Intended and Non-Intended Effects of Managing Organizational Change in Public Organizations

Adrian Ritz
University of Bern, Centre of Competence for Public Management
Schanzeneckstrasse 1, PF 8573
CH-3001 Bern
E-mail: adrian.ritz@kpm.unibe.ch

&

Sergio Fernandez
Indiana University, School of Public and Environmental Affairs
1315 East Tenth Street
Bloomington, IN 47405-1701
E-mail: sefernan@indiana.edu

Early draft. Please do not cite without permission of authors.
INTRODUCTION

After two decades of sweeping administrative reforms around the world, reforming governmental agencies remains a priority for legislators, chief executives, and high-level public managers. This ongoing trend has not induced a high volume of articles addressing the topic of managing change in public organizations. Fernandez and Rainey (2006) called for studies investigating organizational change in government organizations using multivariate statistical techniques and large-sample data to test rival propositions and underlying theories of organizational change.

Overcoming resistance to change and building willingness to change among public employees is a critical contingency for achieving change in public organizations (Fernandez and Rainey 2006, Kotter 1996). However, individuals resist change for many reasons, above all because of anxiety associated with the uncertainty of engaging in something new (Kets de Vries and Balazs 1999). Short of an external shock or stimulus of significant magnitude (Van de Ven 1993), managers can employ a variety of tactics to reduce resistance to change and gradually build acceptance to change initiatives, including creating a mutual understanding for change, providing inducements and rewards, engaging in bargaining, offering guarantees against personal loss, allowing employees to participate in the planning process, and providing emotional support (Judson 1991, Thompson and Sanders 1997). Although theoretical work exists, Herscovitch and Meyer (2002: 474) state that “what is surprising, however, is the paucity of research on employee reactions to change”. Even though empirical work in private management research started a few years ago (Meyer et al. 2007; Conway and Monks 2008; Fugate and Kinicki 2008), empirical studies in the field of employee attitudes towards change in government organizations does nearly not exist. Therefore, we examine in this paper the anticipated consequence of a culture of change as a result of such tactics on employee attitudes and resistance to change as well as their unintended and indirect effects.
To do this, we analyze using multivariate statistical techniques (structure equation modeling) data from a human resources survey administered for the federal administration of Switzerland and investigate the influence of change-oriented organizational culture on employee attitudes (job satisfaction, affective commitment, public service motivation) and attitudes towards change (resistance to change).

The structure of this article is as follows: In a first section we present our theoretical model and the assumption on the causal relationships between exogenous and endogenous variables formulation three hypotheses. In the section that follows, the dataset, the method for analysis, and the measures are explained. In section three the theoretical model gets tested and the results are described. Then the main findings are discussed in section four before limitations and concluding remarks are presented in the last section of the paper.

THEORY AND HYPOTHESES

Prior to addressing the theoretical linkages between our exogenous variable change culture and the endogenous variables job satisfaction, affective commitment, public service motivation, and resistance to change, we will explain the general framework of this study in short.

Porras and Silvers (1991) provided a theory about organizational change and propose a process how organization change occurs. Their model of planned process of organizational change looks at managers’ purposeful actions as a driver of organizational change. Organizational context and managers’ change interventions have an impact on organizational target variables such as organizational culture and climate and employee attitudes toward change and work. Employee attitudes, including resistance or willingness to change, satisfaction, and intention to leave, in turn influence change-oriented behavior. Upon the reflection that organizational change does often not follow an elaborate plan and change interventions might not lead to a cognitive change of employees’ mindset and afterwards to an appropriate behavior (Burke 2008) our study focuses only on the relationship between the organizational
target variable change culture and individual attitudes towards change. Whether a strategy for change is chosen first or if change actions cause movement before an elaborate plan was set up and communicated is not part of our analysis. The question at heart is about the impact of an organizational culture directed towards the reduction of resistance to change on employees’ attitudinal reactions.

**Change Culture and Resistance to Change**

Since Lewin’s (1946, 1947) groundbreaking work on group dynamics and planned change, scholars have studied a wide range of methods aimed at reducing—rather than overcoming—employee resistance to change. Several of these methods, including communicating with employees about the change and promoting employee participation in the change process, are captured in employee perceptions of a change-oriented culture. Research points to the efficacy of participation as a way to overcome resistance to change (Watson, 1967; Judson, 1991; Kets de Vries and Balazs, 1999; Bunker, Alban, and Alban, 1997; Carnall, 1995; Greiner, 1967; Johnson and Leavitt, 2001; Nadler and Nadler, 1998; Pasmore, 1994). Participation helps to reduce resistance by creating psychological ownership, promoting the dissemination of critical information, and enhancing feelings of procedural fairness, thereby increasing receptivity to change. Participation alone, however, is typically insufficient for overcoming resistance (Quinn, 2000; Bryson and Anderson, 2000; Shareef, 1994), particularly when it is not widespread and does not span all phases of the change process (Bruhn, Zajac and Al-Kazemi, 2001). Piderit (2000) noted that for participation to work, employees should be allowed to openly express any ambivalence toward change, and he urges managers to engage in the latter form of participation, which allows employees to openly voice their ambivalence.

Other aspects of a change-oriented culture should also help to reduce resistance to change. Through open communication between management and employees about the
change and its ramifications, employees begin to feel that their concerns and interests are being considered, thereby promoting psychological safety and receptivity to change (Schein, 1964). Feelings of psychological safety are also enhanced when managers refrain from punishing employees for mistakes committed during implementation of change and instead see those mistakes as a necessary and even desirable aspect of organizational change. Change is in part a process of assimilating, implementing, and fine-tuning ideas to solve organizational problems that is rife with errors. The expectancy among employees that such errors will not result in scorn or punishment help to reduce resistance to change (Brehm, 1966; Judson, 1991; Burke, 2008; Schneider, Brief, and Guzzo, 1996).

The Mediating Effects of Job Satisfaction, Affective Commitment, and Public Service Motivation

*Job satisfaction.* Jimmieson, Terry and Callan (2004) suggested that the goal of organizational change is to alter key organizational variables like, for example, job design, change of positions and the redefinition of tasks. By altering these key variables organizational change can create much uncertainty regarding job security, status, and access to resources and opportunities for growth. Thus, there will inevitably be consequences for employees satisfaction within the organization. Their primary psychological states like meaningfulness of the work, responsibility for work or perceived threat, anxiety, and tension which affect employee satisfaction get enhanced by change-oriented efforts like, for example, work and job design (Hackman and Oldham 1980). This causes employees to experience psychic strain and develop negative feelings toward work. A change-oriented culture that emphasizes communication about changes and promotes involvement and participation can help to reduce this kind of uncertainty and increase job satisfaction. Efforts by managers to explain the reasons for change and opportunities allowing employees to voice their concerns can reduce uncertainty and foster a sense of safety and even control (Richardson and Denton 1996; DiFonzo
and Bordia 1998), leading to higher employee satisfaction. Involving employees in decision making and encouraging them to develop their own proposals for change improves work related attitudes in general (Locke and Schweiger 1979; Spector 1986), including attitudes toward change (Sagie et al. 1990; Bordia et al. 2004).

Research findings on the relationship between job satisfaction and resistance to change paint a puzzling picture. Coch and French’s seminal work found a positive relationship between employee morale and a willingness to change. Their work suggests satisfied employees are more receptive to change and likely to possess the motivation to undertake them. In a similar vein, Hage and Aiken (1967) found job satisfaction to be one of the strongest correlates of the rate of change in organizations. Change, however, can foster interpersonal conflict, create significant work-related disruptions, and threaten status and job security. Satisfied employees may feel like they have more to lose from change than dissatisfied ones employees and therefore be less inclined to accept change (Mann and Williams 1960). They may also feel less receptive to change in their behavior or work environment in order to addresses gaps in performance (March and Simon 1958). Studies of the public sector have shown a weak relationship between job satisfaction and change orientation (Fernandez and Pitts 2007). As Pierce and Delbecq (1977) noted, the relationship may be contingent upon organizational level, with high level managers expressing a willingness to change when faced with poor performance and dissatisfaction, while lower level employees embrace change when they are satisfied and motivated at work. In short, we expect job satisfaction and resistance to change to be correlated, but the direction of the correlation may be either positive or negative. This leads to the first hypothesis:

Hypothesis 1: Change culture has an indirect effect on resistance to change through its influence on job satisfaction.

Affective Commitment. Commitment, in general, can be defined as “a force that binds an individual to a course of action of relevance to one or more targets.” (Meyer and
Herscovitch 2001: 301). This force or mind-set that binds an individual to a course of action can reflect a desire to provide support for a change process based on a belief in its inherent benefits, a state characterized as affective commitment to change. A change-oriented culture should, therefore, positively impact affective commitment because of management’s overall goal of strengthening the beliefs of employees in the benefits of change. Such a culture, as measured in this study, involves taking the interests and views of employees into consideration and allowing them to participate in the process of change. These practices characterize a principle of behavior which is central to effective management of change: “Involvement leads to commitment. Stated a bit more elaborately, the degree to which people will be committed to an act is a function of the degree to which they have been involved in determining what the act will be” (Burke 2008: 95). Without having an influence on the content of a change plan or having the choice in whether to contribute to it or not, employees will tend to exhibit low levels of commitment. There is considerable research corroborating this link of involvement practices with higher levels of organizational commitment (Burke 2008; Mayer and Schoorman 1998; Leana et al. 1992; Fields and Thacker 1992). These practices also exemplify a form of organizational support in the sense that they express consideration and care for the wellbeing of employees. Empirical findings indicate perceived organizational support is positively related to organizational commitment (Eisenberger et al. 1990).

As Thompson (1965) suggested in his classic analysis of innovative organizations, employees who are committed to their organization and who see it as an avenue for professional growth are more likely to be receptive to change than those who feel alienated from the organization. Compared to the latter group, the former are more innovative due to their dedication to their workplace and peers and to the belief that innovation behavior will result in opportunities to develop professionally and to gain the esteem of their peers. They are also more likely to feel a sense of responsibility for seeing the organization and its members succeed. Other research points to the opposite relationship between commitment and
resistance to change. Among highly committed employees, attachment to familiar pattern of routines and interpersonal relationships encountered at work can breed complacency and resistance to change. Committed employees have vested interests in the status quo, making change risky if not harmful to their self-interest. In highly institutionalized settings, escalation of commitment to goals, formal structure, or distribution of power and resources within organizations may even set in, stifling innovation or any departures from tradition, even when contributing to the status quo proves to be counterproductive (Mone et al. 1998; see also Danneels 2002). Thus, we expect job satisfaction and resistance to change to be correlated, but the direction of the correlation can be either positive or negative. This leads to the second hypothesis:

Hypothesis 2: Change culture has an indirect effect on resistance to change through its influence on affective commitment.

The relationship between change culture and resistance to change in public sector organizations is assumed to be mediated by employee attitudes regarding the service and community oriented values of public organizations. Change in government organizations, for example, is driven by a desire to improve the provision of public services or to be more efficient and customer focused for the public (Burke 2008). Often this is caused by a need for adaption to the task environment, to incorporate elements from the institutional environment to gain legitimacy or to participate in a larger government reform agenda (Fernandez and Pitts 2007). Institutional rules may be replaced or modified over time through processes of selection and adaptation. Such adaption is related to the work about institutional logics of March and Olsen (1989). According to them, institutions foster a logic of appropriateness in the minds of employees and thus can shape individuals motivation (Perry 2000). “Actors construct believes and behaviors based on what is appropriate in light of their environment and the norms of behavior of those around them” (Moynihan and Pandey 2007a: 42). According to Moynihan and Pandey (2007a) work-related rules and norms like organizational institu-
tions influence the basic attitudes of public employees towards the values about public service. Their empirical study did not show any significance relationship between group, development, rational, and hierarchical culture and public service motivation. However, we argue against the background of Schein’s (1992) work, that in government organizational culture can be seen as one main institutional factor influencing how organizations shape the beliefs and attitudes of their members. A culture of change, thus, might create understanding towards change of institutional rules and influence employees’ motivation regarding the need for greater legitimacy, better service provision, or strengthened public service values.

The relationship between public service motivation and resistance to change has not been investigated yet. Ore’s (2006) work on resistance to organizational change indicates perceived threats to intrinsic motivation (e.g. autonomy) are positively related to resistance to change. That said, organizational change can threaten the individual motivation and, thus, lead to higher resistance to change. This is in line with work based on self-determination theory (Deci and Ryan 1985; Ryan 1995) which shows that a supportive work environment that promotes autonomy facilitates acceptance of change (Gagné et al. 2000). Because autonomy is supported when a task appears to be important (Gagné et al. 2000) we assume that in the public sector, public service motivation will be positively correlated with autonomy. In addition, given the fact that standard procedures cannot provide answers to all situations that are faced, bureaucrats are compelled to use discretion to fulfill their tasks. Decisions and actions of bureaucrats are guided by normative beliefs that simultaneously support the goals of the policy and are subversive to formal authority (Maynard-Moody and Musheno 2000). Therefore, we assume that higher levels of public service motivation, which is a specific type of intrinsic motivation (Perry and Wise 1990; Vandenabeele 2007), will go together with higher levels of autonomy. In conclusion, public service motivation is assumed to be negatively related with resistance to change because change can threaten intrinsic motivation. Therefore our last hypothesis:
Hypothesis 3: Change culture has an indirect negative effect on resistance to change through its influence on public service motivation.

DATA AND METHOD

Data
The data of this study were collected within the framework of the 2009 employee survey of the Swiss federal administration. The survey was planned as a random sample. All seven ministries of the Swiss federal administration took part in the survey. Based upon the responses and the statistical indices of the 2007 personnel survey, one representative random sampling per unit was taken, which was additionally examined according to the representative distribution of socio demographic features (language, gender, age, and salary class). A total of 26,544 persons were given the questionnaire, which corresponded to approximately three-fourths of the federal personnel. The response rate was 56.23 percent of those surveyed (14,926 responses), with response quotas in the seven ministries ranging from 50.0 to 66.6 percent. After sorting and deleting questionnaires with less than 50 percent of questions answered a sample of 14,835 responses remained. The sociodemographic profile of the respondents is shown in table 1.

-- Insert Table 1 here --

Method
The statistical method applied in this study was Structural Equation Modeling (SEM) using Mplus Version 6 (Muthén and Muthén 1998-2010). Given the Likert-type ordinal items the estimation is based on a weighted least square parameter (WLSMV) using a tetrachoric correlation matrix and a weight matrix together which are particularly appropriate because they are
distribution free. WLSMV is a diagonally weighted least squares (DWLS) estimation method (Hox et al. 2010) as applied for ordinal scales in other studies (Coursey and Pandey 2007b).

The handling of missing data can affect results of the analysis in a serious way. On the one hand, missing data can reduce sample size. On the other hand, results based on data with a nonrandom missing data process could be biased. Only nine out of 101 variables in the survey had more than 5% missing values, but all below the threshold of 10% (Hair Jr. et al. 2009). A pairwise deletion of missing values was therefore applied in light of the small reduction in sample size. A comparison of listwise and pairwise deletion did not result in any substantial differences in sample size and in estimation results.

Model fit is assessed by inferential $\chi^2$ and several descriptive goodness-of-fit indices. Since the $\chi^2$-statistic is known to be inflated for samples with N>200 (Kelloway 1998), $\chi^2$ is referred here as descriptive information rather than as a strong inferential test upon which a model is accepted or rejected. In addition to $\chi^2$, root mean square error of approximation (RMSEA), comparative fit index (CFI), and the Tucker-Lewis fit index (TLI) are consulted as fit indices. In structural equation modeling, a strict confirmatory approach is often abandoned because the initial tested model is rejected due to low fit. Therefore, models are often modified and tested again using the same data. Except for the above mentioned modification of the 14-item scale of PSM no further model respecification was necessary.

Measures

All the questionnaire items in this analysis employed 6-point Likert-type scales from 1 (strongly disagree) to 6 (strongly agree). Although a 5-point scale is the most widely disseminated type of measurement scale, there is no single number of response alternatives for a scale which is appropriate for all alternatives. However, Cox (1980) recommended that in general a

---

1 First, we checked if our analysis needed to meet the following requirements: a non-significant Chi-Square test for the whole model (for a perfect model), significant and high factor loadings, no modification indices (for a perfect model), a good explanation of variance, and fit-indices within threshold levels. In this sense, analyzing fit indices is only one part of the overall evaluation of model.
scale with two or three response alternatives are inadequate because they are incapable of transmitting very much information and more than nine alternatives bring only minimal marginal return. Due to the request of a comparable response scale with earlier surveys in the federal government of Switzerland, a 6-point Likert scale was used, which lies within the “seven plus or minus two” range recommended by Cox (1980). A complete list of the items used in each measure is provided in appendix 2.

*Change Culture:* We used four newly-developed items relating to the establishment of a culture which promotes a mutual understanding for changes, which takes resistance to change seriously and which emphasizes improvement and learning through change. The scale reliability coefficient (Cronbach’s alpha) for the four-item scale of change culture is 0.91. All standardized lambda estimates range above 0.84.

*Public Service Motivation:* The various conceptualizations of PSM have resulted in different operational definitions. In this study Perry’s (1996) multidimensional measure is taken as a baseline. He developed a list of 24 items measuring four distinct subscales of PSM (attraction to policy making, commitment to the public interest, compassion, and self-sacrifice). For the purpose of this study we reduced the set of items to a 14-item scale that includes items for all four PSM dimensions. The 14 items were chosen based on previous research on the psychometric testing of the PSM scale (Coursey and Pandey 2007a; Coursey *et al.* 2008; Kim 2008; Vandenabeele 2007) and face validity in the specific context. After model respecification, we used six items for the second-order construct with its dimensions of attraction to policy making, compassion, and self-sacrifice. The results of the confirmatory factor analysis confirmed a three first-order and one second-order factor structure, with two items for each first-order factor. The fit indices fell within an acceptable range ($\chi^2 = 175.74$, $df = 6$, RMSEA = 0.04; CFI = 0.99; TLI = 0.99; for attraction to policy making, compassion, and self-sacrifice, $\alpha$’s = 0.82, 0.71, and 0.46, respectively). All standardized first-order and second-order lambda estimates range above 0.68.
Affective Commitment: For organizational commitment a measure of three items developed within the scales of Mowday et al. 1982), Meyer and Allen (1991) and Balfour and Wechsler (1996) expressing the employees’ emotional attachment to and affiliation with the organization was used. Although different terms regarding the sub-dimensions of organizational commitment which include our second item “I feel a strong sense of belonging to my organization” exist (Meyer and Allen: affective commitment; Balfour and Wechsler: affiliation commitment), the dimension used in this study is called affective commitment because the items express a general affective reaction to the organization and an emotional facet of an employee’s identification. The reliability coefficient of this latent factor is 0.83.

Resistance to Change: We used a newly-developed two-item measure for resistance to change. In comparison with Oreg’s (Oreg 2003) widely disseminated measurement scale for resistance to change, our items are less oriented towards work routine seeking or change induced stress for an individual. Rather, we measure the willingness of an individual to be open for a change towards another job environment. First, employees were asked how much they are willing to change to a different administrative unit within the federal administration. Second, they had to declare their willingness to change work site. Thus, this measure shows the readiness or resistance to a possible change of the job situation with a relatively high impact. The items were reversed for the measurement of resistance to change. The scale reliability coefficient for this latent variable was 0.75 and standardized Lambda estimates range above 0.69.

Job Satisfaction: A single-item measure for general job satisfaction is applied. Job satisfaction is one of the exceptions to the norm of using measurement scales with multiple items to measure psychological constructs. It characterizes a measurement construct that is sufficiently narrow and unambiguous to the respondent and, thus, is accepted as single-item measure like, for example the measurement of self-reported sociodemographic facts, such as years of education, age, etc. (Sackett and Larson 1990; Wanous et al. 1997).
Furthermore, gender, age, leadership position, and full- or part-time employment were used as control variables for the endogenous variable of resistance to change.

Because of the use of newly-developed items for two scales (change culture and resistance to change) and in order to perform meaningful analysis of the causal model, the measures used need to display certain empirical properties. Reliability of the research scales have to be investigated to see the degree to which these scales indicate the latent constructs. Cronbach alpha and composite reliability are seen as useful tests to measure construct reliability (Hair Jr. et al. 2009). The result indicates that all except for the PSM subdimension self-sacrifice the Cronbach alpha values for the constructs exceeded the recommended value of 0.70, which according to Kline (Kline 2000), indicates that the instrument is reliable. In addition, all composite reliability values were greater than the recommended value of more than 0.70 as suggested by Hair et al. (Hair Jr. et al. 2009). Consequently, according to the above two tests, all the research constructs in this study are considered reliable. Convergent validity, which is the degree to which individual questionnaire items measure the same underlying construct, was tested by significance of the standardized coefficient of the individual item (greater than twice its standard error) (Anderson and Gerbing 1988). Appendix 2 shows that all coefficients exceed twice their standard error and are highly significant. Discriminant validity of the factors ensures adequacy of the measurement model indicating that groups of variables measure different latent constructs. The test of inter-factor correlations (see table 2), which are not approaching 1.0, indicates discriminant validity. In addition, the Fornell Larcker criteria for all latent constructs were measured. In this test, the average variance explained (AVE) of the latent variables must be higher than the squared correlation between the latent variables which was met in our measures (Fornell and Larcker 1981).

-- Insert Table 2 about here --
RESULTS

The bivariate correlations between change culture and the four variables job satisfaction, affective commitment, public service motivation, and resistance to change as listed in table 2 (r = .649; .569; .212; .219; p < .01) provided preliminary evidence to support hypotheses 1, 2 and 3 which state that change culture has significant relationships with the three mediating variables. The comparatively low correlation between change culture and resistance to change gives preliminary evidence for the assumed mediating effect. Supporting hypothesis 3 is the finding showing resistance to change is negatively correlated with public service motivation (r = -.139; p < 0.01).

The structural equation model tests the hypothesized relationships by estimating the overall fit of the model as well as the estimates of all individual parameters. The overall model fit of the hypothetical model was tested according to the generally accepted thresholds for a good model fit (Brown and Cudeck 1993; Hu and Bentler 1999: $\chi^2$/df < 2.5; RMSEA < 0.06; CFI > 0.95; TLI > 0.95). The results for the hypothetical model showed good fit to the data ($\chi^2 = 4898.299; \text{df} = 152$, RMSEA = 0.047; CFI = 0.987; TLI = 0.984). Figure 2 shows the structural model with its parameter estimates. We found the hypothesized relationships among change culture, job satisfaction, affective commitment, and public service motivation significant.

The coefficient of the path from change culture to job satisfaction is significant ($\beta = 0.49$, p < 0.001), as are the coefficients of the paths from change culture to affective commitment ($\beta = 0.51$, p < 0.001), from change culture to PSM ($\beta = 0.21$, p < 0.001), from job satisfaction to resistance to change ($\beta = 0.38$, p < 0.001), from affective commitment to resistance to change ($\beta = 0.09$, p < 0.001), and from public service motivation to resistance to change ($\beta = -0.23$, p < 0.001). The path coefficient between change culture and resistance to change is slightly negative at a lower level of significance ($\beta = 0.03$, p < 0.05). In addition, the relationships between the mediating variables are significant; from public service motivation to affec-
tive commitment ($\beta = 0.29$, $p < 0.001$), from public service motivation to job satisfaction ($\beta = -0.07$, $p < 0.001$), and from affective commitment to job satisfaction ($\beta = 0.32$, $p < 0.001$). All in all, 20% of the variance in resistance to change is explained. Change culture explains 5% of PSM, and 40% of the variance of affective commitment is explained by change culture and public service motivation. 48% of job satisfaction is explained by change culture, affective commitment, and public service motivation.

--- Insert Figure 1 about here ---

In summary, the results support all three hypotheses. The three variables job satisfaction, affective commitment, and public service motivation mediate the relationship between change culture and resistance to change. In contrary to the preliminary results from bivariate correlations, the structural equation model reveals nearly a full mediation effect of change culture on resistance to change by the three intermediate latent variables. The direct effect of change culture on resistance to change is very low and compared to all other path coefficients only slightly significant. Indirect effects on resistance to change can be observed from change culture through job satisfaction (0.18), through affective commitment (0.05), through affective commitment and job satisfaction (0.06), through public service motivation (-0.05), through public service motivation and affective commitment (0.005), through public service motivation, affective commitment, and job satisfaction (0.007), and through public service motivation and job satisfaction (-0.001).

**DISCUSSION**

[Limitations: cross-sectional study, analysis of change situation]
Upon reflection of the results of this study, two issues must now be discussed in-depth. First, the positive mediation of the path between culture and resistance to change through job satisfaction is of interest. The more employees perceive the organizational culture as supporting, the more satisfied the respondents are, and, thus, resistance to change increases. Although our measure for resistance to change is not about how employees react to change plans or about their preferences for non-routine work, it shows that the more satisfied employees are the less ready for a change of their work situation they will be. The same effect results when looking at the mediating variable of affective commitment. As formulated in the theoretical section, employee satisfaction gets enhanced by a higher understanding of the reasons for a change and if employees are allowed to voice their concerns. The picture that emerges from the results is that the happier and safer employees feel, the less willing they become to embrace chance in work situation. This can be seen as a result of the development of a job environment which in general is appreciated by employees and creates a positive emotional state. As Mann and Williams (1960) stated, satisfied employees may feel like they have more to lose from change than dissatisfied employees and therefore they may be less inclined to accept change.

Another interesting explanation for this can be found in the work of Büssing (1992; 1998) and Bruggemann (1976) who further developed the concept of job satisfaction. In contrast to the concept of general job satisfaction, they argue different forms of job satisfaction exist. Thus, job satisfaction is a result of individuals’ reactions to discrepant relations between personal aspirations and the actual work situation. If individuals perceive congruence between their aspirations and their work situation, they will be likely either to increase or maintain their level of aspiration. On the contrary, if they perceive a discrepancy, they will be likely either to decrease or maintain their level of aspiration. Consequently, if individuals diminish their level of aspiration, they reach a positive state of satisfaction. In contrast, by maintaining their level of aspiration, individuals might encounter limitations like job dissatisfaction or
long-term frustration. In regard to our study, we deduce from this that high satisfaction is not always positive for behavioral outcomes related to organizational change. A supportive change culture positively influences the congruence between employees’ aspirations like, for example, job security and the work situation. However, in the case of a change in working conditions, this might not lead to the change of attitudes and behavior in favor of a change like, for example, openness to change work site or work unit. Rather, employees get more attached to their work and work environment and see the potential loses that could result from change. Büssing and Bruggemann state that there are more productive forms of job satisfaction. These are characterized by a certain degree of dissatisfaction which leads to a wrestling with the concrete work situation and to openness for improvements. Against this background we wonder if openness for change and lower resistance to change needs a change culture which challenges the employees with the future realities instead of creating a sound culture of mutual understanding and learning. Thus, a certain degree of dissatisfaction with the work situation can lead to higher aspirations in order to pursue change.

The second issue to be discussed concerns our variable of public service motivation. In contrast to the two other mediating variables, public service motivation is less influenced by a culture of change. This is also reflected in a low level of explained variance of public service motivation. A major reason for this might be that this specific form of intrinsic motivation gets rather strengthened by societal influences like, for example, volunteering, family socialization, political party affiliation, and religion or union membership (Anderfuhrten-Biget 2010; Perry 1997; Perry et al. 2008; Taylor 2007) or individual antecedents like, for example, gender, religion, hierarchical grade, and professionalism (Bright 2005; Camilleri 2006; Camilleri 2007; DeHart-Davis et al. 2006; Naff and Crum 1999) than by organizational antecedents. While our study shows a positive relationship between public service motivation and affective commitment which is line with other studies (Crewson 1997; Leisink and Steijn 2009; Moynihan and Pandey 2007b; Park and Rainey 2007), the negative relationship be-
tween public service motivation and job satisfaction is rather unusual when compared to other studies which found a positive relationship between the two variables (Moynihan and Pandey 2007b; Naff and Crum 1999; Liu 2008; Vandenabeele 2009) based on the assumption that public sector jobs provide many opportunities to serve the public interest. Against the backdrop of person-organization fit theory, employees whose motives are anchored in needs for pursuing the common good are likely to be satisfied with their public sector jobs (Kristof 1996; Taylor 2007). However, there is research which found rather weak or insignificant correlations (Moynihan and Pandey 2007b; Steijn 2008; Taylor 2007; Taylor 2008). Taylor (2008) and Steijn (2006) show in their study that a positive link between public service motivation and job satisfaction does not depend on the general motivation of employees to serve the public good, but is rather linked to the presence of attributes to the workplace which allow public service motives to come into play and help the employees to achieve their public service needs. Thus, job environment can act as a facilitator or constraint to the realization of public service motives (Taylor 2008). In the light of these findings, the negative impact of public service motivation on job satisfaction and also resistance to change can be explained by a job environment which does not fit the public service needs of the respondents. Thus, the positive impact of change culture could be crowded out by the fact that employees with high levels of public service motivation cannot achieve their public service needs to a satisfactory extent. This could be a reason why their levels of satisfaction and resistance to change are lower.

Another explanation leads to the essential difference between public service motivation and organizational or work related attitudes like job satisfaction and organizational commitment. As explained in the theoretical section, change can threaten intrinsic motivation. Thus, autonomy of individuals gets diminished and resistance to change increases. However, high levels of public service motivation express a high need for autonomy of an individual. Highly public service motivated employees seek autonomy in the sense of pursuing the public
interest. As long as the change does not directly threaten the situation in such a way public service motives cannot come into play anymore, resistance to change stays at a lower level. A supportive change culture even contributes to the needs of pursuing the public interest. Thus, higher levels of public service motivation might broaden the perspectives of individuals of having other opportunities, like for example, getting another job at another worksite within the same office or getting another job within the federal administration. From a perspective of institutional theory, public service motivation can be understood as a broader concept of work motivation which goes beyond motives primarily related to job or organizational interests (Perry and Vandenabeele 2008; Vandenabeele 2007; Ritz and Brewer 2010). In contrast to affective commitment, which describes an individual’s desire to remain in his or her organization (Herscovitch and Meyer 2002), public service motivation can be rather described as a desire to remain in any job which allows working for public service motives. Thus, a change situation which does not threaten the satisfaction of public service needs does not necessarily have a negative outcome like higher resistance to change. Our study supports this argument due to the finding that higher levels of public service motivation do not lead to resistance against changing work sites or organizational units within the federal administration.

CONCLUSION

The purpose of this paper was the investigation of organizational change in government organizations in the light of management decisions and behavior creating an organizational culture which helps to overcome resistance to change and to build willingness to change among public employees. The study tested a mediation model using a multivariate statistical technique. It showed that an organizational culture which takes resistance to change serious, creates mutual understanding for change, and encourages opportunities of learning and improvement among the employees primarily has an indirect effect on resistance to change mediated by employee attitudes like job satisfaction, commitment, and public service motivation.
Although theoretical arguments support the assumed relationships of our model, the findings of this study contribute to our understanding of employee reactions towards the effects of managed organizational change. From a theoretical viewpoint two insights are of high interest. First, it is important to see that change interventions can be in contradiction with the intended attitudinal effects. At least from our cross-sectional analysis we can learn than a positive perception of a change supportive organizational culture is correlated with higher job satisfaction and affective commitment which leads to lower willingness to change. There are unintended effects of typical change interventions like creating understanding for change or making change less threatening than it really is. The strength of a positive causal link between visions for change, managerial interventions, and employee actions like change supportive behavior might, therefore, be reduced or even reversed. The theoretical conclusion of this is that a change of mental mind-sets, attitudinal reactions, and intended behaviors of employees do not automatically follow well-meant interventions creating support for change. Thus, some degree of discomfort is needed in order to make people open for serious consequences of change like, for example, a change of worksite. As a practical implication, one of the roles leaders have to play in bringing about change is to convince employees that the status quo is unacceptable and will bring about psychic pain that can only be relieved through change rather than through the decrease of discomfort as a consequence of change initiatives.

Second, our findings reveal an interesting result about attitudes towards change in public organizations which is in line with a viewpoint of institutional theory on public service motivation. Intrinsically motivated people who care for the specific values of public service are less resistant to change. This is in contradiction with assumption about bureaucratic attitudes and behaviors of public sector employees enhancing resistance to change. As defined, public service motivation characterizes a facet of employee motivation which is strongly related to the overall mission of government organizations, namely, the fulfillment of services to the public. It could be that this facet of employee motivation reduces the need of employees
to complete unfinished business and, thus, reduced their need for achieving closure in a change situation. These employees need less mental and emotional energy to finish “old business” and move faster through phases of ending and go in a change process. As a consequence, energy in the form of simply talk about former ways of doing things or, even more resistantly, sabotaging organizational change might be reduced (Burke 2008). Thus, our findings encourage more research investigating the impact of institutional change on public service motives and as a consequence on various forms of resistance to change like, for example, resistance towards intra-organizational change or broader initiatives like a fundamental change of an agency when getting decentralized or privatized.
Literature:


Table 1: Sample Characteristics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>4261</td>
<td>28.7</td>
</tr>
<tr>
<td>Male</td>
<td>10264</td>
<td>69.2</td>
</tr>
<tr>
<td>Missing</td>
<td>310</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14835</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20 years</td>
<td>8</td>
<td>.1</td>
</tr>
<tr>
<td>20-29 Years</td>
<td>1276</td>
<td>8.6</td>
</tr>
<tr>
<td>30-39 Years</td>
<td>3922</td>
<td>26.4</td>
</tr>
<tr>
<td>40-49 Years</td>
<td>5094</td>
<td>34.3</td>
</tr>
<tr>
<td>50-59 Years</td>
<td>3736</td>
<td>25.2</td>
</tr>
<tr>
<td>&gt; 59 Years</td>
<td>427</td>
<td>2.9</td>
</tr>
<tr>
<td>Missing</td>
<td>372</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14835</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Leadership Position</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>4851</td>
<td>32.7</td>
</tr>
<tr>
<td>Yes</td>
<td>9723</td>
<td>65.5</td>
</tr>
<tr>
<td>Missing</td>
<td>261</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14835</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Salary</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 1-11</td>
<td>655</td>
<td>4.4</td>
</tr>
<tr>
<td>Class 12-17</td>
<td>3878</td>
<td>26.1</td>
</tr>
<tr>
<td>Class 18-23</td>
<td>4898</td>
<td>33.0</td>
</tr>
<tr>
<td>Class 24-29</td>
<td>4558</td>
<td>30.7</td>
</tr>
<tr>
<td>Class 30-38</td>
<td>445</td>
<td>3.0</td>
</tr>
<tr>
<td>Missing</td>
<td>401</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14835</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Tenure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1 year</td>
<td>810</td>
<td>5.5</td>
</tr>
<tr>
<td>1 - 5 years</td>
<td>2863</td>
<td>19.3</td>
</tr>
<tr>
<td>6 - 10 years</td>
<td>3375</td>
<td>22.8</td>
</tr>
<tr>
<td>&gt; 10 years</td>
<td>7577</td>
<td>51.1</td>
</tr>
<tr>
<td>Missing</td>
<td>210</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14835</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Full-/Part-time</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 50%</td>
<td>205</td>
<td>1.4</td>
</tr>
<tr>
<td>50-90%</td>
<td>2997</td>
<td>20.2</td>
</tr>
<tr>
<td>more than 90%</td>
<td>11435</td>
<td>77.1</td>
</tr>
<tr>
<td>Missing</td>
<td>198</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14835</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### Table 2: Descriptive Statistics, Reliabilities and Correlations

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13336</td>
<td>4.29</td>
<td>0.77</td>
<td>(0.71)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>14703</td>
<td>4.57</td>
<td>0.96</td>
<td>0.212**</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>14648</td>
<td>3.40</td>
<td>1.41</td>
<td>-0.138**</td>
<td>0.219**</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>14438</td>
<td>3.86</td>
<td>1.14</td>
<td>0.396**</td>
<td>0.569**</td>
<td>0.197**</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>14817</td>
<td>4.43</td>
<td>1.21</td>
<td>0.157**</td>
<td>0.649**</td>
<td>0.374**</td>
<td>0.565**</td>
<td>(-)</td>
</tr>
</tbody>
</table>

** p < .01; *Mean and standard deviation for variables 1 to 4 are calculated as additive indexes**
Figure 1: Results of Structural Equation Modeling

-0.03*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Culture</td>
<td>0.21***</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Affective Commitment</td>
<td>0.09***</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Resistance to Change</td>
<td>0.49***</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>PSM</td>
<td>-0.03*</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>0.51***</td>
<td>p&lt;0.001</td>
</tr>
</tbody>
</table>

* = p<0.05
** = p<0.01
*** = p<0.001

Controls:
- gender (non-significant)
- age**
- leadership position***
- full-/part-time work***
Appendix 1:

<table>
<thead>
<tr>
<th></th>
<th>Lambda (SE)</th>
<th>z-Value</th>
<th>Standardized Loadings</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Change Culture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>1 (--I)</td>
<td>---</td>
<td>.90</td>
<td>.81</td>
</tr>
<tr>
<td>V2</td>
<td>.94 (.02)</td>
<td>59.51***</td>
<td>.89</td>
<td>.80</td>
</tr>
<tr>
<td>V3</td>
<td>.83 (.01)</td>
<td>67.26***</td>
<td>.86</td>
<td>.75</td>
</tr>
<tr>
<td>V4</td>
<td>.73 (.01)</td>
<td>66.12***</td>
<td>.84</td>
<td>.70</td>
</tr>
<tr>
<td><strong>Affective Commitment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>1 (--I)</td>
<td>---</td>
<td>.92</td>
<td>.85</td>
</tr>
<tr>
<td>V2</td>
<td>1.22 (.04)</td>
<td>27.96***</td>
<td>.95</td>
<td>.90</td>
</tr>
<tr>
<td>V3</td>
<td>0.29 (.01)</td>
<td>42.13***</td>
<td>.56</td>
<td>.32</td>
</tr>
<tr>
<td><strong>Resistance to Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td>1 (--I)</td>
<td>---</td>
<td>.95</td>
<td>.89</td>
</tr>
<tr>
<td>V2</td>
<td>.33 (.05)</td>
<td>6.40***</td>
<td>.69</td>
<td>.47</td>
</tr>
<tr>
<td><strong>Public Service Motivation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Attraction to Policy Making</strong></td>
<td></td>
<td></td>
<td></td>
<td>.20</td>
</tr>
<tr>
<td>V1</td>
<td>1 (--I)</td>
<td>---</td>
<td>.86</td>
<td>.73</td>
</tr>
<tr>
<td>V2</td>
<td>0.99 (.08)</td>
<td>12.53***</td>
<td>.86</td>
<td>.73</td>
</tr>
<tr>
<td><strong>Compassion</strong></td>
<td></td>
<td></td>
<td></td>
<td>.55</td>
</tr>
<tr>
<td>V1</td>
<td>1 (--I)</td>
<td>---</td>
<td>.82</td>
<td>.67</td>
</tr>
<tr>
<td>V2</td>
<td>.73 (.03)</td>
<td>23.21***</td>
<td>.72</td>
<td>.52</td>
</tr>
<tr>
<td><strong>Self-Sacrifice</strong></td>
<td></td>
<td></td>
<td></td>
<td>.80</td>
</tr>
<tr>
<td>V1</td>
<td>1 (--I)</td>
<td>---</td>
<td>.68</td>
<td>.46</td>
</tr>
<tr>
<td>V2</td>
<td>1.00 (.04)</td>
<td>29.02***</td>
<td>.68</td>
<td>.46</td>
</tr>
</tbody>
</table>

** : p<0.01 ; ***: p<0.001
Appendix 2: List of Variables and Items

**Chance Culture:**
- In my administrative unit, a mutual understanding for required changes is reached with the employees
- In my administrative unit, resistance to change is taken seriously
- In my administrative unit, mistakes are used as an opportunity to learn and improve
- In my administrative unit, employees are consistently encouraged to offer ideas and recommend improvements

**Job Satisfaction:**
- How satisfied are you overall with your work situation

**Affective Commitment:**
- The fate of my federal administration is very important to me
- I feel a strong sense of belonging to my administrative unit
- In my work, I am not satisfied with merely meeting goals, but, instead, I try to achieve even better performance

**PSM (Attraction to Policy-Making; Compassion; Self-Sacrifice):**
- I am very interested in politicians and their work (APM)
- I like to discuss political subjects with others (APM)
- I am highly moved by the plight of the underprivileged (COM)
- Most social programs are too vital to do without (COM)
- Much of what I do is for a cause bigger than myself (SS)
- It is important that people give back to society more than they get from it (SS)

**Resistance to Change:**
- I am willing to transfer to a different administrative unit (Reversed)
- I am willing to change work sites (Reversed)

**Controls:**
- Gender: 0=male; 1=female
- Age: 1=below 20 year, 2=21-29, 3=30-39, 4=40-49, 5=50-59, 6=above 60
- Leadership position: 0=no, 1=yes
- Salary: 1=salary classes 1-11 (lowest), 2=12-17, 3=18-23, 4=24-29, 5=30-38 (highest)
- Tenure: 1=until 1 year, 2=1-5, 3=6-10, 4=more than 10 years
- Full-/Part-Time work: 1=less than 50% employment, 2=50-90%, 3=90-100%