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Person–organization (culture) fit and employee commitment under conditions of organizational change: A longitudinal study ☆

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ABSTRACT

This longitudinal study examines how person–organization fit, operationalized as congruence between perceived and preferred organizational culture, relates to employees' affective commitment and intention to stay with an organization during the early stages of a strategic organizational change. Employees in a large energy company completed surveys before (N = 687) and after (N = 627) the change. We measured perceptions and preferences with regard to four components of organizational culture (human relations, open systems, internal process, and rational goal) derived from the Competing Values Model (Quinn, 1988), as well as affective commitment to the organization and intention to stay. Using polynomial regression and response surface analyses, we found that both perceived culture and culture fit related positively with the criterion variables within and across time. The strongest evidence for relations involving fit was obtained for those components of culture specifically targeted for change. Implications for future research and the management of organizational change are discussed.

1. Introduction

The notion that people adapt best when there is a good person–environment (P–E) fit has a long tradition in psychology. Indeed, P–E fit has become a dominant concept in the discipline as a whole (Schneider, 2001), and the belief that it relates positively to adjustment at work has become "almost axiomatic" (Kristof-Brown, Zimmerman, & Johnson, 2005; p. 283). Therefore, it is not surprising that fit, particularly person–organization (P–O) fit, has been identified as a potentially important factor in the development and maintenance of employee commitment to organizations (Meyer & Allen, 1997; Mowday, Porter, & Steers, 1982). Recent meta-analytic reviews of research conducted to test this proposition provide what appears to be strong supporting evidence (Kristof-Brown et al., 2005; Verquer, Beehr, & Wagner, 2003).

The present research follows from this strong theoretical tradition and was intended to contribute further to our understanding of the implications of P–O (culture) fit for employee commitment and intention to stay with an organization. Our objectives were to address two specific concerns that have been raised about the current body of research: one pertaining to methodology and the other to research context. The methodological issue concerns the use of direct and indirect measures of fit. Edwards (1994; Edwards & Parry, 1993) noted that use of these measures involves untested assumptions concerning the importance of fit *per se* in the explanation of variance in criterion measures such as commitment. As an alternative, Edwards

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and his colleagues advised the use of polynomial regression and response surface analyses because these provide a direct test of the assumptions underlying the use of direct and indirect measures. Studies that used these or related analyses (e.g., Finegan, 2000; Kalliath, Bluedorn, & Strube, 1999; Ostroff, Shin, & Kinicki, 2005; Van Vianen, 2000; Vandenberghe & Peiro, 1999) have provided less consistent evidence for fit effects than is implied by the meta-analytic reviews noted above.

The issue of context was raised by Harris and Mossholder (1996), who noted that most research examining links between P–O fit and affective outcomes (e.g., job satisfaction and organizational commitment) were conducted under conditions of relative stability. Harris and Mossholder argued that organizations today are under tremendous pressure to institute changes in their strategy and structure, and that these changes have implications for culture and culture fit. Therefore, they suggested that "there is a critical need to understand if and how such changes influence the affective implications of individual-culture congruence" (p. 527). Harris and Mossholder conducted what to our knowledge is the only study examining individual-culture congruence under conditions of organizational change; they found that the discrepancy between employees' perception of culture and their ideal culture accounted for significant variance in their commitment. However, this study was limited by the fact it involved the use of an indirect (i.e., discrepancy) measure of fit. It was also a static analysis and did not address how culture fit relates to commitment and change in commitment over time.

Our objective in the present research was to address Harris and Mossholder's (1996) call for more research on the implications of culture congruence under conditions of organizational change, and to extend their study by examining relations within and across time using polynomial regression and response surface analyses as advocated by Edwards (1994). More specifically, we attempted to answer two basic questions. First, does P–O fit, operationalized as congruence between perceived and preferred organizational culture, relate to employee commitment and intention to stay in an organization under conditions of organizational change? Second, does P–O fit prior to the change predict commitment and intention to stay following change? That is, do employees with good fit prior to the change become less committed to the organization following change, or does pre-change fit contribute to a strong commitment that sustains itself as the change unfolds?

We attempted to answer these questions by measuring employees' pre- and post-change perceptions of, and preferences for, organizational culture, along with their commitment to, and intentions to stay with, an organization undergoing a planned change in strategy, structure, and culture. To provide a rationale for our hypotheses, we begin with a summary of conceptual and methodological issues common to P–O fit research. We then provide a brief review of previous research examining the relations between P–O fit and employee commitment and intention to stay. Finally, we elaborate on our objectives and hypotheses in the context of previous findings and the specific change initiative under investigation.

1.1. P–O fit research: Conceptual and methodological issues

Conducting P–O fit research requires a number of strategic decisions that can have important implications for the interpretation of results. The various strategies and their implications have been discussed in detail elsewhere (Edwards, 1994; Kristof, 1996; Kristof-Brown et al., 2005; Ostroff et al., 2005), and therefore we focus here on issues of particular relevance to the design of the current study. These include the form of P–O fit to be addressed, the theoretical framework used to guide the development of hypotheses, and the measurement and data analytic strategies used to test these hypotheses.

1.1.1. Form of fit

P–O fit can be conceptualized in different ways and take different forms depending on the person and organization characteristics and outcomes of interest (Muchinsky & Monahan, 1987). Therefore, these characteristics and outcomes must be taken into account in formulating hypotheses. In this study we were interested in the fit between employees' perceptions of and preferences for organizational culture. We chose to focus on perceptions, or *subjective fit*, rather than comparisons with more objective indicators, because recognition of fit or misfit has the strongest and most direct impact on psychological reactions (cf. Cable & Edwards, 2004; Edwards & Cable, 2009).

Culture is a value-laden construct, and, like values fit, culture congruence falls under the rubric of *needs-supplies fit* (Kristof-Brown et al., 2005). That is, employees' needs are reflected in their preference for a particular culture, and congruence exists when the organization supplies conditions (i.e., through its policies and practices) that satisfy these needs. Based on the assumption that employees' preferences reflect the ideals against which they evaluate the current culture, we expected that deviations (misfit) in either direction (oversupply or undersupply) would be experienced as equally negative and would therefore be accompanied by lower commitment and intention to stay.

1.1.2. Theoretical framework

Ostroff et al. (2005) recently noted that one of the limitations of previous research on value congruence, a concept closely linked to culture congruence, has been the failure to start with a well-developed theoretical structure. They argued that the Competing Values Model (CVM) developed by Quinn and his colleagues (Cameron & Quinn, 1999; Quinn, 1988; Quinn & Kimberly, 1984) provides such a structure. Therefore, like Ostroff et al., we based our measures and developed our study hypotheses on the CVM. This model is particularly well suited to the present investigation because it acknowledges the interdependence of organizational strategy, structure, and culture – the key targets of change in the participating organization.

The CVM was developed initially as a method of categorizing competing theories of organizational strategy and design. According to Quinn and Rohrbaugh (1981), design theories vary along two primary dimensions: control versus flexibility and internal versus external focus. Plotting these two independent dimensions creates four quadrants, each reflecting a distinct

type of organizational structure with incumbent objectives, strategies, management styles, and criteria for success. The CVM was subsequently adapted as a framework for the study of organizational culture when it was recognized that organizations typifying the four quadrants have different cultural values (Quinn & Kimberly, 1984).

Although the labels assigned to the four quadrants vary somewhat, following Ostroff et al. (2005) and others (e.g., Kalliath et al., 1999), we refer to them hereafter as human relations (flexible, internal), open systems (flexible, external), internal process (control, internal), and rational goal (control, external). Organizations with strong emphasis on *human relations* tend to consider employee morale and development to be important end states, and promote loyalty, trust, and teamwork as means to these ends. Those with an *open-systems* orientation strive toward innovation and growth by encouraging risk-taking and creativity. Organizations typifying the *internal process* quadrant use bureaucratic control strategies in an effort to increase timeliness and efficiency. Finally, organizations with a strong *rational goal* orientation evaluate their success in terms of goal attainment and competitiveness, and emphasize efficiency, productivity, and accountability in their management practices. The cultures of most organizations are not the pure types identified in the CVM. Rather, they can reflect characteristics from all four of the CVM quadrants to varying degrees. Indeed, Cameron and Quinn (1999) argued that there are benefits to having structural characteristics and values from all four quadrants, but that the optimal mix will depend on the organization's objectives and the environment in which it is operating. Therefore, hereafter, we refer to human relations, open systems, rational goal, and internal process as *components* of an organization's culture.

1.1.3. Measurement and data analysis

The most common strategy for examining relations between P–O fit and its potential outcomes has been to use direct or indirect measures of fit in correlation or regression analyses (Kristof-Brown et al., 2005; Verquer et al., 2003). Direct measures of fit require employees to rate the degree of fit between themselves and the organization on characteristics such as goals or values (e.g., Cable & Judge, 1996; Saks & Ashforth, 1997). The use of indirect measures involves the calculation of an index of fit (e.g., correlation) or misfit (e.g., algebraic or squared difference score) based on independent ratings of personal and organizational characteristics (e.g., Boxx, Odom, & Dunn, 1991; Bretz & Judge, 1994). Edwards and his colleagues (e.g., Edwards, 1994; Edwards & Parry, 1993) have been critical of this approach because it *assumes* that the measured or computed similarity (or difference) between the person and organization is responsible for observed relations with an outcome measure. As an alternative, they advocated the use of polynomial regression and response surface analyses because these permit a direct test of this underlying assumption.

The use of polynomial regression and response surface analyses requires that the researcher specify in advance how the person and organization characteristics are expected to relate to the criterion variables of interest. These hypothesized relations can then be modeled and tested for accuracy. If the hypothesized relations are not supported, the analyses can provide useful information about the nature of the relations to guide future research. This is the approach we used in the present study. Before presenting our specific hypotheses, we summarize relevant findings from previous research.

1.2. P–O fit and employee commitment: A review of previous research

Like most P–O fit research, studies examining employee commitment and intention to stay as outcomes have typically used direct or indirect measures of fit. Two recent meta-analytic reviews of these studies concluded that P–O fit, particularly value fit, relates positively to affective commitment and intention to stay (Kristof-Brown et al., 2005; Verquer et al., 2003). The majority of studies included in these reviews were conducted under conditions of stability (or, at least, change was not identified as an issue of concern). In the one study we are aware of in which P–O fit was examined specifically in the context of organizational change, Harris and Mossholder (1996) found that congruence between employees' perceptions of the organization's culture and their ideal culture was generally associated with higher levels of commitment.

As noted earlier, the findings of P–O fit studies using polynomial regression or related analytic techniques (e.g., Finegan, 2000; Kalliath et al., 1999; Ostroff et al., 2005; Van Vianen, 2000; Vandenberghe & Peiro, 1999) have provided less consistent evidence of fit effects. Indeed, the findings vary both within and across studies. In several studies, perceptions of personal or organizational characteristics alone or in combination accounted for substantial variance in commitment, and congruence accounted for little or no additional variance. We focus our attention here on the studies by Kalliath et al. and Ostroff et al. because they have several features in common with the current investigation. Specifically, they assessed subjective P–O fit using measures derived from the CVM framework and used polynomial regression and response surface analyses to test their hypotheses.

Both Kalliath et al. (1999) and Ostroff et al. (2005) hypothesized that a good fit between an employee's personal values and his/her perceptions of the organization's values would be associated with stronger commitment, and that a mismatch in either direction would be accompanied by lower commitment. Ostroff et al. found mixed support for this hypothesis in a sample of bank employees. When commitment was the criterion of interest, they found supporting evidence for three of the CVM values (the only exception was rational goal values). With turnover intention as the criterion, they found evidence for a negative relation with fit only for open systems values. In all other cases, the relations involving personal and perceived organizational values were independent and additive.

Kalliath et al. (1999) measured personal and perceived organizational values in a sample of hospital employees. They found no evidence that value congruence contributed beyond the independent and additive effects of personal and organizational values in explaining variance in employees' commitment to the organization. They argued that, regardless of fit,

strong organizational values alone might contribute to commitment by serving to reduce uncertainty. They also suggested that employees with strong personal values might have a more positive outlook than those with weak values, and that this positive outlook might contribute to a better relationship with their organization.

Together, the results of these studies suggest that the values inherent in the four CVM components of culture are potentially important in the formation of commitment, but that the relevance of fit *per se* might vary across values, outcomes, and situations. This is a more qualified conclusion than is typically drawn in meta-analytic reviews of studies using direct or indirect measures of fit. Thus, there is clearly a need for more research to clarify the implications of P–O fit for employee commitment and decisions to stay with the organization. As noted earlier, there is a particularly strong need to examine the implications of P–O fit under conditions of organizational change.

1.3. Purpose and hypotheses

Our objectives in this study were to examine the relations between P–O fit (culture congruence) and employee commitment and intention to stay, within and across time, during a large-scale organizational change. Our hypotheses were based on P–O fit theory and the results of the polynomial regression studies described above. We also took into account the nature of the change context within the participating organization, particularly in developing hypotheses pertaining to time-lagged relations.

1.3.1. Within-time relations

Based on the notion that culture preferences reflect employee needs and perceived culture reflects the organizational supplies, we expected that employee commitment and intention to stay would be greater when there was a match between perceptions and preferences than when there was a mismatch in either direction. Although findings in support of this hypothesis have been mixed in studies using polynomial regression and response surface analyses (e.g., Kalliath et al., 1999; Ostroff et al., 2005), there were too few such studies for us to develop hypotheses regarding specific situational moderators. Therefore, like the previous investigators, we hypothesized that congruence between perceived and preferred culture would relate positively with commitment and intention to stay for all four of the CVM components of culture. However, the relevance of context was left open as a research question. As we explain below, the focus of the change itself could have implications for the salience of the different culture components and the relative impact of congruence.

Hypothesis 1. For all four CVM culture components, commitment and intention to stay will be stronger, both prior to and following the organizational change, when perceptions of the culture match employees' preferences than when there is deviation in either direction.

1.3.2. Time-lagged relations

In addition to within-time relations, we were interested in how perceived culture and culture congruence prior to a change relates to commitment as the change unfolds. As we describe in Section 2, the participating organization was undergoing a strategic change in response to deregulation of the energy sector in Canada. An important component of the change was a shift in culture. In CVM terminology, senior management's plan was to move the company away from its existing internal process orientation and toward a stronger rational goal and open-systems orientation. Although human relations were expected to remain a priority, they were not specifically targeted for change.

The implications of culture and culture congruence under conditions of change involves somewhat of a paradox. On the one hand, pre-change congruence should be associated with strong affective commitment, and such commitment has been found to relate positively to support for organizational change initiatives (e.g., Herscovitch & Meyer, 2002; Neubert & Cady, 2001). On the other hand, a change in culture could undermine fit and therefore weaken commitment (Meyer, Allen, & Topolnytsky, 1998). In light of the evidence linking commitment to support for change, we hypothesized that culture fit prior to a change would relate positively to commitment following the change, but that this relation would be due in large measure to the effects of congruence on pre-change commitment. When this stability in commitment is statistically controlled, we expected that pre-change culture preferences would exert independent effects on post-change commitment. For those components of culture being strengthened (i.e., rational goal and open systems), we predicted that pre-change preference ratings would relate positively with post-change commitment, whereas for the component targeted for reduction (i.e., internal process), the relation should be negative. We expected a similar pattern of findings for intention to stay with the organization.

Hypothesis 2. For all four CVM components, commitment and intention to stay following the change will be stronger when pre-change perceived culture ratings match preferred culture ratings than when there is deviation in either direction.

Hypothesis 3. For all four CVM components, when the relevant pre-change criterion variable is controlled, the relations between culture fit prior to the change and both commitment and intention to stay following the change will be eliminated or greatly attenuated.

Hypothesis 4. When the relevant pre-change criterion variable is controlled, pre-change preference ratings for those culture components targeted for increase (i.e., rational goal, open systems) will relate positively to post-change affective commitment and intention to stay, whereas pre-change preference ratings for the component targeted for decrease (i.e., internal process) will relate negatively.

2. Method

2.1. Research setting and change context

The research site was a large energy company undergoing a planned structural and cultural transformation. The company itself was fairly new – a by-product of a recent and significant re-organization by its parent company. Due to deregulation in the Canadian energy sector, and in an attempt to remain competitive, the parent company split the business into three separate companies: a gas provider, a retail service provider, and a shared services provider. The latter was responsible for providing services (e.g., HR, IT) to the other companies within the umbrella organization and served as the research site.

The shared service provider had its own revenue and earnings targets, strategies for success, and business plans. According to senior management, the company's goal was to become a profitable and significant player in its market niche. To achieve this objective, it had to be profit-oriented and adaptable to changes in the energy and shared services industries. This philosophy was dramatically different from the one that had existed under regulation. The regulator had required the utility to meet strict guidelines and placed limits on profits. Therefore, although employees worked hard and followed directions, there was little emphasis on personal accountability for performance, and there were there no strong incentives to exceed performance quotas or offer creative suggestions for business development. Among the most immediate and visible events affecting employees after the re-organization were the layoff of approximately 20% of permanent employees, the hiring of a slightly greater number of contract workers, changes in the senior management team, and a variety of initiatives undertaken by senior management to promote the changes in strategy and culture (e.g., "town hall" meetings, site visits, and management training).

2.2. Preliminary qualitative assessment

As part of the preparations for the quantitative phase of the research, semi-structured telephone interviews were conducted with 10 employees identified by the Director of Human Resources and the General Manager as being representative of managerial and frontline employees. The purpose of these interviews was to ensure that the content and form of the culture survey to be used for our research were appropriate. The interviews were approximately 60 min long and started with a general discussion of the organization's culture to identify the most salient values and the ways in which they were communicated to employees. Interviewees were then asked to complete a preliminary version of the survey, and were queried about the appropriateness of the item content and wording. Special consideration was given to ensuring that the content of the survey captured relevant characteristics of the organization's culture, that the terminology was appropriate for the organization, and that the reading level was suitable for employees at all levels within the organization. Based on the interview responses, minor modifications were made to the survey.

2.3. Participants and data collection procedures

The first survey was administered one month prior to the official announcement of the planned change. The entire workforce (N = 1041) was asked to participate and 699 (67%) responded. The second survey was administered eight months later. Again, the entire workforce (N = 1075) was invited to participate and 637 (59%) responded. For present purposes, data obtained from those involved in planning and overseeing the change initiative (i.e., senior management) were not included in the analyses. Within-time analyses were conducted on data from all of the remaining respondents (Time 1, N = 685; Time 2, N = 627); analyses concerning change were conducted using the data from those who responded to both surveys (N = 334). At Time 1, 31% of respondents were male, 76% worked full time, 11% were managers with direct reports, 20% were managers without direct reports, and 66% were frontline workers (3% did not indicate job status). At Time 2, 29% of respondents were male, 75% worked full time, 11% were managers with direct reports, 21% were managers without direct reports, and 66% were frontline workers (1% did not indicate status). The demographic characteristics in the longitudinal sample were very similar to those for the cross-sectional samples.

Surveys were distributed via interoffice mail. Participation in the survey was voluntary and anonymous. Employees were given two weeks to return the surveys. Reminders were e-mailed and posted on bulletin boards a few days before the deadline for return. We were able to match Time 1 and Time 2 surveys by having employees use a unique code number. All of the measures described below were included on both administrations of the survey.

2.4. Measures

2.4.1. Culture

We measured perceived and preferred organizational culture using an instrument adapted from Harris and Mossholder (1996). The instrument is based on the "scenario" approach to measuring values within the CVM framework. This approach

was advocated by Cameron and Quinn (1999), and was intended to stimulate respondents to think about core values as reflected in various organizational attributes (e.g., leadership, reward structure). In the present study, respondents were presented with 28 statements (7 organizational attributes × 4 culture components) grouped according to organizational attribute. The seven organizational attributes were: organizational climate, organizational "glue," mission/vision, organizational leader, management style, reward structure, and recruitment and selection. Respondents were asked first to indicate the extent to which they agreed (1 = strongly disagree, 5 = strongly agree) that each statement accurately described the current organization, and then to indicate the extent to which they agreed that the statements described their ideal place to work. The statements reflect organizational attributes as they would be manifest in organizations typifying the four culture orientations in the CVM. Modifications to the original Harris and Mossholder measure were made to ensure that the attributes included were relevant and the language used in the descriptions was appropriate for the organization under study. A complete listing of the organizational attributes and their descriptions is presented in the Appendix.

To obtain an overall score for each of the four perceived and preferred organizational culture components, we averaged across ratings for the seven attributes. Reliabilities (coefficient alpha) all exceeded .75 and are reported in Table 1.

2.4.2. Organizational commitment

We measured affective commitment to the organization using a slightly reworded version of Meyer, Allen and Smith's (1993) 6-item scale. All responses were made on a 5-point Likert-type scale (1 = strongly disagree and 5 = strongly agree). See Table 1 for reliabilities.

2.4.3. Intention to stay

We measured intention to stay with one item: "How likely is it that you will voluntarily leave [the company] within the next 2 years?" Responses could vary from 1 (very unlikely) to 5 (very likely). The item was reverse scored so that high scores reflected greater likelihood of staying.

2.5. Analyses

We tested our hypotheses using polynomial regression and response surface analyses. Separate analyses were conducted for each of the dependent variables (commitment and intention to stay) and for each of the CVM components. In polynomial regression, the criterion variable is regressed in Step 1 on the ratings of perceived and preferred culture ratings. These ratings are centered by subtracting the scale midpoint to reduce the effects of multicollinearity (Edwards, 1994). In a second step, the squares and cross-product of the centered ratings are entered as predictors. If the R^2 is significant at Step 1 and the change in R^2 at Step 2 is not significant, it suggests that there are no fit effects; rather, perceived and preferred values are simple independent (or additive) predictors of outcomes. If the change in R^2 at Step 2 is significant, and the overall R^2 is also significant, then it suggests that the relations are more complex and fit effects should be examined.

In cases where there was evidence for non-linear effects, we conducted response surface analyses to explore the nature of the effects. That is, we tested whether there were significant linear or non-linear changes in the criterion variable along the *fit line* (i.e., where perceived culture ratings equal preferred culture ratings) and *misfit line* (i.e., where perceived culture ratings are the inverse of preferred culture ratings). In response surface analysis, slope and curvature along the fit and misfit lines are indicated by a set of parameters reflecting varying combinations of the coefficients obtained in the polynomial regression analysis: perceived culture (b_1), preferred culture (b_2), perceived culture squared (b_3), the product of perceived and preferred culture (b_4), and preferred culture squared (b_5). The shape of the fit line is indicated by a_1 ($b_1 + b_2$) and a_2

Table 1
Means, standard deviations, reliabilities and paired *t*-test comparison of means over time.

	Time 1			Time 2			Test–retest reliability	Paired *t*-test	
	M	*SD*	α	*M*	*SD*	α	*r*	*df*	*t*
Perceived culture									
Human relations	2.77	.76	.81	2.96	.77	.82	.54	330	−.42
Open systems	2.96	.71	.79	3.10	.71	.79	.51	329	−.32
Internal process	2.85	.71	.76	2.95	.71	.77	.49	330	−.31
Rational goal	3.18	.76	.82	3.35	.72	.80	.58	330	−1.87*
Preferred culture									
Human relations	4.35	.52	.83	4.39	.49	.84	.33	326	−.75
Open systems	4.30	.50	.83	4.35	.49	.84	.31	326	−.44
Internal process	3.92	.62	.79	3.89	.68	.81	.43	326	1.87*
Rational goal	4.18	.56	.83	4.25	.55	.85	.37	328	−.08
Affective commitment	2.92	.89	.85	3.04	.88	.86	.64	331	−.08
Intention to stay	3.09	1.27	–	3.24	1.28	–	.55	332	−.79

Note. $N = 620–685$.
* $p < .10$.

($b_3 + b_4 + b_5$). When a_1 is positive, it suggests that the fit line is sloping upward as it passes the neutral fit point (0, 0); a negative value for a_1 means a downward slope. When a_2 is positive, it suggests a convex curvature along the fit line (a negative value would indicate a concave curvature). If neither parameter is significant, it means the fit line is flat.

The shape of the misfit line is also reflected in two parameters. When a_3 ($b_1 - b_2$) is positive, it suggests that the misfit line is sloping upward as it passes the neutral fit point (a negative value indicates a downward slope at 0, 0). When a_4 ($b_3 - b_4 + b_5$) is positive, it suggests a convex curvature along the misfit line (a negative value would indicate a concave curvature). If neither parameter is significant, it means that the misfit line is flat. According to Hypothesis 1, commitment and intention to stay should be lower under conditions of misfit compared to fit, regardless of the direction of the misfit. Thus, the optimal point on the misfit line should occur at the neutral fit point, 0, 0, and outcomes (i.e., commitment and intention to stay) should decline with misfit in either direction: (i.e., $a_3 = 0$ and a_4 is negative). The shapes of the response surfaces predicted in Hypothesis 2 are the same as those in Hypothesis 1, and therefore the same pattern of significant parameters was expected.

Hypotheses 1 was tested using outcome scores and preferred and perceived culture ratings within occasion (i.e., Time 1 or Time 2). Hypotheses 2, 3, and 4 were tested using culture ratings from Time 1 and outcome scores from Time 2. To test Hypotheses 3 and 4, it was necessary to control for the pre-change criterion measure. Therefore, we created residualized outcome ratings by regressing the Time 2 criteria on their Time 1 counterparts and saving the residuals from these analyses. We then regressed these residual scores on the Time 1 perceived and preferred culture ratings in the same manner that we did in the regressions described above.

3. Results

Means, standard deviations, and internal consistency estimates for all of the study variables are reported in Table 1. Table 1 also includes the results of *t*-test comparisons of means over time as well as test–retest reliability coefficients. As can be seen, means for the culture, commitment, and intention to stay scores were relatively stable over time – there was only a marginally significant increase in perceived rational goal culture and a marginally significant decrease in preferred internal process culture. However, the test–retest reliabilities ranged from .49 to .58 for perceived culture ratings, from .31 to .43 for preferred culture ratings, and from .55 to .64 for the criterion variables, suggesting that there was considerable change over time in the rank ordering of scores on all of the study variables.

Correlations among the variables within time are reported in Table 2, and correlations across time are reported in Table 3. There are several notable patterns in these correlations. First, within time, there are substantial correlations among the ratings of perceived culture (range = .63–.83 at Time 1 and .61–.78 at Time 2) and preferred culture (range = .59–.83 at Time 1 and .51–.84 at Time 2). As expected, culture components sharing a common pole on one of the two dimensions in the CVM framework tended to correlate more strongly than those at opposite poles on both dimensions. Second, the correlations between ratings of commensurate perceived and preferred culture components within time were quite low (maximum = .18). Third, commitment correlated significantly with intention to stay at both times, as observed in previous research (see Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Finally, the correlations between ratings of perceived culture and the criterion variables at both Times 1 and 2 were all significant and moderate in magnitude (range = .22–.58). For the most part, although significant, ratings of preferred culture were only modestly correlated with commitment and intention to stay. The highest correlations were between rational goal culture and commitment at Time 1 and Time 2 (.23 and .27, respectively).

3.1. Test of within-time hypotheses

Results of the polynomial regression and response surface analyses conducted on the within-time data to test Hypothesis 1 are reported in Table 4 for commitment and Table 5 for intention to stay.

Table 2
Correlations between measures within Times 1 and Time 2.

	1	2	3	4	5	6	7	8	9	10
Perceived culture										
1. Human relations	–	.78	.72	.65	.14	.16	.10	.20	.57	.28
2. Open systems	.83	–	.61	.78	.17	.18	.09	.20	.54	.34
3. Internal process	.67	.63	–	.65	.09	.10	.13	.12	.38	.20
4. Rational goal	.66	.80	.65	–	.15	.14	.01	.14	.40	.23
Preferred culture										
5. Human relations	.13	.16	.10	.16	–	.84	.57	.67	.15	.05
6. Open systems	.15	.16	.06	.12	.83	–	.51	.73	.14	.02
7. Internal process	.10	.11	.02	.01	.63	.59	–	.54	.10	.06
8. Rational goal	.19	.16	.07	.09	.65	.76	.61	–	.27	.10
9. Affective commitment	.58	.55	.38	.41	.10	.15	.12	.23	–	.54
10 Intention to stay	.32	.33	.22	.27	.09	.09	.16	.16	.55	–

Note. Correlations below the diagonal are for Time 1 (*N*s range from 673 to 685) and correlations above the diagonal are for Time 2 (*N*s range from 620 to 625). Correlations below the diagonal greater than .07 are significant at $p < .05$, and correlations greater than .09 are significant at $p < .01$. Correlations above the diagonal greater than .07 are significant at $p < .05$, and correlations greater than .10 are significant at $p < .01$.

Table 3
Correlations between Time 1 and Time 2 measures.

Time 1	Time 2									
	1	2	3	4	5	6	7	8	9	10
Perceived culture										
1. Human relations	.54	.47	.44	.43	.03	.03	.03	.09	.34	.10
2. Open systems	.44	.51	.41	.50	.06	.03	.06	.06	.32	.11
3. Internal process	.30	.31	.49	.42	.01	−.01	.01	.01	.18	.07
4. Rational goal	.32	.44	.38	.58	.05	.00	.02	.00	.20	.09
Preferred culture										
5. Human relations	.12	.17	.17	.19	.34	.29	.22	.20	.12	.06
6. Open systems	.17	.14	.13	.12	.26	.31	.19	.24	.18	.02
7. Internal process	.11	.10	.11	.07	.18	.14	.43	.20	.10	.08
8. Rational goal	.23	.20	.13	.13	.22	.28	.20	.37	.25	.05
9. Affective Commitment	.40	.38	.30	.32	.02	.03	.04	.13	.64	.32
10. Intention to Stay	.25	.26	.20	.20	.02	−.04	.11	.02	.37	.55

Note. *N*s range from 328 to 334.
Correlations greater than .10 are significant at $p < .05$, and correlations greater than .14 are significant at $p < .01$.

Table 4
Results of polynomial regression and response surface analyses for affective commitment.

	Time 1 (pre-change)				Time 2 (post-change)			
	HR	OS	RG	IP	HR	OS	RG	IP
Constant	3.01***	2.79***	2.46***	2.83***	.55*	.65*	.08	1.43
Perceived culture	.67***	.67***	.45***	.47***	.64***	.67***	.45***	.47
Preferred culture	.05	.11	.31***	.17**	.14*	.07	.34***	.06
R^2	.34***	.30***	.20***	.16***	.33***	.30***	.21***	.15***
Adj. R^2	.33	.30	.20	.15	.33	.30	.21	.15
Constant			2.53***	2.80***			1.01*	2.10
Perceived culture (b_1)			.14	.17*			.06	.27
Preferred culture (b_2)			.26*	.23**			.44***	.04
Perceived culture sq. (b_3)			−.13**	−.04			−.02	−.13
Perceived × Preferred (b_4)			.25**	.28***			.30***	.16
Preferred culture sq. (b_5)			.04	−.00			−.09	.05
ΔR^2			.03***	.03***			.02**	.02**
R^2			.23***	.18***			.23***	.17***
Adj. R^2			.22	.18			.22	.16
Surface tests								
a_1 ($b_1 + b_2$)			.40**	.40**			.50**	.31**
a_2 ($b_3 + b_4 + b_5$)			.16	.24**			.19*	.08
a_3 ($b_1 - b_2$)			−.12	−.06			−.38*	.23
a_4 ($b_3 - b_4 + b_5$)			−.34**	−.32**			−.41**	−.24*

Note. HR, human relations; OS, open systems; RG, rational goal; IP, internal process.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

3.1.1. *Affective commitment*

The strongest support for our hypothesis regarding culture fit and commitment was obtained for the rational goal and internal process components. In both cases, the polynomial regression analyses at Times 1 and 2 revealed a significant overall R^2 and a significant change in R^2 at Step 2. Therefore, we conducted response surface analyses to explore the nature of the relations. The surface plot for the Time 1 rational goal culture ratings are presented in Fig. 1. The surface plots for the Time 2 rational goal ratings and the Times 1 and 2 internal process ratings were similar in shape.

For rational goal culture, the response surface analyses revealed a significant concave slope along the misfit line at both Times 1 and 2, suggesting that misfit in either direction was associated with lower commitment. This finding is consistent with Hypothesis 1. At Time 1, the shape of the curve is an inverted-U that peaks at the neutral point, whereas at Time 2 the peak occurs just prior to the neutral point. Although not predicted, the response surface analyses also revealed a significant positive slope along the fit line at both Time 1 and Time 2; at Time 2 there was also evidence for a significant convex curvature. In both cases, it appears that affective commitment was greater when there was a match between high ratings of perceived and preferred culture than when the match involved low ratings.

Table 5
Results of polynomial regression and response surface analyses for intention to stay.

	Time 1 (pre-change)				Time 2 (post-change)			
	HR	OS	RG	IP	HR	OS	RG	IP
Constant	3.06***	2.98***	2.64***	2.85***	1.67**	1.71***	1.26**	1.95***
Perceived culture	.54***	.59***	.43***	.39***	.47***	.64***	.38***	.34***
Preferred culture	.11	.10	.31***	.32***	.04	−.10	.17	.08
R^2	.11***	.12***	.09***	.07***	.08***	.12***	.06***	.04***
Adj. R^2	.11	.11	.09	.07	.08	.12	.05	.04
Constant			2.63***	2.78***				
Perceived culture (b_1)			.05	.10				
Preferred culture (b_2)			.48**	.49***				
Perceived culture sq. (b_3)			−.05	.03				
Perceived × Preferred (b_4)			.30**	.29**				
Preferred culture sq. (b_5)			−.10	−.09				
ΔR^2			.01†	.01*				
R^2			.10***	.09***				
Adj. R^2			.10	.08				
Surface tests								
a_1 ($b_1 + b_2$)			.53*	.59**				
a_2 ($b_3 + b_4 + b_5$)			.15*	.23**				
a_3 ($b_1 - b_2$)			−.43	−.39*				
a_4 ($b_3 - b_4 + b_5$)			−.45*	−.35*				

Note. HR, human relations; OS, open systems; RG, rational goal; IP, internal process.
† $p = .05$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

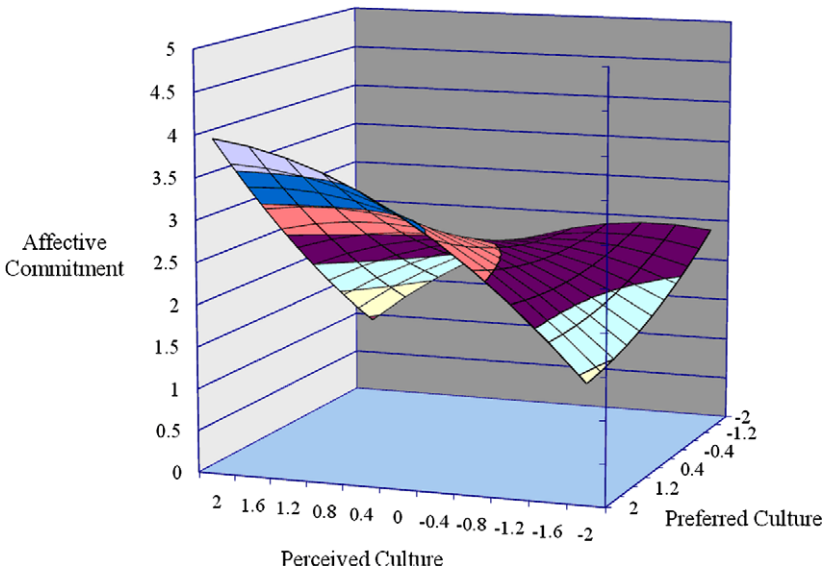

Fig. 1. Response surface for Time 1 rational goal culture and affective commitment.

For internal process culture, the response surface analyses also revealed a significant concave slope along the misfit line at both Times 1 and 2, suggesting that commitment declined with misfit in either direction. At both times, the shape of the curve is consistent with an inverted-U that peaks at the neutral point, as predicted in Hypothesis 1. Again, although not predicted, the response surface analyses revealed a convex curvature along the fit line with the slope rising at the neutral fit point at Time 1 and a significant positive slope with no curvature at Time 2. As was the case with rational goal culture, it appears that commitment was greater when there was a match involving high ratings for perceived and preferred internal process culture than when there was a match involving low ratings.

For human relations and open systems culture, the polynomial regression analyses at both times revealed a significant R^2 at Step 1, but the change in R^2 at Step 2 was not significant. In all cases, perceived culture ratings contributed significantly (positive) to the prediction of commitment. In the post-change analysis, the regression coefficient for preferred human rela-

tions culture was also positive and significant. Thus, Hypothesis 1 was not supported for human relations and open systems culture ratings.

3.1.2. Intention to stay

The strongest support for our hypothesis concerning intention to stay was also obtained for the rational goal and internal process culture components, but only at Time 1. As can be seen from Table 5, in both cases the polynomial regression analyses predicting intention to stay at Time 1 produced a significant overall R^2. The change in R^2 at Step 2 following the inclusion of higher-order terms was significant for internal process culture and had a p-value of exactly .05 for rational goal culture. The response surface analyses indicated a significant concave slope along the misfit line that peaked at the neutral point for rational goal culture, but was declining at the neutral point for internal process culture. The overall shape of the response surfaces were similar to that depicted in Fig. 1 for rational goal culture and affective commitment. In both cases, visual inspection of the misfit line revealed that intention to stay appeared lower when ratings of perceived culture were low and ratings of preferred culture were high than vice versa. This finding is generally consistent with Hypothesis 1. The analyses for both rational goal and internal process values also revealed a convex curvature along the fit line with the slope rising at the neutral fit point. A visual inspection revealed that the fit line had roughly the appearance of the right-hand side of a U-shaped curve, with intention to stay greater when both perceived and preferred culture ratings were high than when both were low.

The polynomial regression analyses for rational goal and internal process culture at Time 2 revealed a significant R^2 at Step 1, but the change in R^2 at Step 2 was not significant. Only the perceived rational goal and internal process culture ratings contributed significantly (positive) to the prediction of intention to stay. Thus, in contrast to Time 1, the findings for rational goal and internal process culture at Time 2 did not support Hypothesis 1.

The polynomial regression analyses at Times 1 and 2 for the human relations and open systems culture components yielded a significant R^2 at Step 1, but the change in R^2 at Step 2 was not significant. On both occasions, only the perceived human relations and open systems culture ratings contributed significantly (positive) to the prediction of intention to stay. Therefore, Hypothesis 1 was not supported for these components with intention to stay as the criterion.

3.2. Test of the time-lagged hypotheses

Results of the polynomial regression and response surface analyses conducted to test Hypotheses 2, 3, and 4 regarding time-lagged relations are reported in Table 6 for affective commitment and Table 7 for intention to stay.

3.2.1. Affective commitment

The results for rational goal culture provided the strongest support for our time-lagged hypotheses. The polynomial regression analyses predicting Time 2 commitment from Time 1 rational goal culture ratings produced a significant overall

Table 6
Results of polynomial regression and response surface analyses – time-lagged analyses predicting actual and residualized affective commitment scores at Time 2 from culture ratings at Time 1.

Time 1 predictors	Time 2 affective commitment				Time 2 affective commitment (residualized)			
	HR	OS	RG	IP	HR	OS	RG	IP
Constant	2.94***	2.73***	2.54***	2.93***	−.16	−.16	−.19*	−.02
Perceived culture	.38***	.37***	.21**	.21**	−.06	−.06	−.08	−.10
Preferred culture	.11	.22*	.36***	.13	.11	.12	.16*	.01
R^2	.12***	.12***	.10***	.04**	.01	.01	.02*	.01
Adj. R^2	.11	.11	.09	.03	.00	.00	.02	.01
Constant			2.60***					
Perceived culture (b_1)			−.19					
Preferred culture (b_2)			.28					
Perceived culture sq. (b_3)			−.09					
Perceived × Preferred (b_4)			.31**					
Preferred culture sq. (b_5)			.05					
ΔR^2			.04**					
R^2			.14***					
Adj. R^2			.12					
Surface tests								
a_1 ($b_1 + b_2$)			.09					
a_2 ($b_3 + b_4 + b_5$)			.27*					
a_3 ($b_1 - b_2$)			−.47					
a_4 ($b_3 - b_4 + b_5$)			−.35*					

Note. HR, human relations; OS, open systems; RG, rational goal; IP, internal process.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 7
Results of polynomial regression and response surface analyses – time-lagged analyses predicting actual and residualized intention to stay scores at Time 2 from culture ratings at Time 1.

Time 1 predictors	Time 2 intention to stay				Time 2 intention to stay (residualized)			
	HR	OS	RG	IP	HR	OS	RG	IP
Constant	3.14***	3.31***	3.13***	3.14***	−.08	.14	.07	.05
Perceived culture	.15	.22*	.15	.12	−.14	−.10	−.11	−.11
Preferred culture	.12	−.03	.09	.16	.04	−.12	−.05	−.08
R^2	.01	.01	.01	.01	.01	.01	.01	.01
Adj. R^2	.01	.01	.00	.01	.00	.00	.00	.00
Constant			3.32***					
Perceived culture (b_1)			.08					
Preferred culture (b_2)			−.46					
Perceived culture sq. (b_3)			−.14					
Perceived × Preferred (b_4)			.07					
Preferred culture sq. (b_5)			.31*					
ΔR^2			.03*					
R^2			.04*					
Adj. R^2			.02					
Surface tests								
a_1 ($b_1 + b_2$)			−.38					
a_2 ($b_3 + b_4 + b_5$)			.24					
a_3 ($b_1 - b_2$)			.54					
a_4 ($b_3 - b_4 + b_5$)			.10					

Note. HR, human relations; OS, open systems; RG, rational goal; IP, internal process.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

R^2 and a significant change in R^2 at Step 2. The response surface analyses revealed a significant concave relation along the misfit line. An inspection of the misfit line revealed that commitment peaked at approximately the neutral point, and declined with greater misfit in either direction (see Fig. 2). However, it appears that the decrement in Time 2 commitment was greater when rational goal culture as perceived at Time 1 exceeded preferences than when Time 1 preferences exceeded perceptions. There was also a significant convex curvature along the fit line, suggesting that fit at the extremes was associated with greater commitment than was fit at moderate levels. This pattern of findings, although not identical to that predicted in Hypothesis 2, does provide some evidence that post-change commitment was lower when pre-change organizational culture did not fit employees' pre-change preferences.

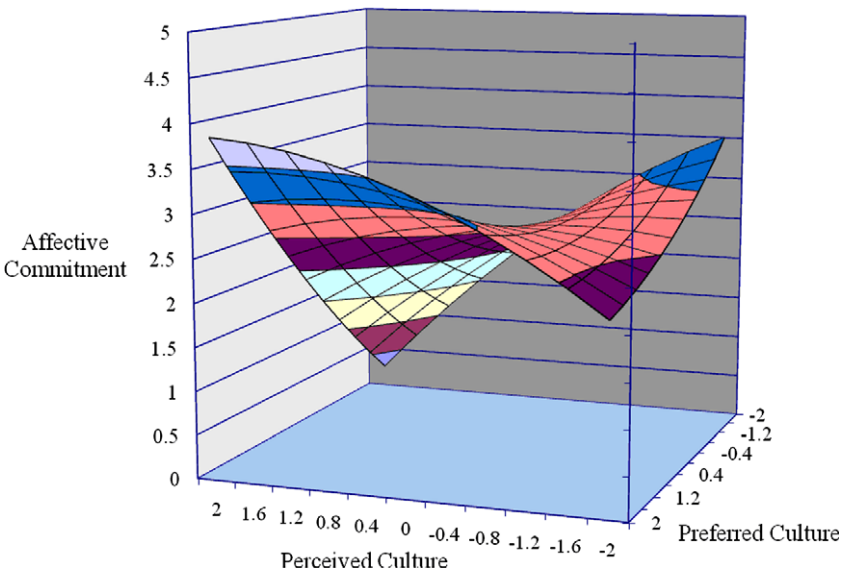

Fig. 2. Response surface for Time 1 rational goal culture and Time 2 affective commitment.

When the same analyses were conducted with the residualized data to control for Time 1 commitment, the change in R^2 at Step 2 was no longer significant. Thus, the relation between fit with respect to Time 1 rational goal culture and Time 2 commitment appears to have been driven by employees' commitment at Time 1. This result supports Hypothesis 3. Inspection of the regression coefficients at Step 1 revealed a significant relation between preferred rational goal culture at Time 1 and residualized Time 2 commitment. Thus, consistent with Hypothesis 4, employees who had a stronger preference for rational goal culture at Time 1 showed the most positive change in commitment at Time 2.

The polynomial regression analyses for the remaining CVM culture components produced a significant R^2 at Step 1, but no significant change in R^2 at Step 2. For the human resource and internal process components, only the Time 1 rating of perceived culture contributed significantly (positive) to the prediction of Time 2 commitment. For the open systems component, both perceived and preferred culture ratings at Time 1 contributed significantly (positive) to prediction of Time 2 commitment. Although these findings do not support Hypothesis 2 (i.e., there was no evidence for fit effects), we proceeded to conduct the analyses with the residualized scores. In all three cases, the R^2 at Step 1 was no longer significant when Time 1 commitment was controlled. This result is consistent with the logic underlying Hypothesis 3 – that perceptions of culture at Time 1 are linked to commitment at Time 2 due to their relation with commitment at Time 1. Contrary to Hypothesis 4, there was no evidence that preference ratings for these components of culture were related to change in commitment.

3.2.2. Intention to stay

The polynomial regression analysis predicting Time 2 intention to stay from rational goal culture ratings at Time 1 produced a significant change in R^2 at Step 2 and a significant overall R^2. However, there were no significant parameters in the response surface analyses, and therefore our hypothesis concerning the shape of the misfit line (Hypothesis 2) was not supported. When this same analysis was repeated with residualized intention to stay scores, the change in R^2 at Step 2 was significant, but the overall R^2 was not significant, and therefore we did not attempt to interpret the non-linear effects.

The polynomial regression analyses for the remaining CVM culture components revealed no significant relations at either Step 1 or Step 2, and therefore provided no support for Hypothesis 2. In the absence of any significant relations between culture ratings and Time 2 intention to stay, we were unable to test Hypothesis 3 for these components. When we conducted polynomial regression analyses using the residualized intention to stay scores, we found no support for Hypothesis 4.

4. Discussion

Our objective in this study was to examine how P–O (culture) fit relates to employee affective commitment and intention to stay with an organization during the early stages of an organizational change. Consistent with P–O fit theory (Kristof, 1996) and previous research using the CVM framework (e.g., Ostroff et al., 2005), we expected that employees' commitment and intention to stay with the organization, both pre- and post-change, would be greater when there was a fit rather than a misfit between perceived and preferred organizational culture. We found some, albeit circumscribed, support for this hypothesis, the strongest being for the rational goal and internal process components of culture. For the human relations and open systems components, it appeared that perceptions of the organization's culture were more important than fit in shaping commitment and intention to stay.

We were also interested in assessing the relations between P–O fit prior to the change and employees' commitment and intention to stay following the change. We reasoned that positive relations between pre-change fit and commitment should carry over to post-change commitment and intention to stay, considering that commitment has been found to be related to support for organizational change (e.g., Herscovitch & Meyer, 2002; Neubert & Cady, 2001) and is generally quite stable over time. That is, we expected that the relation between pre-change fit and post-change commitment would be a function of the impact of fit on pre-change commitment. However, we also expected that, for those components of culture targeted for change, pre-change culture preferences would contribute uniquely to changes in commitment and intention to stay over time. Again, we found some support for our hypotheses – the expected pattern of relations was obtained for rational goal culture with commitment as the criterion. For the remaining CVM culture components, and in the time-lagged analyses involving intention to stay, only perceived culture at Time 1 related positively to the criterion at Time 2. As expected, these relations were no longer significant when the Time 1 criterion measure was controlled, suggesting that the initial relations were attributable to stability in commitment over the course of the change.

In addition to the supportive findings, there are four basic patterns to which we want to draw attention. The first involves the fairly consistent evidence for positive relations, both within and across time, between ratings of perceived human relations and open systems culture with the criteria of commitment and intention to stay. It appears that the more an organization's policies and practices reflect concern for employee morale and development (human relations) and encourage innovation and growth (open systems), the more employees want and intend to stay. The absence of evidence for fit effects suggests that preferences for these components of culture have relatively little impact – perhaps because most employees prefer to work in organizations with these characteristics. Indeed, the mean preference ratings for these two components of culture were slightly higher, and the standard deviations lower, than was the case for the rational goal and internal process components. This finding is not without precedent – previous studies using polynomial regression or related analyses have typically reported positive relations between people-oriented values such as these and various indices of adjustment at work (e.g., Finegan, 2000; Kalliath et al., 1999; Vandenberghe & Peiro, 1999).

Second, the strongest support for our fit hypotheses was obtained in analyses involving the rational goal and internal process components of culture. This might be due to the fact that these components were the primary focus of the change initiative. Although the open systems component was also targeted for increase, and there was a desire to maintain a strong human relations orientation, the primary objective was to move away from the internal process focus that existed prior to deregulation toward a stronger rational goal focus. Even before the official launch of the change, employees were aware of the deregulation and senior management's plans for a change in strategy. Therefore, it is possible that employees were particularly sensitive to the current culture and their preferences regarding these two components. This finding is relevant to the research question we posed concerning situational moderators, and with recent emphasis on the importance of context in organizational behavior research (Johns, 2006; Rousseau & Fried, 2001). We return to this point later in our discussion of the implications of our findings for theory, research, and practice.

Third, the strongest and most consistent relations with culture were obtained for the criterion of commitment. Although culture ratings were related to intention to stay in some analyses, the strength of the relations was generally weaker. In some cases, most notably in the Time 2 and time-lagged analyses, the relations were not significant. It appears, therefore, that perceptions of culture relate more strongly to employees' *desire* to maintain a relationship with the organization than with their actual behavioral intentions. This observation might reflect the fact that decisions about whether to stay or leave an organization are determined by factors other than the desire to stay. Indeed, according to Meyer and Allen (1991, 1997), an employee's commitment to stay with an organization can reflect obligation (normative commitment) or perceived cost (continuance commitment) as well as desire. Similarly, employees might feel embedded in their organizations or communities (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001), making it difficult for them to leave, at least in the short term, even if this was something they wanted to do. Employees might also be reluctant to state a strong intention to stay or leave at such an early stage in the change process, preferring instead to wait and see how the change unfolds. Nevertheless, given the generally strong relation between commitment and intention to stay observed in meta-analyses (Cooper-Hakim & Viswesvaran, 2005; Meyer et al., 2002), and in this study, we expect that the relations observed between culture and commitment will have implications for turnover intentions and turnover in the longer term.

Finally, although not predicted, we found some evidence that culture congruence was associated with higher levels of commitment when the ratings of perceived and preferred culture were both high than when they were both low. Ostroff et al. (2005) obtained similar findings for ratings of cultural values, and argued that fit might be more important to employees when the values involved are important than when they are not (cf. Edwards & Rothbard, 1999; Hecht & Allen, 2005). In the present study, employees rated the extent to which they perceived and preferred organizational policies and practices typifying the four CVM culture components. It appears from our findings that getting what one wants produces a more positive reaction (commitment) than does not getting what one does not want. It should be noted, however, that this finding did not hold up in the time-lagged analyses. In the one case where we found time-lagged fit effects, post-change commitment was higher when pre-change fit for perceived and preferred rational goal culture involved extreme as opposed to moderate ratings. It would be premature to speculate on why we obtained different results in the within and across time relations. However, in light of these and previous findings, it appears that *form of fit* warrants more attention in future research.

4.1. Strengths and limitations

Discussion of the meaning and potential implications of our findings must take into consideration the strengths and limitations of the research. On the positive side, our measures of organizational culture were guided by a strong theoretical framework – the CVM – as recommended by Ostroff et al. (2005). We also used commensurate measures of person and organization characteristics and applied polynomial regression and response surface analyses as advocated by Edwards (1994; Edwards & Parry, 1993). In addition, we collected data on two separate occasions in an organization undergoing a planned change, and examined relations within and across time. These features, along with the large sample and relatively high response rate, are strengths of the current research.

Mindful of these strengths, we also made strategic decisions that involved tradeoffs (Kristof-Brown et al., 2005) and, therefore, place limits on the interpretation and generalizability of the findings. First, our decision to collect data in a single organization undergoing a specific change is likely to have influenced our findings (see Section 5). Second, because we considered *recognition* of fit or misfit to be necessary in order for it to have an effect on commitment and intentions to stay (cf. Cable & Edwards, 2004), we used self-report measures of both culture (perceived and preferred) and the criterion variables. We recognize that the use of self-report measures raises concerns about common method bias. This concern is somewhat mitigated by the use of polynomial regression analyses to test our hypotheses – if anything, the presence of response biases may have attenuated potential interactions among the perceived and preferred culture ratings, thereby making tests of our hypotheses more conservative.

Other potential limitations of the study became evident only after the collection of the data. For example, we found quite strong relations among the culture measures. Kalliath et al. (1999) reported similarly strong relations among values derived from the CVM. Given that the descriptors for all of the culture components were stated positively, these high correlations might reflect a general evaluation bias (halo error). The strength of the correlations among the culture ratings raises concerns about whether relations with the criterion variables observed for any one component might be spurious (i.e., due to its strong positive relations with other components). Although we cannot rule out this possibility, the fact that the strongest

evidence for fit relations were observed for the components targeted for change (particularly the rational goal and internal process components), reduces our concern about this limitation.

5. Implications for theory and research

Our findings using polynomial regression and response surface analyses provide further support for the notion that culture fit *can* contribute to stronger commitment and employee retention under some circumstances. However, they also demonstrate that the importance of fit can vary across components of culture, time, and the criterion of interest. We noted earlier that there were inconsistencies in the support for fit effects, both within and across earlier studies, but that there were too few studies available for comparison to determine why these inconsistencies exist. We raised the possibility of context effects as a research question to be explored in this study. More specifically, we speculated that the nature of the change, and the way it unfolded over time, might serve as one such context factor in the organization under investigation. Interestingly, we did find the strongest support for our fit hypotheses for two of the components of culture, rational goal and internal process, specifically targeted for change. Although it is still too early to draw any firm conclusions about context effects, the pattern of findings in our study suggest that a more systematic analysis of these effects might be warranted in the future.

One of the major obstacles to such a systematic analysis of context effects is the absence of a comprehensive taxonomy of relevant situational factors (Johns, 2006). Nevertheless, it should be possible to conduct research under conditions in which one or more contextual factors are particularly salient. The current study conducted under conditions of culture change is one example. Examining the implications of P–O fit during or following an intensive socialization process might be another (cf. Van Vianen, 2000). In both cases, it should be possible to identify those personal and organizational characteristics that are the focus of attention and to determine whether this attention has predictable effects on the observed pattern of fit effects.

A second approach to understanding the inconsistency would be to pay greater attention to the mechanisms responsible for fit effects (Cable & Edwards, 2004; Edwards & Cable, 2009). Edwards and Cable recently identified several mechanisms (e.g., communication, expectations, need satisfaction, trust) that have been used to predict or explain the effects of P–O fit, but noted that there has been little systematic research conducted to evaluate whether these mechanisms are indeed operating. They found that the impact of fit on job satisfaction and organizational identity could indeed be attributed to several of these mechanisms, most notably trust. By considering context and mechanisms together in the design of future research, it might be possible to offer more precise predictions about when fit between person and organization characteristics will be of greatest relevance to the criterion of interest.

To illustrate, consider how Edwards and Cable's (2009) finding regarding the role of trust might be used to interpret the difference between our findings and those of Ostroff et al. (2005) regarding rational goal values/culture. Recall that Ostroff et al. (2005) found fit effects for three of the four CVM values. Interestingly, the one exception was rational goal – the aspect of culture for which we found the strongest evidence for fit effects. Ostroff et al. conducted their study with bank employees under conditions of relative stability (as far as we can tell). It is possible that bank employees generally hold strong rational goal values and therefore have greater trust in, and commitment to, the organization when they see these values being demonstrated (i.e., organizational values account for most of the variance in trust and commitment). In the energy company under investigation here, the emphasis on strengthening the rational goal culture with a fairly obvious profit motive might have raised concerns about trust among those whose culture preferences did not match the new strategic orientation. If so, fit/misfit with regard to rational goal culture would play a more important role in determining employees' trust in, and commitment to, the organization. Although this is merely retrospective speculation, researchers in the future might use context factors and mediating mechanism prospectively to guide the development of more precise hypotheses. In the long term, this will greatly help to enrich P–O fit theory.

From the standpoint of management practice, our findings demonstrate that culture does matter in the development of commitment and in deliberations pertaining to leaving an organization. For some culture characteristics, particularly those that are employee-centered (e.g., human relations culture), culture strength itself might be most important. In other cases, fit with employee preferences could play a stronger role. As noted above, we are not yet at a point where we can accurately predict what the nature of the relation will be, but it is clear that employers interested in fostering commitment and increasing retention should give careful attention to culture and how organizational values are communicated to employees (see Collins & Porras, 1996, for a more detailed discussion and recommendations for strengthening and communicating cultural values).

Looking more specifically at the change context, our findings suggest that pre-change commitment and intention to stay can have positive implications for post-change commitment and intentions. Therefore, organizations that invest in efforts to foster strong commitment may be better positioned for success following large-scale change than those that do not continuously attempt to engender such commitment. Committed employees are more likely to support the change than are those who are less committed (Herscovitch & Meyer, 2002; Neubert & Cady, 2001). Still, it is important to consider how organizational changes might affect factors that have been instrumental in the development of pre-change commitment (Meyer et al., 1998). For example, we found that, even with pre-change commitment controlled, those employees who had a strong preference for a rational goal culture prior to the change demonstrated a greater increase (or weaker decline) in commitment following a change designed to increase emphasis on rational goal values. This finding suggests that initiatives taken to explain and gain support for the change *before* it is implemented might complement the benefits of having high levels of

pre-change commitment (cf. Kotter, 1996). Also, fit with regard to perceived and preferred internal process and rational goal culture characteristics at Time 2 contributed to the prediction of commitment following the change. Therefore, initiatives taken during the implementation process to strengthen preferences for the new culture can also help to maintain or strengthen employee commitment.

Appendix A

A.1. Competing value scale items

A.1.1. Human relations values

1. The climate inside ABC emphasizes good employee relations. It is participative and supportive.
2. The glue that holds ABC together consists of loyalty and commitment.
3. ABC's mission and vision statements promote an image of ABC as an employee-focused company.
4. ABC's general manager is generally considered to be a mentor, facilitator, and team player.
5. At ABC, middle management encourages teamwork, consensus and participation.
6. At ABC, recognition and rewards are most often given to those who are co-operative and team players.
7. At ABC, recruitment and selection practices are geared to bring in employees who are courteous, friendly, supportive, and fair.

A.1.2. Open systems values

1. The climate inside ABC emphasizes dynamism, growth and readiness to meet new challenges.
2. The glue that holds ABC together is a focus on innovation and development.
3. ABC's mission and vision statements promote an image of ABC as an innovative, adaptable, and entrepreneurial company.
4. ABC's general manager is generally considered to be an entrepreneur, innovator, and risk-taker.
5. At ABC, middle management encourages individual initiative, innovation, freedom, and uniqueness.
6. At ABC, recognition and rewards are most often given to those who take initiative and adapt to change.
7. At ABC, recruitment and selection practices are geared to bring in employees who are creative, autonomous, and adaptable.

A.1.3. Internal process values

1. The climate inside ABC emphasizes stability and predictability. Expectations regarding procedures are clear and enforced.
2. The glue that holds ABC together is its formal procedures, rules, and policies.
3. ABC's mission and vision statements promote an image of ABC as a stable and rule-oriented company.
4. ABC's general manager is generally considered to be a co-ordinator and organizer.
5. At ABC, middle management enforces rules, procedures, and consistency.
6. At ABC, recognition and rewards are most often given to those who abide by the rules and express caution.
7. At ABC, recruitment and selection practices are geared to bring in employees who are conservative, logical and predictable.

A.1.4. Rational goal values

1. The climate inside ABC emphasizes competitive actions and achievement
2. The glue that holds ABC together is an emphasis on productivity and goal accomplishment.
3. ABC's mission and vision statements promote an image of ABC as a competitive and achievement-oriented company.
4. ABC's general manager is generally considered to be a hard driver, producer, and competitor.
5. At ABC, middle management emphasizes hard-driving competitiveness, productivity, and achievement of results.
6. At ABC, recognition and rewards are most often given to those who are hard-driving, productive, and competitive.
7. At ABC, recruitment and selection practices are geared to bring in employees who are competitive and achievement-oriented.

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