffs and rehires, and over the past 15 years they had lived through two substantial (of between 20 to 50,000) increases and decreases in employment levels. In terms of our study period, the Wave 1 survey was conducted just as a layoff of some 20,000 employees was ending. Following 2 years of employment gains, the year 1999 saw the division move from an employment peak of more than 105,000 at the beginning of the year to the loss of 20,000 workers by the end of the year. Wave 2 coincided with these layoffs. Unlike the pattern following previous mass layoffs, the years at the start of the new century did not see any significant rehiring. Indeed, layoffs accelerated in the aftermath of September 11 and did not stabilize at much lower levels until 2005. Wave 3 therefore occurred following a sustained period of layoffs (50,000 had left the division since early 2000) and with the prospects of additional if smaller layoffs. The final survey (Wave 4) was administered in late 2005 as employment levels stabilized at a slightly higher level than that found during the trough of 2004. The division has thus seen the total number of employees fall from a high of more than 105,000 in the late 1990s to a low of about 48,000 in 2004. Moreover, the mass layoffs that occurred affected all sections of the workforce from managers and engineers to technicians and hourly production workers.

More than cyclical changes in sales and employment however have occurred over the past 15 years. Top management implemented a series of comprehensive and significant changes in their business strategy and operations. Much of the product design work as well as the system of ordering parts were computerized. Lean production techniques modeled on the Toyota system were gradually spread to all sections of the company throughout the period of the study, thereby significantly cutting production cycle times. The manufacture and even the design of the product was increasingly outsourced to suppliers in the United States and around the world, with the concomitant repositioning of the division around what it perceived as its core competencies in design, integration, and final assembly. All these changes occurred as the company tried to absorb the resources and employees as well as the cultural dislocations brought about by the merger with one of its large competitors.

Not surprisingly, according to managers and workers, these years of change have begun to reshape the corporate culture. The organization's leadership heralded this change by repeatedly telling employees that the company should no longer be seen as a "family" but rather as a "team." The implication, of course, was that family members

were wedded to each other through powerful and unshakable emotional and psychological obligations, whereas team members would support each other only so long as there were mutual benefits from the arrangement. In the end, individual and team performance would determine the nature and longevity of the relationships. The family to team metaphor used by this company nicely illustrates the change in the implicit psychological contract between company and employee that several researchers have argued marks the current era (Cappelli et al., 1997; King, 1998). The new relationship is no longer based on a sense of mutual loyalty and trust but becomes more instrumental and calculating. Many employees in their comments to us echoed the sentiments expressed by two of their colleagues, one an hourly production worker who remarked "If I'm just a number to them, then they're just a paycheck to me" and one, an engineer with 25 years of tenure at the company, who said, "I care less and less about the company. I have no loyalty to the company. I work there because it pays the bills."

The corporate culture changed in other ways. There was now less tolerance of "free riders" or those who did not pull their weight as "lean" processes tightened standards and raised productivity expectations. Paradoxically, as the culture changed from family to team, many workers reported to us that supervision became less hierarchical and more sensitive to employee input. A 51-year-old white-collar worker with 27 years experience at the company noted that, "It used to be a 'shut up and do your job attitude' but now employees have the ability to question and make suggestions." The workplace also became more diverse as women in particular began to occupy more management positions. And as was the case with several other large corporations, the company under study had its share of executive scandals and malfeasance and subsequent changes in top management. Although for reasons of space and to avoid the identification of the company we cannot go into detail on the economic and financial performance of the company, we can report that company sales and profits rebounded by the time of our Wave 4 survey and that the stock reached record levels in 2005 after going through troubling times in the previous decade. The company and division were now seen as "winners" in the global marketplace, with a reasonably secure future over the next decade (see Table 1 for an outline of how the chronology of the organizational changes intersected with the timing of the survey waves).

We provide this thumbnail sketch of the company to indicate that the challenges it faced and the policies it pursued are shared with many other large corporations. Like other organizations, this company experienced a variety of changes, often simultaneously, that were perceived as being both positive and negative. Even the same event (e.g., a downsizing wave) was viewed positively by some (e.g., "The poor performers were laid off") and negatively by others (e.g., "I lost my whole department"). Although we do not claim that the attitudes and opinions of our sample are necessarily representative of employees across all large companies in the United States, we believe they provide a window into the thoughts of many American workers as they navigate their way through these turbulent, complex times.

**TABLE 1**  
**Chronology of Organizational Changes and Timing of Survey Waves**

<i>Survey</i>	<i>Organizational Change</i>
Wave 1 (early 1997)	End of period of layoffs (20,000 over previous 3 years) Major merger and subsequent culture change from an engineering and "family" culture to a finance and "team" culture Start of period of increased hiring (40,000 hired over next 3 years) Start of massive shift to computerization of design and parts ordering and to lean manufacturing
Wave 2 (end of 1999/start of 2000)	Start of extended period of mass layoffs; layoffs accelerate after 9/11 Computerization and lean spread across company; cycle times cut significantly
Wave 3 (2003)	Layoffs begin to slow down after 50,000 laid off since 1999 Ethics problems among top executives in 2004 and 2005
Wave 4 (end of 2005/early 2006)	Increased use of outsourcing of design and manufacturing work Modest rehiring Company working on new or redesigned products; rapid increases in orders New CEO appointed; stock price now double or triple what it was during previous survey waves

## METHOD

### Participants

Initially, 3,700 white- and blue-collar workers were selected at random, mailed a letter explaining the nature and aims of the research, and asked if they would be willing to participate in a longitudinal study that examined the work attitudes and health and well-being effects stemming from organizational change. Of these 3,700 workers, 2,279 responded. At Time 2, 1,960 of the 2,279 workers remained with the company, and 1,244 of these employees again responded to the survey; 198 left the company before the third survey wave, and of the remaining 1,046, 773 replied. In 2005, 525 of the remaining 728 provided usable data. Table 2 displays the response rate history over the course of the 10 years.

Comparison of this final sample of 525 workers to company records data reveals that the sample was similar in terms of gender (80% male in sample, 80% male in company). With respect to representation by company pay codes, the sample was under-represented by hourly workers (company percentages in parentheses): hourly 33.1% (50%), engineers 16.8% (13%), management 12.8% (10%), and secretarial, technical, professional, and administrative 37.4% (27%). Approximately 87% of the sample had received some type of post-high school education, with 45.6% of the sample achieving a 4-year college degree. The mean age of the employees at Wave 1 was 42.8 ( $SD = 7.7$ ) years, and they had served an average of 14.8 ( $SD = 7.3$ ) years with the company. Across the four time periods, in addition to the expected aging of the sample, there was little change in educational levels achieved and pay code representation, two variables that conceivably could have changed over the course of the study.

**TABLE 2**  
**Sample Sizes and Response Rate History**

<i>Time</i>	<i>Left Company Since Previous Survey</i>	<i>Mailed Survey</i>	<i>Responded</i>	<i>Response Rate (%)</i>
Wave 1 (1997)	NA	3,700	2,279	62
Wave 2 (2000)	319	1,960	1,244	63
Wave 3 (2003)	198	1,046	773	74
Wave 4 (2005)	45 <sup>a</sup>	728	525	72

a. Due to difficulties associated with company records, the number of employees leaving the company between the third and fourth waves is estimated.

### Procedure and Measures

Some 6 months prior to the dissemination of the first survey, we contacted company representatives, explained the goals of the research, and asked them for employee contact information. We also conducted scores of individual interviews and several focus groups with employees to become well acquainted with the particular stressors and changes experienced in the organization. Using this information, we constructed a survey containing numerous measures of job attitudes, health, and well-being; some of these measures were constructed specifically for this research<sup>3</sup> while the majority came from the literature. In this article, we report on those measures for which we had complete data across the four waves of data collection, selecting scales from the areas of job attitudes, organizational attitudes, work and family measures, and indices of well-being. A summary of all measures may be found in Table 3.

As mentioned earlier, we randomly selected 3,700 white- and blue-collar workers and contacted them with a letter sent to their home. The letter clarified the nature and aims of the research, explained the researchers' independence from the company, and assured respondents that their responses would remain confidential. Respondents were paid \$20 (Waves 1 and 2) or \$35 (Waves 3 and 4) for their participation. Subsequent survey administrations followed a similar procedure; however, before the second, third, and fourth survey administrations, we contacted company officials to secure up-to-date contact information for those who had participated previously. We also made a number of changes to the survey (i.e., adding and deleting measures in an effort to query respondents on those issues of greatest relevance) and on the Wave 4 survey solicited hundreds of comments about employee reactions to the changes (more than 45% of the respondents provided us with such written comments). Executive summaries of our previous survey findings were made available to any interested managers or workers.

## RESULTS AND DISCUSSION

### Analytic Strategy

To examine the over-time changes in means across the four waves of data collection, we computed a series of repeated measures analyses of covariance (controlling

**TABLE 3**  
**Description of the Measures**

<i>Variable</i>	<i>Description of Construct</i>	<i>Number of Items</i>	<i>Alpha Range<sup>a</sup></i>	<i>Source</i>
Job attitudes				
Job challenge	Degree to which one uses one's special skills and abilities on the job (e.g., "My job is very challenging.")	3	.68 to .74	Cammann, Fichman, Jenkins, and Klesh (1983)
Role overload	Enough time to complete work; fairness of amount of work, too much to do (e.g., "I have too much work to do everything well.")	3	.74 to .77	Cammann et al. (1983)
Role ambiguity	Clarity of job objectives, clarity of expectations others have for one's work (e.g., "How much of the time are your work objectives well defined?")	4	.88 to .90	Caplan, Cobb, French, Van Harrison, and Pinneau (1980)
Job stress	Degree to which one feels tense, pressured, hassled on the job (e.g., "hassled")	6	.81 to .82	Stanton, Balzer, Smith, Parra, and Ironson (2001)
Job satisfaction	Overall job satisfaction, degree to which one likes working at that organization (e.g., "In general, I like working here.")	3	.86 to .89	Cammann et al. (1983)
Job involvement	Degree to which one thinks about job, personally invested in work (e.g., "Most things in life are more important than work." Reverse scored)	8	.69 to .73	Lodahl and Kejnar (1965)
Job security	Past/present worry about job security, confidence in future employment (e.g., "At the present time, how worried are you about your job security?")	3	.81 to .84	Armstrong-Stassen (1993)
Intent to quit	Likelihood that one will seek employment elsewhere/thinks of quitting (e.g., "I often think about quitting my job.")	3	.79 to .84	Cammann et al. (1983)
Organizational attitudes				
Layoff justice	Fairness of selection and procedure of most recent round of layoffs (e.g., "During the current round of layoffs, how well has [name of company] been treating those who were let go?")	2	.56 to .70	Written for this study
Organizational commitment	Loyalty to company, desire to work for that company over other job offers (e.g., "I feel very little loyalty to [name of company].") Reverse scored)	3	.72 to .77	Lincoln and Kalleberg (1990)
Organizational attitudes support	Perception that company cares about worker's well-being, notices worker support (e.g., "[Name of company] really cares about my well-being.")	4	.88 to .90	Eisenberger, Huntington, Hutchinson, and Sowa (1986)

(continued)

TABLE 3 (continued)

<i>Variable</i>	<i>Description of Construct</i>	<i>Number of Items</i>	<i>Alpha Range<sup>a</sup></i>	<i>Source</i>
Trust management integrity	Degree to which top management is believable, trustworthy (e.g., "Top management often says one thing then does another." Reverse scored)	4	.79 to .84	Kirkpatrick and Locke (1996)
Trust management competence	Effectiveness, knowledge of work, quality of decisions by top management (e.g., "Top management doesn't know what's going on." Reverse scored)	5	.87 to .91	Dunham, Grube, and Castaneda (1994)
Family and work				
Work to family conflict	Interference of work time and responsibilities with family (e.g., "How often does your job interfere with your responsibilities at home?")	2	.81 to .83	Frone, Russell, and Cooper (1992)
Family to work conflict	Interference of family time and responsibilities with work (e.g., "How often does your home life keep you from spending the amount of time you would like to on job-related activities?")	2	.69 to .77	Frone et al. (1992)
Family focus	Degree to which one has become more devoted to family/friends over work-related duties in the past 2 years (e.g., "Compared to the past, in the last 2 years, have you become more focused on your work?" Reverse scored)	7	.66 to .74	Written for this study
Mental and physical health				
Health problems	In past year, experience of headache, back pain, heart problems, ulcers, and so on (e.g., "Have you experienced any of the following in the last year? High blood pressure")	6	.43 to .46	Modified from Moos, Cronkite, Finney, and Billings (1986) and Quinn and Staines (1977)
Depression	In past week, number of days one felt sad, lonely, could not get going (e.g., "On how many days during the past week have you felt that everything was an effort?")	7	.87 to .91	Mirowsky and Ross (1989)
Mastery	Degree of control one believes one has in dealing with life, controlling life outcomes, solving problems (e.g., "I have little control over the things that happen to me." Reverse scored)	7	.82 to .86	Pearlin and Schooler (1978)

NOTE: In all cases, scales have been scored such that higher total scores reflect greater levels of the named construct. With the exception of the health problems measure, which used a dichotomous yes or no response format, all scales used a 3-, 4-, or 5-point Likert-type response format. Alpha for the health problems scale is low due to the heterogeneous content of the specific health concerns.

a. Refers to the range of alphas obtained across the four separate survey administrations.

for age) using data from participants who answered all items across all four time periods for a given variable. Next, for each variable that showed a significant change, we performed paired comparisons between all time periods but were particularly interested in examining two types of comparisons. First, as compared to Time 1, we examined whether or not the mean values at Times 2 or 3 showed an increase, in the case of “negative” measures such as depression, or decrease, in the case of “positive” measures such as organizational support. (Recall that the extensive layoffs and most turbulent period for the company occurred during the second and third survey administrations.) Second, we looked to see whether or not the values obtained at Time 4—the time during which the company was once again financially successful and the threat of job loss was quite minimal—were significantly different from those initial values reported at Time 1. Although cautious of accepting the null hypothesis as evidence of “no difference,” we would tentatively conclude that failure to find a difference between Times 1 and 4 could be taken as support for the position that surviving employees have shown some recovery following any negative effects. Adjusted means and results from the paired comparisons, along with  $p$  values for those analyses where we examine lack of difference, are presented in Table 4.

### Mean Changes by Variable Category

*Job attitudes.* The pattern of means for the job attitude variables shows a clear trend: For all variables, we see a significant change at either Wave 2, Wave 3, or both Waves 2 and 3 as compared to Wave 1. The direction of the change is uniformly negative. Respondents report more role ambiguity, less job satisfaction, less job involvement, less job security, and more intent to quit—changes that are all consistent with descriptions of an organization in the midst of much change and turmoil, with Waves 2 and 3 dominated by mass layoffs. Respondents also report, however, less job challenge, less role overload, and less job stress during Waves 2 or 3—suggesting a period with fewer work demands, probably in response to weaker sales and to the internal reorganization of work processes. At Wave 4, however, all variables, save job involvement, have returned to levels that are not significantly different from the values reported at Wave 1. Only job involvement shows a drop at the second and third time periods that fails to return to previous levels by the time of Wave 4.

*Organizational attitudes.* With a few exceptions, organizational attitudes demonstrate a similar pattern to job attitudes. For the two measures of trust in top management (management integrity and management competence), we see the same significant drop at Waves 2 and 3 with a return to values reported at Wave 4 that are not significantly different from the values obtained at Wave 1. In the case of organizational support, respondents also report decreases at Times 2 and 3, but Time 4 levels actually surpass those at Time 1, results that are consistent with comments made to us by several managers and workers that the company moved toward a more participatory style of management that encouraged communication and employee involvement and responsibility. However, Time 4 levels of organizational commitment fail to return to those obtained at Time 1, an issue we return to in the following section.

**TABLE 4**  
**Adjusted Scale Means<sup>a</sup> Across the Four Survey Administrations and Results of the Paired Comparisons**

<i>Variable</i>	<i>Possible Scale Range</i>	<i>Wave 1 (W1; 1997)</i>	<i>Wave 2 (W2; 2000)</i>	<i>Wave 3 (W3; 2003)</i>	<i>Wave 4 (W4; 2005)</i>	<i>Significant After W1 or at W2, W3?</i>	<i>Significant Difference Between W1 and W4?</i>	<i>Other Significant Differences?</i>
Job attitudes								
Job challenge	3 to 15	10.17	10.11	9.90	10.38	Yes, at W3	No ( $p = .08$ )	
Role overload	3 to 15	9.39	8.88	9.30	9.36	Yes, at W2	No ( $p = .78$ )	
Role ambiguity	4 to 20	8.27	8.43	8.65	8.36	Yes, at W3	No ( $p = .57$ )	
Job stress	0 to 18	10.85	10.10	10.45	10.58	Yes, at W2	No ( $p = .34$ )	
Job satisfaction	3 to 15	11.36	10.58	10.29	11.26	Yes, at W2 and W3	No ( $p = .37$ )	
Job involvement	8 to 40	22.88	21.60	21.72	22.13	Yes, at W2 and W3	Yes ( $p = .00$ )	
Job security	3 to 12	8.74	7.60	6.26	8.56	Yes, at W2 and W3	No ( $p = .14$ )	
Intent to quit	3 to 15	6.42	7.54	7.67	6.32	Yes, at W2 and W3	No ( $p = .54$ )	
Organizational attitudes								W3 significant from W4
Layoff justice	2 to 8	5.77	5.70	5.66	5.84	No	No ( $p = .31$ )	
Organizational commitment	3 to 15	10.05	8.87	8.55	9.71	Yes, at W2 and W3	Yes ( $p = .00$ )	
Organizational support	4 to 20	10.29	9.49	9.24	10.73	Yes, at W2 and W3	Yes ( $p = .00$ )	
Management integrity	4 to 20	10.34	8.95	8.82	10.15	Yes, at W2 and W3	No ( $p = .21$ )	
Management competence	5 to 25	13.49	11.58	12.06	13.56	Yes, at W2 and W3	No ( $v = .77$ )	
Family and work								
Work to family conflict	2 to 8	4.87	4.43	4.50	4.44	Yes, at W2 and W3	Yes ( $p = .00$ )	
Family to work conflict	2 to 8	3.39	3.14	3.20	3.22	Yes, at W2 and W3	Yes ( $p = .00$ )	
Family focus	0 to 7	2.77	3.80	3.82	3.67	Yes, at W2 and W3	Yes ( $p = .00$ )	
Mental and physical health								
Health problems	0 to 6	1.78	1.86	2.16	2.11	Yes, at W3	Yes ( $p = .00$ )	
Depression	0 to 49	7.24	7.32	7.94	6.41	No	No ( $p = .05$ )	W2 and W3 significant from W4
Mastery	5 to 35	26.18	26.37	26.08	26.80	No	Yes ( $p = .00$ )	W2 and W3 significant from W4

a. All means are adjusted for age.

Layoff justice shows relatively little change; it is only the comparison between Times 3 and 4 that reaches a level of significant difference.

*Work and family.* The three variables in this category (i.e., work to family conflict, family to work conflict, and greater focus on family, friends, and leisure activities) all “pit” the domains of work and nonwork against each other. In this sense, they shed light on the relative importance of each arena and particularly in the case of the focus on work versus nonwork variable, the degree to which one is engaged with work relative to family and other nonwork-related activities. Although the drops in work to family and family to work conflict may seem counterintuitive—indeed, as work becomes more tumultuous, one could posit some negative “spillover” between the domains of work and family—they are consistent with the lower work demands interpretation offered earlier to explain the declines in the job challenge and stress variables at Times 2 and 3. The fact that they are still lower at Time 4 than at Time 1 might also suggest that workers have managed to better segregate the two domains or that they have reappraised the relative importance of the two in their lives such that they feel less need to trade off one against the other. Although the maturation of the sample over the course of the study confounds the picture somewhat, an issue we return to in the next section, the interpretation of a reappraisal is supported by examining the pattern of means of the job involvement and organizational commitment variables alongside those of the work versus nonwork focus variable. What we find is that as workers become less engaged in their work and less committed to their organization, they begin to report that they devote more of their time and allegiance to friends, family, and leisure activities. This shift endures even at Time 4 when the company has recovered and the organization seems to be in a more tranquil state. Thus, although several of the job attitude and to a lesser extent, organizational attitude variables reflect that workers regain their sense of security, satisfaction, and so on, the 10-year roller-coaster experience does seem to have significantly lowered their commitment to their work life relative to other life domains.

*Mental and physical health.* The three variables in this category present a somewhat mixed picture. On the one hand, relative to Time 1, reported health problems show an increase at Time 3 that remains at that level at Time 4. However, depression and mastery values are most positive at Time 4, significantly so as compared to Time 1 in the case of mastery. (For both variables, Times 2 and 3 are not significantly different from Time 1, but they are different relative to Time 4.) The data on health symptoms are consistent with two related interpretations: first, that it might take some time for symptoms of poor health to manifest themselves and second, that there may be some cumulative impact of going through repeated difficult work events. Surviving and getting through the storm however is associated with less depression and slightly higher levels of mastery, suggesting some degree of psychological recovery and perhaps strengthened confidence in one’s abilities to cope with uncertainty and change.

## CONCLUSION

The workers in our longitudinal sample lived through a difficult and turbulent 10 years of change. They were among the survivors who witnessed the layoffs of thousands of their work colleagues. They adapted to a radically different way to organize the work process and endured numerous changes in top management and in management directives and programs. These multiple changes created anxiety and uncertainty among them and, as we saw, produced deterioration in many of their attitudes to their work and to the organization. But at Time 4 there was a noticeable rebound. Most of their views about their work and the organization recovered to Time 1 levels. The rebound in attitudes at Time 4 coincided with the spectacular upturn in the economic fortunes of the company and a modest expansion of the labor force. The sense of uncertainty diminished as job security and intentions to quit improved. But as we have pointed out, the rebound in economic performance coincided with and perhaps was even linked to the new work processes and more relational and less hierarchical management styles that were adopted and became established by the Time 4 survey. Work was now seen as more challenging and satisfying, the organization was seen as more supportive of workers, and management was viewed as more competent and as having more integrity. Although we cannot disentangle the relative contributions of the economic recovery of the company, the new work processes, or the change in management approach to the rebound in work attitudes at Time 4, we do believe, based on our qualitative data, that each played some role in the rebound. Here are two fairly typical examples of employee comments.

A 61-year-old engineer with 35 years work experience at the company noted the transformation in the fortunes of the company:

The [company] in which I have worked most of my career is flourishing and this has made a tremendous change in the workplace for me personally and I think for many of my colleagues. All of my fellow workers want to believe we are working for a very technically capable, ethical, world leading company.

A 45-year-old production worker points to both "lean manufacturing" and "the new management style" for his improved attitudes. He stated, "I feel more responsible and respected. [I'm] allowed to make decisions and [I'm] asked for my input."

But some attitudes and orientations did not return to Time 1 levels. Workers never quite regained the levels of job involvement or organizational commitment they had at Time 1, although the trend was one of improvement. Of special interest is the apparent shift in these workers' relative engagement with their work as compared to other life domains. The shift to increased devotion to their family, friends, and leisure activities occurs at Time 2 and continues through Time 3 and 4. Does this portend a reappraisal of values and an enduring shift in their commitment away from work? Although we are wary of overinterpreting this result, we think it raises interesting questions in relation to the ideas of certain commentators who speculate about how the changes in work and organizations are reshaping personal values and character. In a recent book on the personal consequences of work in the new economy, Richard Sennett (1998) argues that many of the workplace changes currently

underway corrode trust, loyalty, and mutual commitment. The reigning principle in this new economy becomes “no long term” and this makes durable commitments more risky and tenuous. As we saw, involvement in one’s job and commitment to the organization are the two work-related attitudes that failed to recover to their previous levels. And when work is pitted against other important activities, many workers express stronger commitments to their families, friends, and leisure pursuits relative to their Time 1 levels. Sennett suggests that the corrosive effects of this short-termism will not only affect the employment relationship but that it will change our character and thus spill over to other domains. While there might be some evidence that the strength of marital relationships and community involvement have weakened over time (Putnam, 2001), we see no evidence in our limited data to support the view that in their attitudes workers have abandoned their strong expressed devotion to their families and friends. Neither do we see support for Hochschild’s (1997) contention that the harried home lives of modern families result in increasing numbers of workers viewing work as a haven from the stresses of the home rather than the more traditional view of seeing home as a haven from the stresses of work. For the 7 years of data we have (the question was only asked at Waves 2, 3, and 4), some 95% of our respondents consistently reported that compared to the past, they had not come to see work as a haven from the stresses of home.

Because we do not have a control group against which to compare our findings, we cannot rule out the possibility that our results are the product of normal maturation or employee response to some larger societal event, such as 9/11. For example, health problems increased over time—something that could reflect the cumulative impact of multiple stressors associated with organizational change or merely the normal effects of aging. Despite the fact that we controlled for age in our analyses, we note that this procedure controlled for age effects within each time period; it did not remove the impact of aging in our sample.

To this criticism, we offer the following. First, we would point out that for most of our variables, particularly in the case of the job and organizational attitudes, we see a rise and fall that maps quite clearly onto company events as described previously. The mean scores over time also corroborate the qualitative comments made to us in interviews, focus groups, and on the Wave 4 survey. Second, we examined means over time by various age categorizations (i.e., younger than 35, 35 to 44, 45 to 54, and older than 55 at Time 1), reasoning that if maturation effects (i.e., normal age-related changes) rather than effects due to organizational change were responsible for the differences, they would be revealed by significant interactions (i.e., age categorizations by over-time changes in a given variable). For the vast majority of these post hoc analyses, we found no significant interactions.<sup>4</sup> Although it was not uncommon to find mean group differences on many of the variables across the four time periods, the trend lines of the means did not significantly differ across the four age groups (e.g., job security was higher for the oldest group at each time period, but the trend lines of the four groups demonstrated a U shape across the time periods).

A second concern revolves around the possibility of response bias such that those who responded to all four surveys differed in some systematic way from those who did not respond. This would of course affect the generalizability of the findings. To check

for response bias we compared those who answered all four surveys to (a) those who responded only to Waves 1 on Time 1 scores, (b) those who responded to only Waves 1 and 2 on Time 2 scores, and (c) those who answered only Waves 1, 2, and 3 on Time 3 scores (Table 5). The comparisons were conducted on the 19 variables listed in Table 3. Comparing the means of the 4-wave sample to those who only answered Waves 1, Waves 1 and 2, or Waves 1, 2 and 3, we found 9 statistically significant differences in the 57 comparisons. So for example, we see that those who answered Wave 1 only were slightly less satisfied with their jobs (11 vs. 11.4) and had higher intent to quit (6.9 vs. 6.4) and depression (8.4 vs. 7.1) scores. Those who answered only Waves 1 and 2 were slightly more involved in their job and had somewhat higher depression and intent to quit scores. Those who answered Waves 1, 2, and 3 differed only on the degree of family to work conflict. While those who dropped out of the study after Wave 1 or Wave 2 had higher depression scores than the final sample, on the vast majority of variables, those in the 4-wave sample were not significantly different from those who dropped out of the study, including on symptoms of poor health and sense of mastery. Overall therefore, the evidence does not clearly suggest the existence of systematic differences in individual characteristics or attitudes between the 4-wave sample and those who dropped out before Time 4. For that reason, and because we followed the same cohort across the 10 years and document both declines and recovery in their attitudes, we do not believe that our explanation of employee resilience in the face of organizational change is likely due to the sample being disproportionately composed of individuals with more resilient personalities.<sup>5</sup>

We are aware that this company may differ from other large global corporations. Its turnaround was quite remarkable, partly based on its actions but perhaps also partly on some fortuitous circumstances. We do not know if employee reactions would have rebounded as well if the company had experienced only a marginal turnaround or continued to struggle (e.g., as is the case with Ford Motor). There may also be some business practices—not implemented at this company—that would irrevocably damage job and organizational attitudes. Even though unpopular, the mass layoffs around the third wave survey, for example, seemed to be reasonably well understood and accepted in the aftermath of 9/11. It is also the case that our results come from a survivor sample and do not include the experiences of those who were laid off or left the company over the decade. Moreover, there are aspects of the competitive and cyclical nature of the industry that tend to give credence to the economic rationale the company gave for layoffs that may not exist in other industries. Although the layoffs were unpopular and caused much insecurity and anxiety, they were accepted as necessary by many workers.

Despite these caveats, the longitudinal data presented here suggest that employees are resilient in the face of difficult changes, even as they endure some damage to their sense of well-being. However, there are signs that the new psychological contract—the movement from “family” to “team”—can cut both ways. When employers weaken their obligations to employees, employees can not only physically quit the team, as some of the more valued employees with in-demand skills did in this company during the downsizing waves, but they may also begin to withhold some of their emotional engagement from their work and employer and perhaps shift some

**TABLE 5**  
**Scale Mean Comparisons Between Continuing Participants Versus**  
**Participants Who Dropped Out After Time 1, Time 2, and Time 3**

Variable	Data					
	Time 1		Time 2		Time 3	
	Only Wave 1	All 4 Waves	Waves 1 and 2	All 4 Waves	Waves 1, 2, and 3	All 4 Waves
Job attitudes						
Job challenge	10.3	10.2	10.1	10.1	9.9	9.9
Role overload	9.3	9.4	9.1	8.8	9.1	9.2
Role ambiguity	8.3	8.3	8.7	8.4	8.6	8.7
Job stress	10.9	10.8	9.7	9.9	10.4	10.4
Job satisfaction	11.0	11.4*	10.3	10.6	10.4	10.2
Job involvement	22.9	22.9	22.4	21.6*	22.2	21.7
Job security	8.7	8.7	7.8	7.6	6.4	6.3
Intent to quit	6.9	6.4*	8.0	7.4*	8.1	7.7
Organizational Attitudes						
Layoff justice	5.6	5.8	5.7	5.7	5.7	5.6
Organizational commitment	9.9	10.0	8.8	8.9	8.7	8.5
Organizational support	10.1	10.3	9.6	9.5	9.5	9.2
Management integrity	9.9	10.3*	9.2	8.9	8.9	8.7
Management competence	13.0	13.6*	11.7	11.7	12.3	12.0
Family and work						
Work to family conflict	4.8	4.9	4.3	4.4	4.4	4.5
Family to work conflict	3.5	3.4	3.2	3.1	3.4	3.2*
Family focus	2.7	2.8	3.6	3.8	3.7	3.8
Mental and physical health						
Health problems	1.9	1.8	1.9	1.8	2.1	2.1
Depression	8.4	7.1*	8.7	7.3*	8.6	8.0
Mastery	26.2	26.2	27.0	26.5	26.2	26.1

\* $p < .05$  for the mean comparison between groups for a given time period.

of their commitment to their nonwork lives. Although we cannot be sure whether this change will endure into the foreseeable future without conducting additional surveys of this cohort, the scores of employee comments made to us suggest that many of these employees were permanently scarred by the major disruptive changes they endured. As one female employee told us, deep emotional ties, like "loyalty, devotion, even love" were broken as a result of these changes. Such deep emotional feelings are, as George and Jones (2001) contend, the triggers for individuals to change both the way they view the organization and how they behave in relation to it. Moreover, if there is a "hierarchy of changeability" among individual characteristics, such that some characteristics are more difficult to change because they are more deeply rooted in our sense of self, then it probably requires events of large magnitude and long duration to change them (Woodman & Dewett, 2004). Repeated mass layoffs over several years and disruptive mergers are events that can create acute emotional reactions and a reappraisal, perhaps even a "disidentification," of employees' relationship to the organization (Kreiner & Ashforth, 2004). A sizeable number of employees in our study tended to agree with the sentiments of another female white-collar worker who told us that in response to what the organization had become,

she would do her 8 hours but “my loyalty is to my family, friends, and community in that order.”

We would like to point out two implications for those researching the effects of organizational change. First, there is the importance of examining patterns of attitudinal or, for that matter, behavioral measures at frequent intervals over extended periods of time. If we had only collected data for Time 1 and 2 we would have missed the rebound in most of the attitudinal scores. Similarly, if we had only measured attitudes at Time 1 and Time 4 we would have erroneously concluded that there had been great stability in employee attitudes (see Griffin, 1991, for the same point). Unfortunately, there are no clear guidelines about what the appropriate duration or timing should be in conducting longitudinal studies. Panel designs have the advantage of providing baseline data and then enabling researchers to map individual changes onto organizational changes, that is, to connect the process of change in human consciousness to sequences of collective events and actions in the organization (Pettigrew et al., 2001). Ideally, such studies should track employees over their whole employment histories, from first hiring to retirement. But in addition to the obvious practical difficulties (e.g., funding and company permission) in conducting such long-term research, there are serious problems of sample attrition to contend with, especially if employee turnover increases as some expect. With these unavoidable caveats in mind, we believe there are fruitful avenues for future research. One is for additional longitudinal research that examines the impact of the economic and organizational changes currently underway in a broad variety of industries and countries. We will then be better able to assess the generalizability of our findings across different economic and sociocultural locations. Another avenue flows from the fact that our sample is an aging one, with a large number of baby boomers who are approaching retirement. A key question therefore is how the post-baby boom generations will respond to these new organizational realities as they comprise an increasing part of organizational workforces. Will they have different work expectations and values from their predecessors? Will they be as committed to their work roles or organizations? And are they more likely to embrace and to react more positively to ongoing and disruptive organizational change than the employees in our study (Smola & Sutton, 2002)?

Second, the changes in attitudes that we report suggest that employee attitudes fluctuate over time in response to and somewhat in concert with organizationally initiated change. Although this finding in no way resolves the debate between those who argue that attitudes toward one's job are stable over time due to some persistent personality trait (what has been called the “dispositional approach”) and those who contend that such attitudes are shaped by encountered work conditions (“the situational approach”), the U-shaped pattern in most employee attitudes does suggest that managerial actions do have significant if modest consequences (Davis-Blake & Pfeffer, 1989; Kalleberg & Mastekassa, 2001). Managers embarking on such large-scale and pervasive organizational change might want to reflect on the human costs of such decisions and consider that any damage to employee attitudes and well-being might take many years to recover.

## NOTES

1. In some of our other work we have examined the impact of layoffs on survivors' mental and physical health (Grunberg, Moore, & Greenberg, 2001) and on their organizational commitment and job performance (Grunberg, Anderson-Connolly, & Greenberg, 2000). This article is the first to report findings from the four-wave panel study.

2. Because of agreements with the company we cannot provide more specific or detailed information about its operations.

3. The shift in focus scale, developed specifically for this study, comprised the following questions. Compared to the past, in the last 2 years, have you: (a) devoted more time to your family, (b) devoted more time to your friends, (c) devoted more time to leisure activities, (d) become more focused on your work, (e) become more ambitious in your work, (f) become more willing to turn down a promotion in order to spend time doing other things, and (g) decided to work less overtime in order to spend time doing other things? Respondents could answer yes or no to each question. A two-item measure of layoff fairness, also developed for this study, was comprised of the following items: (a) During the current round of layoffs (time frame), how fair was the procedure that (name of company) used to select those who were to be let go? and (b) During the current round of layoffs, how well has (name of company) been treating those who were let go? For both items, participants indicated their response on a 4-point scale anchored from *very fair* to *not fair at all* (first item) and *very well* to *not well at all* (second item).

4. In the few cases where the interactions were significant, the trend lines showed that some age cohorts recovered sooner than others. For example, on organizational commitment, the scores of the younger-than-35 age group began to turn upward after Wave 2 rather than after Wave 3 as occurred for the other three age groups. The two youngest age groups also showed a drop in their intent to quit after Wave 2, whereas the drop occurred after Wave 3 for the two oldest groups. On a couple of other variables (i.e., layoff justice and symptoms of poor health), there was no clear pattern to differentiate the four age groups. Although not the focus of this article, we also note that there were few differences in the overall pattern of employee responses, either by gender or by managerial status. However, we did find an interesting statistically significant difference on the shift in focus away from work variable. Managers at the start of our study reported much lower scores than nonmanagers (1.8 vs. 2.9), but by Time 4 that difference had virtually disappeared (3.2 vs. 3.3). If such a trend were replicated across other companies, this might portend a worrying development for top executives, indicating a significant disengagement from work among those previously most committed.

5. This is a complex question to resolve satisfactorily given that those who dropped out of the sample over the 10 years include some who left the company and some who for various reasons chose not to continue to participate. It is possible that less resilient individuals were either laid off or chose to leave, thus biasing the remaining pool of potential respondents. However, we note that layoffs among the blue-collar workforce were conducted according to seniority, with those with least seniority going first, and there is no reason to believe that these workers would necessarily have less resilient personalities. As to those who chose to drop out of the study, we can think of no good reason why they would tend to have less resilient personalities.

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