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POWER TALKING: UNDERSTANDING THE SOURCES AND CONSEQUENCES OF CONVERSATIONAL POWER DISPLAYS IN MIXED-GENDER TEAMS

The aim of this study was to assess patterns of power displays in mixed-gender teams. Participants for this study included 216 university students who were randomly assigned to 36 mixed-gender teams for the purpose of discussing two business-related cases. Conversational interruptions were used as a measure of power displays. The findings indicate that team gender composition and perceived gender biases in the task can influence patterns of interruption behavior. In addition, the use of such power displays was shown to be negatively correlated with leadership rankings in the team for both men and women.

Numerous studies of gender dynamics in work teams have considered the relative distribution of power and influence among male and female group members, and the behavioral consequences of such distributions (e.g., Grob, Myers & Schuh, 1997; Karakowsky & Elangovan, 2001; Ridgeway & Smith-Lovin, 1999). Conversational activity is a useful domain for examining power and status effects in organizational contexts, even though little attention has been given to how individuals display relative power at the face-to-face level (Morand, 2000). The study of conversation among men and women in organizations is particularly important because of the potential for conversation to create and sustain gender inequality in the workplace (Martin, 1992; Smith-Lovin & Robinson, 1991). Consequently, a number of researchers have assessed the role of verbal behaviors (e.g., frequency of speech initiations and total amount of speech) as indicative of gender differences in power displays between men and women (eg., Dovidio et al, 1988; Grob et al, 1997).

There is ample research evidence to suggest that verbal interruptions can be viewed as a mechanism of power and dominance in conversation because they constitute a violation of the current speaker's right to speak) and because they can be used to control the subject of conversation (Anderson & Leaper, 1998; Aries, 1996). The notion of interruption behavior as a manifestation of power and dominance has been drawn upon to make sense of research findings which indicate that men more actively engage in interruption behavior compared to women (e.g., Zimmerman and West, 1975; Case, 1988; Craig and Pitts, 1990). However, there is evidence refuting the claim that men are more dominant in mixed-gender discussions with regard to interruptive behavior (e.g., James and Clarke , 1993; Marche & Peterson, 1993). Moreover, a number of studies have reported that women, in fact, may engage in more interruptive behavior compared to men (e.g., Bilous & Krauss, 1988; Smeltzer and Watson, 1986). Unfortunately, there have been few attempts to resolve contradictory findings with regard to alleged gender differences in mixed-gender settings.

Inherent in the contradictory findings is the general lack of a systematic approach to the

study of power displays in mixed-gender work teams. In their meta-analyses, Anderson and Leaper (1998) suggested that the research needs to more fully explore a contextual-interactive model of gender that focuses on the importance of situational moderators in such power displays as verbal interruptions. The effects of proportional representation and status differences on interruption behavior are quite complex and require greater research attention (Smith-Lovin & Brody, 1989). Unfortunately, the research has not made a systematic effort to distinguish between the effects of gender, proportional representation and status differences. The observation that men engage in more interruptive behavior than women may not be purely a function of gender, but rather a combination of gender, proportional representation and perceived status in a given situation. Consequently, our study, reported below, attempts to discern the impact of each of these factors on interruption behavior.

Theoretical Background and Research Hypotheses

Numerous scholars have argued that for women, conversational goals include gaining trust, establishing an affiliation with their conversational partners (e.g., Troemel-Ploetz, 1991) and consequently women tend to be more responsive listeners and considerate speakers (e.g., Roger, 1989). In contrast, it has been suggested that men are more likely to use conversation as a means to establish status or to gain or disseminate information (Aries & Johnson, 1983; Tannen, 1990). Consequently, this has been used to explain observed conversational patterns among men including: relative domination of mixed-gender conversations in public situations (e.g., Holmes, 1995); less expressed interest in the contributions of the conversational partner (e.g., Dovidio, Brown, Heltman, Ellyson & Keating, 1988); and lower levels of polite forms of speech (e.g., Holmes, 1995).

The gender-role socialization approach (Eagly, 1987; Maccoby & Jacklin, 1974) suggests that men and women learn different norms for interaction from their experiences in same-gender peer groups. These expectations for behavior are carried into same-gender contexts which ultimately affect behavior (Carli, 1989; 1990; Hannah & Murachver, 1999). Consistent with this view, the research has indicated that when men and women work in gender-segregated contexts they are more likely to engage in behavior which is considered stereotypical for that gender, compared to non-gender segregated contexts (Aries, 1996; Carli, 1989). A number of studies have indicated that women exhibit more positive social or communal behaviors and men exhibit more task or agentic behaviors in same-gender rather than in mixed-gender pairs (e.g., Carli, 1989; Moskowitz, 1993). For example, Johnson, Clay-Warner & Funk (1996) found that in same-gender groups, women showed higher rates of agreement compared to men, and men showed higher rates of counter-arguments. Given the tendency for gender segregation to stimulate gender stereotypes in conversational behavior, a question of central concern to our present study is - how will this phenomenon influence interruption behavior in work group contexts?

Power displays are perceived as congruent with male socialized gender roles (Eagly, 1987) and consequently will likely arise more frequently among members in male-dominated as opposed to female-dominated or balanced-gender work groups. That is, given that such power displays are consistent with stereotypical masculine behaviors, male-dominated groups will exhibit higher levels of interruption behavior. On the other hand, consistent with the research cited above, female-dominated groups will be less inclined to exhibit high levels of interruption behavior. These assertions can be summarized in the following hypothesis.

Hypothesis 1

Male group members in male-dominated groups will engage in higher levels of interruption behavior compared to their female counterparts in female-dominated groups.

The research cited above suggests that work groups which are numerically dominated by one gender are more likely to reinforce behavior traditionally associated with that gender. On the other hand, those individuals in numerical minority positions will be less reliant on their *traditional*, socialized gender-roles and will be more likely to adopt the roles or behaviors of their numerically dominant counterparts. This is consistent with the assertions of Kanter's (1977a, 1977b, 1980) model of proportional representation which suggests that the numerical representation of men and women can directly influence behavior in group settings.

Kanter (1977a, b) asserted that when a group member exists in the numerical minority (based on gender or ethnicity) he/she will tend to feel isolated from the numerical majority (Kanter, 1977a) and consequently may engage in activities which serve to reduce feelings of isolation and powerlessness. For example, Eagly & Johnson (1990) suggested that women in male-dominated environments adopt male styles in order to avoid losing authority and position. This also offers an explanation for the tendency of women, in mixed-gender groups, to exhibit greater levels of stereotypically masculine-associated behavior (acting more assertively, becoming more task-oriented, etc.) compared to women in gender-segregated work-groups who will exhibit greater levels of stereotypically feminine-associated behavior (communal or socio-emotional) (e.g., Maccoby, 1990). With regard to conversational styles – women tend to masculinize their conversation in the presence of male counterparts (e.g., Fitzpatrick, Mulac & Dindia, 1995; Coates, 1986). Other researchers have, similarly, found that both men and women decrease their gender-preferential style in conversational behavior in mixed-gender dyads (e.g., Mulac, Wiemann, Widenmann & Gibson, 1988).

The research outlined above suggests that when either men or women are in the numerical minority in a group, they will adapt their conversational style to match that of the numerical majority. Based on this notion, we predict that numerical minority males (in female-dominated groups) will exhibit lower levels of interruption behavior compared to their male-counterparts in male-dominated groups. Similarly, numerical minority women (in male-dominated groups) will be more likely to adopt the masculine norm – and display greater levels of interruption behavior compared to their female counterparts in female-dominated groups. All these assertions are summarized in the following series of hypotheses.

Hypothesis 2

Male group members in numerical minority positions will engage in lower levels of interruption behavior compared to males in numerical majority positions.

Hypothesis 3

Female group members in numerical minority positions will engage in higher levels of interruption behavior compared to females in numerical majority positions.

According to expectation states theory or status characteristics theory (Berger, Rosenholtz & Zelditch, 1980) group members judge their relative skills and abilities in attaining group goals. External or diffuse status characteristics, such as race, age, and gender can be used by group members to form initial expectations about the relative competencies of individuals working on a group task. While status in task-oriented groups may be based on external or diffuse status characteristics such as gender, more direct information about competence can have a greater impact

on expectations and behaviour (Berger et al, 1980). For example, individuals expect others to perform better at tasks that are appropriate or compatible with their gender (e.g., Karakowsky & McBey, 2001). This has important implications for behavior in mixed-gender groups, since it suggests that perceptions of relative status or expertise can arise as a consequence of gender-biased tasks and specifically of perceptions of congruence or incongruence with the perceived gender-orientation of the group's task.

Numerous scholars have suggested that through experience, individuals come to share beliefs about the extent to which tasks are linked to gender (e.g., Piliavin & Martin, 1978; Wood & Karten, 1986). Masculine- and feminine-typed jobs are not necessarily equally distributed at work largely because professional, managerial and many technical jobs have been dominated for long periods of time by men and thus continue to be perceived as masculine despite recent increases in the entry of women (Vancouver & Ilgen, 1989). In team contexts, when a team member's gender is incongruent with the perceived gender-orientation of the team's task, that team member will be less likely to engage in power displays. Incongruent gender-biased tasks can trigger perceptions of being "out of one's territory" and consequently can reduce the tendency to display power or influence (e.g., Dovidio, Brown, Heltman, Ellyson & Keating, 1988). While both men and women are affected by congruence or incongruence with the perceived gender-orientation of the task, previous research suggests that men are more resistant to changes in task-based cues, and will be less affected by incongruence with the task's gender-orientation (Lenney, 1977; Vancouver & Ilgen, 1989). In addition, men tend to adhere more strongly to traditional gender role beliefs (e.g., Spence & Hahn, 1997; Twenge, 1997) and experience greater cultural pressure to conform to such beliefs (Herek, 1986) compared to women. For women, diffuse status cues and socialized gender roles create a greater burden and consequently are more likely to be negatively affected by incongruence with the gender-orientation of the task (Berger et al, 1980). For example, a number of studies have shown that found that women's self-confidence tends to vary as a function of perceived gender-orientation of the task, while men's self-confidence remains relatively stable across tasks (e.g., Carr, Thomas & Mednick, 1985).

In line with the assertions outlined above, we predict that the decrease in interruption behavior among individuals, as they move from male-dominated to female-dominated groups, will be greatest among women performing gender-incongruent tasks (the male-stereotyped task). In other words, in addition to the inhibiting influence of female-dominated groups on power displays, gender-incongruent tasks will act as a further impediment. And, according to the research cited above, this effect will be greater for women than for men.

Hypothesis 4

Incongruence with the gender-orientation of the group's task will result in greater decrements in interruption behavior for women compared to men, as they move from male-dominated to female-dominated work groups.

An obvious question that arises from our examination above is – what are the consequences of interruption behavior for group members? While the literature has viewed interruption behavior as a reflection of power or status, it is also important to consider whether such power displays ultimately enhance a member's status in the group. Consequently, an additional aim of this study was to examine whether interruption behavior has any impact on perceived status in a group – does such behavior reinforce status perceptions? One way to address this question is to consider whether group members who engage in higher rates of interruption behavior are more likely to be viewed as exerting greater influence or leadership in the group.

Goktepe & Schneier (1989) defined emergent leaders as members who lack formal authority over other members but nonetheless exert significant influence over other members.

That is, a group member will emerge as a leader in the group only if he/she is perceived as such. Consequently, at least one important relationship that needs to be explored is the relationship between interruption behavior and perceptions of influence or emergent leadership in the group.

Given that interruptions are a violation of turn-taking norms, this behavior has been linked to dominance, power and status (Smith-Lovin & Brody, 1989). However, there is evidence that dominance behavior is, in fact, an ineffective means of gaining influence in task groups (e.g., Driskell, Olmstead & Salas, 1993; Ridgeway, 1987; Ridgeway & Diekema, 1989). Ridgeway (1987) found that dominance cues actually generated negative reactions from other group members. Ridgeway & Berger (1986) suggested that dominance cues do not imply task competence but are typically perceived as individually motivated attempts to gain power. Consequently, the individual who displays dominance behavior is more likely to be seen as motivated by self-interest rather than by a group orientation (Driskell et al, 1993).

Given the perception of negative interruptions as disruptive displays of dominance, there is reason to predict that such behavior will impede a member's ability to be viewed as influential or leader-like. While a number of studies have found that women who displayed assertive leadership behavior in task groups were judged more negatively than were their male counterparts (e.g., Butler & Geis, 1990; Eagly, Makhijani & Klonsky 1992), these findings are at best mixed, with more recent studies finding no differences in perceptions of male and female leaders in task groups (e.g., Lucas & Lovaglia, 1998). Consequently, our predictions regarding the consequences of interruption behavior for emergent leadership rankings do not differ for male or female group members. Specifically, we predict that the relationship between emergent leadership rankings and interruption behavior will be negative for both men and women.

Hypothesis 5

Interruption behavior is negatively correlated with perceived leadership behavior for both men and women in a work group context.

Method

Sample

216 university students from undergraduate business programs in two large North American universities (108 men, 108 women) were randomly assigned to 36 groups with six participants per group. A total usable sample of 197 (103 men and 94 women) of the 216 participants were included in the analyses. Participation in this study was part of a course assignment which required students to engage in videotaped group discussions of several business cases. The students were informed that there would be voluntary questionnaires to complete as part of a study in examining group decision-making, however they were unaware of the specific hypotheses of this study.

Design

The hypotheses were tested via a laboratory study. The independent variables of interest were: gender of the participant, the gender-orientation of the task or task-gender (male-stereotyped task, female-stereotyped task), and the participant's proportional representation in the group according to their gender (referred to as Numerical Status). This latter factor was determined by the subject's random assignment to one of three types of mixed-gender work groups: male-dominated (five men, one woman), female-dominated (five women, one man) and balanced (three men and three women) groups.

Task

This study required the use of two group discussion tasks that could trigger significantly different perceptions regarding the relative expertise or status of males and females. As mentioned above, previous research has successfully employed gendered tasks, via stereotypical content, as a means to generate differences in perceived expertise among men and women in mixed-gender contexts (e.g., Carr, Thomas & Mednick, 1985; Vancouver & Ilgen, 1989; Lippa & Beauvais, 1983). Our study employed two different managerial-related tasks used by Karakowsky & Siegel (1999) which were confirmed by the authors to be male-stereotyped and female-stereotyped. Karakowsky & Siegel (1999) confirmed that the MT triggered higher levels of perceived expertise for males compared to females. On the other hand, the FT triggered higher levels of perceived expertise for females compared to males. Consequently, these cases, by definition, serve as manipulations of perceived status or expertise.

Procedure

Within a time period of thirty minutes, all groups were instructed to reach a consensus regarding the development of a negotiation strategy for the protagonists in two assigned cases as discussed below. The research assistant distributed the first case, allowed the group several minutes to read it, and then activated the video-recording equipment. The assistant then left the room for the duration of the group discussion. After the allotted time, the assistant returned, shut off the camcorder and distributed the first set of questionnaires. The research assistant followed identical procedures for the second group discussion task, after which time the participants' involvement in the study ended. To control for possible confounding effects, the order of the two types of tasks were counterbalanced, as was the use of a male or female research assistant in facilitating the data collection.

Dependent Variable Measures

Interruption Behavior. Numerous researchers have acknowledged three fundamentally different types of interruptions: supportive or rapport-oriented interruptions (i.e., agreements, positive requests for information); neutral (i.e., elaborations on the topic of the interrupted speaker without evaluative content, requests for clarification); intrusive or negative (i.e., introducing topic changes, raising objections) (Goldberg, 1990; Smith-Lovin and Brody, 1989). This study focuses on intrusive interruptions since they have been viewed as the clearest indicator of power displays (Anderson & Leaper, 1998; Goldberg, 1990). This type of interruption best reflects a form of dominance, particularly given its intent to usurp the speaker's turn at discussion.

With regard to measurement, the videotaped group discussions were observed by three male and three female judges (graduate psychology students). Both men and women were used as judges to control for possible gender differences in observations given previous suggestions that male and female observers can differentially rate interruption behavior (Crown & Cummins, 1998). The judges received a training session on the observation and scoring of group member interruptions, using the definition of interruptions described above. Specifically, all judge observers were trained to observe and account for interruptions that could be classified as intrusive or negative interruptions (as opposed to supportive or neutral interruptions). This included successful attempts to prevent another speaker from completing a conversational turn and could include such characteristics as: expressing disagreement with the speaker; raising an objection to the speaker's idea; or introducing a complete change in topic (completely disregarding the initial speaker's utterance) (Anderson & Leaper, 1998; Smith-Lovin & Brody, 1989).

Judges were assigned to view 24 videotaped group discussions. All 72 group discussions were randomly assigned - the random assignment was restricted in the sense that each judge did not

view the same group engaged in more than one discussion. Consequently, once one group's discussion had been allocated to a judge, the second videotaped discussion performed by that group was randomly assigned to one of the remaining two judges. This was done to avoid biasing the judges' evaluation - i.e., viewing one group discussion might generate expectations among judges regarding the types of interruption behavior to be observed in the second group discussion.

Expert judge ratings of leadership. The videotaped group discussions were observed by six expert judges (three male, three female) in order to assess member leadership. These judges were selected independently of the judges used to score interruption behavior. The judges were human resource professionals who received training in the observation and scoring of group member behavior using the instruments developed for this study. Judges were assigned to view 24 videotaped group discussions. All 72 group discussions were randomly assigned - the random assignment was restricted in the sense that each judge did not view the same group engaged in more than one discussion. This was done to avoid biasing the judges' evaluation, as was explained above in the measurement of interruption behavior.

After viewing the videotaped group discussion, the judges ranked each subject in the group on six-point scales for leadership exhibited during the group discussion. Rankings ranged from 1 (lowest) to 6 (highest). This was based on methods used in previous research that are simple yet have proven to be straight-forward and reliable measures of emergent leadership (Bass, 1981). We considered the measures of leadership from each judge pair as forming a two-item scale for the combined judges' measure of leadership. The reliability reported in Table 1 is a measure of interjudge agreement on this measure.

Member ratings of leadership. Following each group discussion, group members ranked each other with regard to the level of leadership that group members exhibited in the group discussion, using a six-point scale identical to that used by the judges. Rankings for this measure ranged from 1 (lowest) to 6 (highest). We considered the rankings of leadership from each group member as forming a six-item scale for a combined group member measure of leadership. The reliability reported in Table 1 is an average measure of intragroup agreement on this measure.

Insert Table 1 about here

Individual Difference Measures

Following discussion of the group's second task, subjects completed questionnaires which measured masculinity-femininity (the Bem Sex-Role Inventory (BSRI; Bem, 1974) and self-efficacy in communication (Li, 1993). While these variables were not of central concern for this study, they were entered as covariates in the analyses of interruption behavior, given their potential influence on the dependent variable. We also attempted to control for a number of other factors which could potentially confound the results, and consequently we measured the following additional items: prior familiarity with other group members, age, relational demography (Tsui, Egan & O'Reilly, 1992) and differences in the two student samples used (156 participants forming 26 groups from one university, 60 participants forming 10 groups from another).

Results

The hypotheses of this study were analyzed using a mixed ANCOVA, and were included as part of a larger study. First, a 2 x 2 within-subjects factorial design involved the factors of

Task-Gender (male-stereotyped or female-stereotyped), Judge Gender (male or female). This was crossed with a 2 x 2 between-subjects factorial design involving: Order (the order in which the group discussed the two gender-oriented cases), Assistant gender (male or female), which was intended to control for potential confounding effects. This design was crossed with a 2 x 3 between-subjects factorial design involving: Gender of the participant (male or female), Numerical Status (proportional representation in the group based on gender - numerical minority, balanced or majority status). The covariates assessed in this study were intended to control for possible confounds and included: the relational demography score of the participant; the participant's age in years; whether the participant had previous familiarity with other group members; the participant's self-efficacy in communication; and the participant's masculinity and femininity scores. Table 2 reports a summary of the descriptive statistics of all variables in this study.

Insert Table 2 about here

For the purpose of data analyses, interruption behavior was measured by correcting the number of interruptions made by a participant for the time the participant spoke (Kollock, Blumstein & Schwartz, 1985). Consistent with methods previously employed (e.g., Smith-Lovin & Brody, 1989), the correction was obtained by using the logarithm ratio of the number of interruptions made by the participant to the total time for which the participant spoke. Total talking time (recorded in minutes and seconds) was obtained for every participant in each of the 72 group discussions by independent research assistants. In the male-stereotyped task, talking times ranged from 0.00 seconds to 16 minutes, 23 seconds ($M = 4$ minutes 28 seconds, $SD = 3$ minutes 24 seconds). In the female-stereotyped task, talking times ranged from 5 seconds to 19 minutes 50 seconds ($M = 4$ minutes 30 seconds, $SD = 4$ minutes 4 seconds). Levels of inter-rater reliability in both the male-stereotyped and female-stereotyped task were adequate, as reflected in the intra-class correlations between male and female judges on our measure of interruptions (male-stereotyped task ($r_1 = 0.83$), female-stereotyped task ($r_1 = 0.81$)).

One essential aim of our analyses was to examine the effects of a member's gender and the member's proportional representation on interruption behavior. **Hypothesis 1** predicted that proportional representation will have different consequences for men versus women. This assertion was tested by examining the two-way interaction of Gender and Numerical Status. There was a significant interaction effect between these two-factors ($F(2, 174) = 4.66, p < .05, \eta^2 = 0.05$). As indicated in Table 3, the results support the assertion of Hypothesis 1 - men in the numerical majority position differed significantly from women in majority positions with regard to the level of interruptions exhibited ($t(174) = 2.43, p < .05, d = 0.35$). Specifically, majority males interrupted significantly more ($M = 1.39, SE = 0.08$) compared to females ($M = 1.11, SE = 0.08$).

Further examination of the significant Gender x Numerical status interaction can be made with respect to the predictions of Hypothesis 2 and 3 which consider a within-gender comparison among members who are represented in different proportional representations – majority, balanced or minority positions. **Hypothesis 2** asserted that men in numerical majority positions will exhibit higher levels of interruption behavior compared to their same-gender counterparts in numerically balanced and minority positions. This assertion is supported by the pattern of means evident in Table 3. As indicated by the direction of the changes in the reported means, interruption behavior increases among male group members as one moves from numerical minority positions, to balanced positions, to numerical majority positions.

Hypothesis 3 predicted that women in numerical majority positions will exhibit lower

levels of interruption behavior compared to their same-gender counterparts in numerically balanced and minority positions. This assertion is also supported by the pattern of means reported in Table 3. As indicated by the direction of the changes in the reported means, interruption behavior decreases among female group members as one moves from numerical minority positions, to balanced positions, to numerical majority positions.

Insert Table 3 about here

Finally, we can consider the influence of Gender (G) x Task-Gender (T) x Numerical Status or proportional representation (N). This three-way interaction is the focus of **Hypothesis 4**. After controlling for possible confounds, there is a significant three-way interaction between Gender-Orientation of the task, Gender of the participant and Numerical Status in the group ($F(2, 174) = 5.29, p < .01, \eta^2 = 0.06$).

Essentially, Hypothesis 4 asserts that decrements in interruption behavior that arise due to proportional representation (i.e., moving from male-dominated to female-dominated groups) and incongruence with the gender-orientation of the task will be greater for women compared to men. The pattern of results shown in Table 4, together with post-hoc results, confirm this assertion. Specifically, the decrement in interruption behavior among women as they move from performing gender-congruent tasks in male-dominated groups ($\underline{M} = 1.56, SE = 0.18$) to gender-incongruent tasks in female dominated groups ($\underline{M}=0.89, SE = 0.09$) is significantly greater compared to men as they move from performing gender-congruent tasks in male-dominated groups ($\underline{M} = 1.22, SE = 0.08$) to gender-incongruent tasks in female dominated groups ($\underline{M}=1.13, SE = 0.18$) ($F(1,174) = 27.98, p < 0.01, \eta^2 = 0.14$). This significant difference indicates that while both men and women experience a decrease in power displays as they move from male-dominated to female-dominated groups, incongruence with the gender-orientation of the task produces a greater decrease for women than it does for men.

Insert Table 4 about here

Finally, our correlational analyses of the relationship between interruption behavior and emergent leadership ratings were conducted separately for men and women, as reported in Table 5. The findings support the assertion of **Hypotheses 5** that predicted the relationship would be negative for both men and women, regardless of the gender-orientation of the task and numerical status in the group. In addition, both peer-based and judge-based measures of leadership were negatively correlated with interruption behavior. This implies that the more a group member participates in group conversation via intrusive interruptions, the less likely the member will be viewed as exhibiting leader-like qualities in the group's activities.

Insert Table 5 about here

Discussion

It is important to understand the sources of power displays in diverse teams given that such displays can disrupt the effective integration of team members and thereby impede team functioning (Fiorelli, 1988). Drawing on the view of interruption behavior as a mechanism of power and dominance, this study emphasized that perceptual factors (i.e. perceived status), sociological factors (i.e. socialized roles) as well as structural factors (i.e., proportional representation) can play a significant role in stimulating gender differences in power displays in a group context.

Hypotheses 1 – 3 addressed the importance of gender roles and proportional representation in influencing power displays in team conversation. Consistent with the assertion of Hypothesis 1, our results indicated that men in male-dominated groups exhibited higher levels of power displays, in the form of verbal interruptions, compared to women in female-dominated groups. Taken together, the support found for Hypotheses 1, 2 and 3 extend the findings of previous research beyond the dyadic context in which conversational style, and specifically interruptions, have been almost exclusively examined. The pattern of results is consistent with the notion that the less diverse the group is, with regard to gender, the more likely the members will engage in behavior stereotypically associated with the dominant gender. The higher level of power displays in male-dominated contexts, is consistent with the notion of a greater level of socialized assertiveness among males compared to females. Rather than being passive, our results suggest that a numerical minority female is motivated to adapt to male group norms that involve power displays. This calls into question previous blanket assertions that suggest that the female numerical minority will automatically take on a passive role in male-dominated groups (Kanter, 1977).

In addition to proportional representation, our study underscores the importance of perceived status or expertise in mixed-gender contexts. In this study, expertise or status cues were generated based on congruence or incongruence of the member's gender with the gender-orientation of the group's task. Hypothesis 4 asserted that women are more adversely affected by incongruence with the gender-orientation of the task than are men. While incongruence with the gender-orientation of the task affected both men and women, men experienced a smaller decrease in interruption behavior on the gender-incongruent task. Compared to men, women were much more adversely affected by being perceived as "out of their domain" – they engaged in less powerful verbal behavior in such situations.

The findings cited above are particularly important given the increasing use of self-managing teams across many organizations. Self-managing work-teams typically operate without formal role status distinctions among members. The absence of such formal role status differences suggests that diffuse status differences, potentially triggered by the gender-orientation of the task, can play an even greater role and consequently magnify the impact of gender bias in mixed-gender work contexts. While our study employed a sample of university students, the research has similarly offered evidence of the persistence of sex role stereotyping in the workplace - the tendency to assign characteristics based on gender can apply to tasks or occupations that are more closely associated with one gender than the other (Schein, 1975). Sex-role stereotypes, well-documented throughout the 1970's and 1980's, continue to persist in research findings of the 1990's, in ways that have profound implications for members of work teams as well as for organizations. Our findings suggest that attention should be given to the pervasiveness of sex stereotypes, particularly as they relate to the nature of group work. Such stereotypes can trigger differential perceptions of status or expertise and create alleged gender differences in intra-group behavior where they might otherwise not have arisen.

Finally, our study attempted to explore the consequences of power displays among group members. Our findings offered support for the assertion of Hypothesis 5 which predicted a negative relationship between interruption behavior and emergent leadership ratings. Among both

men and women, our results suggested that interrupters are less likely to be viewed as emergent leaders in the group. This implies that the more a group member participates in group conversation via intrusive interruptions, the less likely the member will be viewed as exhibiting leader-like qualities in the group's activities. While interrupters may have gained dominance in the group discussion, this dominance was not viewed as "leader-like" by colleagues nor by independent observers. This finding may seem somewhat paradoxical - interruptions are allegedly a form of power display, yet their ultimate effect is to reduce the member's leadership ranking in the group.

The results do not necessarily indicate that interruption behavior will consistently undermine power or status in a group. However, the findings do suggest that such power displays may be incongruent with perceptions of effective leadership under certain circumstances. In this study, leadership rankings were based on perceptions of emergent leadership demonstrated within group tasks that were largely open-ended rather than directed. These tasks could be viewed as requiring consensus-building and collaboration – qualities that are in conflict with power displays such as interruptive behaviors. On the other hand, for tasks that require more directive leadership behaviors, such power displays may be perceived as congruent with effective leadership. Clearly, additional research is required to more fully explore the relationship of power displays, perceived leadership and the nature of the group's task.

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Table 1
Reliabilities and Confidence Intervals for Leadership Measures

Task	Scale	Reliability	95% Confidence Interval
MT	Judge measure of leadership	0.817 ^a	0.767 to 0.857
FT	Judge measure of leadership	0.820 ^a	0.771 to 0.860
MT	Group measure of leadership	0.754 ^b	0.734 to 0.772
FT	Group measure of leadership	0.765 ^b	0.746 to 0.783

Note. *CI = confidence interval; MT = male-stereotyped task; FT = female-stereotyped task.*

^a Intra-class correlation based on the one-way model.

^b Averaged intra-class correlation based on the one way model, using the inversion of Fisher's z_i transform.

Table 2
Summary of Descriptive Statistics for Observed Sample (N = 197)

Variable	<u>M</u>	<u>SD</u>	Correlations												
			1	2	3	4	5	6	7	8	9	10	11		
1 Interruption Behavior, MT ¹ Fem. Judge	1.44	0.87	-												
2 Interruption Behavior, MT Male Judge	1.11	0.88	-	0.91**											
3 Interruption Behavior, FT ² Fem. Judge	1.43	0.85	-	0.11	0.09										
4 Interruption Behavior, FT Male Judge	1.01	0.87	-	0.13	0.11	0.91**									
5 Location	0.28	0.45	-	-0.04	-0.03	-0.04	-0.13								
6 Relational Demography	0.43	0.51	-	0.01	0.03	0.06	-0.07	0.52**							
7 Age	23.90	7.22	-	-0.11	-0.11	-0.04	-0.08	-0.07	-0.02						
8 One friend in the group	0.09	0.28	-	0.07	0.07	0.02	0.01	-0.01	-0.03	-0.14*					
9 Two friends in the group	0.06	0.24	-	-0.13	-0.12	-0.01	-0.06	-0.03	0.05	-0.11	-0.08				
10 Self Efficacy in Communication	42.87	9.06	0.86	-0.07	-0.09	-0.28**	-0.21**	-0.09	-0.05	-0.11	-0.01	0.14*			
11 Bem Masc. Score	50.52	11.20	0.87	-0.21**	-0.21**	-0.17*	-0.15*	-0.13	-0.09	0.07	-0.01	0.07	0.54**		
12 Bem Fem. Score	48.53	10.39	0.77	0.12	0.12	0.07	0.09	-0.24**	-0.11	-0.02	0.10	0.15*	-0.04	-0.11	

Note. *p < 0.05, **p < 0.01.

¹MT=male-stereotyped task

²FT=female-stereotyped task

Table 3

Summary of Interaction of Gender and Proportional Representation (Numerical Status) on Interruption Behavior

Numerical Status of the Subject's Gender in the Group	Subject's Gender	Interruption Behavior (M)	SE	<u>T</u>	<u>d</u>
Numerical Minority	Male	0.95	0.18	1.69	0.24
	Female	1.39	0.18		
Numerically Balanced	Male	1.11	0.11	0.81	0.12
	Female	1.23	0.11		
Numerical Majority	Male	1.39	0.08	2.43*	0.35
	Female	1.11	0.08		

Note. Marginal means evaluated at the averages of the covariates. Men $n=103$. Women $n=94$.

* $p < .05$.

Table 4

Summary of Interaction of Gender, Gender-Orientation of Task and Proportional Representation (Numerical Status) on Interruption Behavior

Subject's gender	Task Gender Orientation	Numerical Status	Interruption Behavior (<u>M</u>)	<u>SE</u>
Male	Female-Stereotype	Minority	1.13	0.18
		Balanced	1.33	0.11
		Majority	1.56	0.08
	Male-Stereotyped	Minority	0.76	0.19
		Balanced	0.87	0.11
		Majority	1.22	0.08
Female	Female-Stereotyped	Minority	1.56	0.18
		Balanced	1.38	0.12
		Majority	1.31	0.09
	Male-Stereotyped	Minority	1.21	0.19
		Balanced	1.09	0.12
		Majority	0.89	0.09

Note. Marginal means evaluated at the averages of the covariates.

Table 5

Summary of Correlations Between Leadership Measures and Interruption Behavior

<u>Source of Leadership Scores</u>	<u>Source of Interruption Behavior Scores for Males (n = 108)</u>			
	<u>Male-Stereotyped Task</u>		<u>Female-Stereotyped Task</u>	
	<u>Female Judge</u>	<u>Male Judge</u>	<u>Female Judge</u>	<u>Male Judge</u>
Peers	-0.4**	-0.39**	-0.46**	-0.41**
Male Judge	-0.32**	-0.31**	-0.46**	-0.39**
Female Judge	-0.41**	-0.31**	-0.44**	-0.34**

<u>Source of Leadership Scores</u>	<u>Source of Interruption Behavior Scores for Females (n = 104)</u>			
	<u>Male-Stereotyped Task</u>		<u>Female-Stereotyped Task</u>	
	<u>Female Judge</u>	<u>Male Judge</u>	<u>Female Judge</u>	<u>Male Judge</u>
Peers	-0.36**	-0.35**	-0.25**	-0.21**
Male Judge	-0.29**	-0.30**	-0.31**	-0.25**
Female Judge	-0.39**	-0.39**	-0.24**	-0.16**

Note. *p < 0.05, **p < 0.01

THE BURNOUT PROCESS RE-EXAMINED

This study examined the burnout process among 480 senior officers in an Australian law enforcement organization. Structural equation models (LISREL) were used to investigate three possible burnout processes and the interrelationships among the modified five-factors of the Maslach Burnout Inventory (Maslach and Jackson, 1981). Results demonstrated that the Leiter and Maslach (1988) sequential model approach was superior to Golembiewski and Munzenrider (1988) phase and base model approaches. The study supported emotional exhaustion (psychological strain) as central to, or the trigger of, the other burnout factors. This study also provides additional support for a five-factor burnout framework and advances the debate regarding the interrelationships among the burnout factors. Theoretical and practical implications are discussed.

Burnout is generally viewed by researchers as a process and not a reaction to a specific stressful event (Burke and Greenglass, 1991; Capel, 1991; Greenglass and Burke, 1990; Lee and Ashforth, 1993; Leiter, 1990; Wade, Cooley et al., 1986). However, there is no consensus among researchers about the burnout process and how the syndrome proceeds from one factor to another (Cordes and Dougherty, 1993; Lee and Ashforth, 1993; Leiter, 1993; Toppinen-Tanner, Kalimo et al., 2000), although most burnout models have the basic assumption that the process is sequential (Schaufeli and Enzmann, 1998). Lee and Ashforth (1990) and more recently, Hellesøy, Grønhaug, and Kvitastein (2000) have highlighted the deficiency in understanding the burnout process and have called for more theoretical development. This study aims to address this deficiency in the literature while further advancing our limited understanding of burnout among senior managers.

Background

The concept of burnout was a product of intense investigations conducted in the late 1970s and early 1980s, and was not defined as a separate entity until 1974 by Freudemberger. According to Farber (1983:14), "burnout is more often the result not of stress per se. . . but of unmediated stress - of being stressed and having no 'out', no buffers, no support system." Rarely, would a single disturbing action episode be sufficient to cause burnout (Burisch, 1993). Maslach and Jackson (1981) pioneered the empirical study of burnout and established the widely-cited definition for this debilitating syndrome. Their definition defines burnout in terms of three dimensions of the syndrome, namely emotional exhaustion, depersonalization of others, and perceived lack of personal accomplishment in working with others. The implications of burnout for organizations are well documented (see Burke and Richards, 1993; Cordes and Dougherty, 1993). For example, Leiter and Maslach (1988) found that high levels of burnout were related to diminished organizational commitment and were detrimental to key aspects of the interpersonal environment within organizations. Burnout has been described as "a sensitive indicator of organizational healthiness" (Cox and Leiter, 1992: 222). While burnout studies have focused on the human services professions, health workers and teachers have been the predominant occupational groups studied (Schaufeli and Enzmann, 1998).

Law enforcement has been recognized as one of the most stressful human service professions in modern society (Selye, 1979) and linked to burnout (Maslach and Jackson,

1991) and individual psychological strain (Kaufmann and Beehr, 1989). Studies of burnout among law enforcement officers represents only two percent of 473 studies published in journal articles, books and 538 dissertations between 1978 and 1996 (Schaufeli and Enzmann, 1998). However, several burnout studies of law enforcement organizations, have confirmed the negative impact that job demands have on the home and family lives of officers as a result of high burnout levels (e.g., Burke and Deszca, 1986). Law enforcement is associated with psychological and emotional stressors that are often not counterbalanced by positive, emotionally pleasing interactions (Cannizzo and Liu, 1995). The majority of burnout studies on law enforcement have focused at the lowest organizational levels (i.e., street level), which is consistent with most burnout studies conducted in various occupations. According to Lee and Ashforth (1993: 370), “very few studies have focused on managers, despite the apparent prevalence of burnout at the managerial level” (e.g., Harvey and Raider, 1984) and the detrimental effects managers can have on the attitudes and behaviors of individuals they serve and lead (Golembiewski, Munzenrider et al., 1986; Gryskiewicz and Buttner, 1992; Kadushin, 1985; Seltzer and Numerof, 1988). Consequently, the current study aims to address this deficiency by investigating burnout among senior law enforcement officers by focusing on the burnout process within this occupation.

The Maslach Burnout Inventory (MBI, Maslach and Jackson, 1981) has been the most widely used instrument for investigating burnout and is recognized to be robust. However, the structural validity of the MBI is not beyond question (Schaufeli, Enzmann et al., 1993), even though many attempts have been made to clarify the number of factors (e.g., Byrne, 1993; Schaufeli and Van Dierendonck, 1993). The original three factor structure developed by Maslach and Jackson (1981) has dominated all investigations of the burnout process which to date, have been unable to provide conclusive empirical evidence of the burnout process (Hellesøy et al., 2000). A recent study of the MBI factor structure identified five burnout factors (Densten, 2001). This new factor structure incorporated key developments in the conceptualization and measurement of burnout that have occurred since the conception of the MBI. Specifically, the expanded five-factor structure increased the capacity of the MBI to measure more clearly the dimensions of emotional exhaustion and personal accomplishment. The emotional exhaustion dimensions relate to ‘feelings of being emotionally extended and exhausted by one’s work’ (Maslach and Jackson, 1981: 100) and have both a psychological and somatic (i.e., physical) aspect which are measured by two factors, namely emotional exhaustion (*psychological strain*) and emotional exhaustion (*somatic strain*). According to Enzmann, Schaufeli, Janssen, & Rozeman (1998), being able to distinguish clearly between psychological and physical forms of exhaustion has sound theoretical support. Emotional exhaustion, as a single factor has a discriminant validity that is considered ‘relatively poor’ because it is strongly related to other concepts, such as psychosomatic symptoms (Schaufeli and Enzmann, 1998). Consequently, these findings provide support for emotional exhaustion having two aspects.

The personal accomplishment or professional efficacy dimensions relate to a lack of feelings regarding both job competence and successful achievement in one’s work and are measured by two factors (items were reverse scored), namely personal accomplishment (*self*) and personal accomplishment (*others*). Personal accomplishment (*self*) focuses on internally driven feelings related to self-inefficacy or a lack of ability (Bandura, 1977), while personal accomplishment (*others*) focuses on externally driven (e.g., views from others) feelings related to learned helplessness (Seligman, 1975) and the expectation that successful achievement is unlikely. The depersonalization, cynicism, or dehumanization dimension relates to an individual’s attempts to gain emotional distance (e.g., treating a client as a number) as a means to cope with exhaustion, and is measured by a factor, namely depersonalization. In summary, the emotional exhaustion factors represent forms of strain while the personal accomplishment factors and the depersonalization factor are coping behaviors.

Each MBI burnout factor has a different progression or mechanism but is linked by a common association or root (Buunk and Schaufeli, 1993). This multidimensional view is supported by empirical evidence (Maslach, 1993). Several models have attempted to explain

the interrelationships among the MBI burnout factors. Central to these investigations has been a developmental focus (Leiter, 1993), that is, how one factor influences another factor. Originally, Leiter and Maslach (1988) proposed sequential relationships among the burnout factors, and from this proposal, two schools of thought have developed. The first views the burnout process as an internal process with emotional exhaustion as the trigger to the syndrome. The second views personal accomplishment and emotional exhaustion dimensions as developing in parallel (Leiter, 1993) which involves two factors being influenced at the same time from external work aspects. Further, Leiter (1993) has argued that a mixed sequential and parallel process model is most appropriate, rather than just a simple sequential process model. Several studies of the burnout process (e.g., Bakker, Schaufeli et al., 2000; Toppinen-Tanner et al., 2000) have limited their investigations to a purely sequential approach (i.e., emotional exhaustion leads to depersonalization and then personal accomplishment) which ignores the potential of parallel relationships within the burnout process. This study aims to contribute to the literature by investigating parallel and sequential relationships.

The current study identified three alternative process models of burnout. The first model, was based on the phase approach of Golembiewski and Munzenrider (1988), the second model, was based on the sequential approach of Leiter and Maslach (1988), and the third model, the base model, had all burnout factors centered on emotional exhaustion (*psychological strain*). The base model tests the proposition that emotional exhaustion (*psychological strain*) was central to all other burnout factors. Common to the first and second models, was the direct relationship of emotional exhaustion (*psychological strain*) on emotional exhaustion (*somatic strain*). Support for the direction of this relationship arises from Leiter, Clark, and Durup's (1994:79) finding that "emotional exhaustion mediated the relationship of psychosomatic symptoms with qualities of the work environment." Wolpin (1988, cited in Shirom, 1989) also found that somatic symptoms were more likely to follow psychological symptoms rather than precede them. In addition, personal accomplishment (*others*) preceded personal accomplishment (*self*) in both the first and second models. While both personal accomplishment types involve assessments of psychological success and failure, personal accomplishment (*others*) is similar to self-efficacy (see Bandura, 1989) and is influenced by job or organizational aspects (i.e., situation-specific) and would therefore, logically precedes the more globally focused personal accomplishment (*self*) which is associated with the general premise of hope (see Synder, 1994). In other words, self-efficacy beliefs would logically affect feeling of hope. The current study aims to clarify the relationships between the two emotional exhaustion factors and the two personal accomplishment factors within a single structural model.

Golembiewski and Munzenrider's (1988) Phase Model

The Golembiewski and Munzenrider's (1988) process model has eight distinct phases which are identified by unique combinations of high and low scores of depersonalization, personal accomplishment, and emotional exhaustion. These eight phases identify the progressive deterioration of an individual experiencing burnout. Several cross-sectional studies (Golembiewski, Boudreau et al., 1996; Golembiewski and Munzenrider, 1990; Golembiewski et al., 1986; Greenglass, Burke et al., 1997; Gryskiewicz and Buttner, 1992) and one longitudinal study (Bakker et al., 2000) have provided support for this model. The eight phases represent an underlying progression from depersonalization, to lack of personal accomplishment and finally, emotional exhaustion. In simple terms, the phase model suggests that individuals first attempt to cope with a stressful situation by gaining emotional distance from their clients (i.e., depersonalization), resulting in impeded performance which diminishes personal accomplishment that eventually results in emotional exhaustion (Golembiewski et al., 1996). The current study investigates this phase progression of burnout in Model 1 which proposes that the burnout process starts from depersonalization, which simultaneously (or in parallel) leads to (lack of) personal accomplishment (*others*) and (lack of) personal accomplishment (*self*), and finally to emotional exhaustion (*psychological strain*) and emotional exhaustion (*somatic strain*). Figure 1, illustrates the relationships of Model 1.

Insert Figure 1 here

Leiter and Maslach's (1988) Sequential Model

Leiter and Maslach (1988) proposed an alternative burnout process model to Golembiewski and Munzenrider's (1988) Phase Model. Their sequential model places emotional exhaustion as central or the starting point of the phenomenon, where emotional exhaustion first influences depersonalization and in turn, depersonalization then influences personal accomplishment. Several cross-sectional studies (Greenglass et al., 1997; Lee and Ashforth, 1993; Leiter and Schaufeli, 1996) and one longitudinal study (Bakker et al., 2000) have supported the sequential model approach. In simple terms, the sequential model suggests that in stressful situations where individuals become over stimulated and exhausted (i.e., emotional exhaustion), they cope by depersonalizing their clients which leads to diminished personal accomplishment. Consequently, the resulting order of burnout factors, and subsequent interpretation of the burnout process is substantially different from the phase model proposed by Golembiewski and Munzenrider (1988).

Leiter (1993) suggested an additional improvement to the sequential model by asserting that emotional exhaustion and personal accomplishment develop separately or in parallel. He argued that the working environment affects each of these factors differently and therefore each factor reacts independently. Further, both emotional exhaustion and personal accomplishment (*self*) are similar to what Burisch (1993: 91) terms "second-order stress" which results from failed attempts to remedy situations. In the current study, Model 2 presents the burnout progression identified by the sequential model, along with Leiter's suggested improvements. In Model 2, the burnout process starts from emotional exhaustion (*psychological strain*) which is central to all other burnout factors, except personal accomplishment (*self*). Emotional exhaustion (*psychological strain*) represents the reaction of individuals to the accumulating effect of long-term stressors, or in other words, over stimulation and exhaustion. Emotional exhaustion (*psychological strain*) then simultaneously influences three of the four burnout factors, namely emotional exhaustion (*somatic strain*), depersonalization, and personal accomplishment (*others*). Personal accomplishment (*self*) is the last remaining factor and influenced by personal accomplishment (*others*). Figure 2, illustrates the relationships of Model 2.

Insert Figure 2 here

In summary, the current study aims to address the deficiency in understanding the burnout process, by (a) increasing our comprehension of burnout in senior managerial positions, (b) clarifying the burnout process among senior law enforcement officers, (c) incorporating and investigating parallel and sequential relationships of the burnout process, and (d) clarifying the relationships between the two emotional exhaustion factors and the two personal accomplishment factors within a single structural model.

Method

Questionnaires mailed out to 585 law enforcement senior officers and 480 were returned which achieves a response rate of 82%. A randomly stratified sample design achieved proportional representation. The chi-square value and associated level of significance ($\chi^2 = 6.56$; *d.f.* = 4; *p* > .05) indicates that the achieved sample was not significantly different from the population.

Measures

The MBI (Maslach and Jackson, 1981) consists of 22 items to measure burnout and uses an intensity Likert scale that ranges of 0 ('Never') to 7 ('Major, very strong'). Several

studies (Friedman and Sarros, 1989; Jackson, Turner et al., 1987; Leiter and Meehan, 1986; Sarros and Sarros, 1992) have elected to use only the intensity and not the frequency scale because unlike stress, burnout is an on-going manifestation where there is no respite and therefore, the intensity of feelings is more critical than the frequency of occurrence. Such an approach is consistent with several test-retest studies conducted using the MBI (Wade et al., 1986) which found burnout to be a chronic rather than a transient syndrome.

An investigation of the factorial validity of the MBI resulted in item 12 ('I feel energetic') being deleted because it did not load on the appropriate factor. This action is consistent with the recommendations of Bryne (1993) and Schaufeli and Van Dierendonck (1993). Two further items were excluded: item 13 ('I feel frustrated by my job'), and item 14 ('I feel I'm working too hard on my job') because of very low squared multiple correlation scores. In addition, both items refer to common aspects of law enforcement such as 'frustration' and 'working too hard' for which respondents may not have been able to discern the intensity of their feelings. An acceptable confirmatory factor analysis for this study was achieved ($\chi^2=290.18$, $d.f.=109$, $p=.000$; $GFI=.91$; $TLI=.92$; $CFI=.94$) which measured five factors of burnout, namely emotional exhaustion (*psychological strain*) - 3 items, emotional exhaustion (*somatic strain*) - 4 items, depersonalization - 5 items, personal accomplishment (*others*) - 4 items, and personal accomplishment (*self*) - 3 items (for further details regarding CFA see Densten, 2001). In addition, the word 'recipient' replaced 'patient' among the MBI items.

Sample

The sample was predominantly male, with an average age of 45 years, most were married (87.2 per cent) with two or more children, and a majority (63.2 per cent) had only attained high school education (non-college education). Most respondents (81.4 per cent) joined the law enforcement organization when under 21 years of age. Senior sergeants formed the largest group (48.7 per cent) among the five senior officer levels examined. The average years of service was 25 years with most managers (70 per cent) being in their current position for three years and five months. Most managers (73 per cent) worked in a department of 75 or fewer personnel.

Analyses of data

Composite factor scores of each factor were generated using factor score regression weights that maximize the reliability of factor scores (see Wertz, Rock et al., 1978). These composite factors were examined using Multilevel Analysis procedures (see Woodhouse, 1995) and identified as single level data. According to Keeves and Cheug (1990), single level structural equation models should not be fitted with multilevel data, otherwise unreliable or inelegant analysis may result. These single level composite factor scores were then fitted to the LISREL method for submodel 3b (Jöreskog and Sörbom, 1989) that contains only y (observed) and η (latent) variables which were treated as endogenous. Three structural equation models were generated, namely Model 1: Golembiewski and Munzenrider's (1988) Phase Model approach, Model 2: Leiter and Maslach (1988) Sequential Model approach, and the base model where emotional exhaustion (*psychological strain*) directly influenced all of the remaining burnout factors.

The structural equation models were assessed using several indices in three areas, namely overall fit indices (i.e., Chi Square, Goodness of Fit and Root Mean Square), comparative fit indices (i.e., Adjusted Goodness of Fit, Normed Fit Index, and Non-normed Fit Index), and parsimonious fit indices (i.e., Normed Chi-square, Parsimonious Normed Fit Index, and Akaike Information Criterion).

Results

Table 1 presents the means, standard deviations, correlations, and reliabilities for this study. An examination of the correlation matrix identified relationships among the factors which were consistent with Maslach and Jackson's (1981) original study. In addition, the reliabilities for all burnout factors were above .70 except for personal accomplishment (self) which was .67.

Insert Table 1 here

As indicated in Table 2, Model 2 had an acceptable fit and was superior to Model 1 and the base model. Model 1 and the base model did not achieve acceptable fits. Model 2's acceptable fit is indicated by (a) an adequate chi-squares ($\chi^2 = 2.24$, $d.f. = 2$, $p = .33$), (b) a Goodness of Fit Index (GFI) of .99 which indicated a reasonable fit, (c) a Root Mean Square Residuals (RMSR) of .03 which is less than the threshold of .05. and (d) a χ^2/df score less than 2 (Anderson and West, 1998). Further, the incremental fit indices of Tucker-Lewis Index (TLI) (i.e., .99) and Comparative Fit Index (CFI) (i.e., .99) were above the recommended .90 level (Hair, Anderson et al., 1998) and the Normed Chi-square Index was 1.12 which indicated a good fit. Finally, the parsimonious fit indices of the Adjusted Goodness of Fit of .99 and the Parsimonious Normed Fit Index (PNFI) of .91 were within acceptable limits indicating a good fitting model. Model 2 Akaike Information Criterion (i.e., 12.24) was lower than Model 1 which had unacceptably low incremental and parsimonious fit indices.

Insert Table 2 here

Figure 3 illustrates the direct effects (i.e., β) and errors (i.e., ζ) for the burnout factors in Model 2, which is based on the sequential model of Leiter and Maslach (1988).

Insert Figure 3 here

Discussion

The current study examined the interrelationships to clarify the burnout process. Figure 3 confirms the findings of several studies which identified emotional exhaustion as central to the burnout process (e.g., Gaines and Jermier, 1983; Hobfoll and Freedy, 1993; Lee and Ashforth, 1993; Leiter, 1991; Maslach, 1982; Shirom, 1989). In addition, the current study highlights the linkage between emotional exhaustion (*psychological strain*) and depersonalization ($\beta=.561$) and personal accomplishment (*others*) ($\beta=-.367$). Further, emotional exhaustion (*psychological strain*) appears to directly affect emotional exhaustion (*somatic strain*) ($\beta=.775$) which confirms the findings of Leiter, Clark and Durup (1994:79). Emotional exhaustion (*psychological strain*) appears to directly affect depersonalization ($\beta=.162$) which supports the findings of Savicki and Cooley (1994) and Leiter and Maslach (1988) that emotional exhaustion is capable of predicting levels of depersonalization. These findings contradict Schwab and Iwanicki's (1982) argument that there is no fixed sequence in burnout, and that one factor is not an inevitable consequence of another. The present study suggests that emotional exhaustion (*psychological strain*) and personal accomplishment (*others*) operate in parallel, and that both depersonalization and personal accomplishment (*others*) are responses to emotional exhaustion (*psychological strain*).

This study demonstrated that emotional exhaustion (*psychological strain*) was central in the burnout process and was the only factor to directly effect emotional exhaustion (*somatic strain*), depersonalization, and personal accomplishment (*others*). This finding supports Leiter and Maslach's (1988) sequential model approach and is consistent with previous research (Gaines and Jermier, 1983; Hobfoll and Freedy, 1993; Lee and Ashforth, 1993; Shirom, 1989). The inability of emotional exhaustion (*somatic strain*) to sustain similar relationships adds further evidence of the discriminant validity of these emotional exhaustion factors, and raises questions about whether both factors of emotional exhaustion have the same relationships with the possible causes, concomitants, and consequences of burnout. According to Schaufeli and Enzmann (1998), of all the burnout factors, emotional exhaustion is the most strongly related to such issues. The central position of emotional exhaustion (*psychological strain*) within the burnout process suggests that individuals cope with excessive stimulation and insufficient means to regulate such stimulation (see Hobfoll and Freedy, 1993) by depersonalizing their clients and harshly judging their own personal accomplishments. This raises the question: "How do individuals cope with emotional exhaustion (*somatic strain*)?" This type of burnout relates to feeling of being 'emotionally drained', 'used up', 'fatigued', and 'burnt out' which may suggest that individuals take more extreme measure to cope, such as avoiding work altogether or leaving their organization.

The direct effect of emotional exhaustion (*psychological strain*) on depersonalization was greater than its direct effect on personal accomplishment (*others*) which confirms the findings of previous studies (e.g., Toppinen-Tanner et al., 2000). However, differences between the effects were relatively small (i.e., $.561-.367=.194$) which raises another question as to whether personal accomplishment (*others*) should be included in the so-called "core of burnout" (see Walkey and Green, 1992). Previously, Walkey and Green (1992), had only considered emotional exhaustion and depersonalization and not personal accomplishment as the "core of burnout." The current study identifies that all three factors are interrelated and probably are influenced by similar workplace stimuli. In addition, both depersonalization and personal accomplishment (*others*) represent an internal response resulting from excessive stimulation and insufficient means to regulate such stimulation, which suggests that these coping behaviors occur in parallel rather than one after the other. Such a finding is consistent with Leiter and Maslach's (1988) view that the burnout process is triggered by emotional exhaustion which then influences the coping behaviors process. Further, the results clarify the particular aspect of emotional exhaustion which is the trigger for burnout as psychological rather than somatic, i.e., strain and feelings of stress, and the feelings of being "at the end of one's rope" are the main indicators. However, recognizing emotional exhaustion (*psychological strain*) as the trigger raises questions about the role of emotional exhaustion (*somatic strain*) in the burnout process. Perhaps this factor more accurately measures the residual or underlying aspects of the burnout process identified in earlier research. For example, burnout has been identified as a state of physical, emotional, and mental exhaustion caused by long term involvement in situations that are emotionally demanding (Pines and Aronson, 1988), and depletion of energetic resources, involving a combination of physical fatigue, emotional exhaustion, and cognitive wariness (Shirom, 1989). These definitions are consistent with the clarified definition of emotional exhaustion (*somatic strain*).

The current study also provided support for the discriminant validity of personal accomplishment (*others*) and personal accomplishment (*self*), as demonstrated by the fact that emotional exhaustion (*psychological strain*) only directly influenced personal accomplishment (*others*) and not personal accomplishment (*self*). Also, the existence of two personal accomplishment types helps to clarify why some studies have found that personal accomplishment develops separately from the other burnout factors, and other studies have not (Bakker, Schaufeli et al., in press; Bakker et al., 2000; Cordes, Dougherty et al., 1997; Lee and Ashforth, 1996; Maslach and Goldberg, 1988). Personal accomplishment (*self*) relates to self-inefficacy which has a personal or self-view focus and is influenced by general attitudes toward work rather than job specific stimuli. In contrast, personal accomplishment (*others*) relates to learned helplessness which is associated with burnout in terms of expectations and the work environment (Burisch, 1993; Shirom, 1989). Future research needs

to clarify to what extent personal accomplishment (*self*) is independent from the other burnout factors, and this could be achieved by examining its relationships to the presence of resources (e.g., social support), a key influence on personal accomplishment as a single factor (Leiter, 1993).

In summary, the findings of the current study allow for a new perspective on how the process of burnout develops. This perspective suggests that when individuals become over stimulated and exhausted from the accumulated effect of stressors, two types of coping behaviors are triggered simultaneously, i.e., gaining emotional distance from their clients (depersonalization) and reducing their feeling of mastery to alleviate performance frustration (personal accomplishment (*others*)). Emotional exhaustion (*psychological strain*) acts as the trigger for these coping behaviors and acts as an indicator of the initial exhaustion of individuals. As individuals attempt to cope with over-stimulation, their energetic resources become depleted causing physical fatigue and tiredness thereby affecting their physical well-being. Emotional exhaustion (*somatic strain*) is a measure of this deterioration in physical well-being. While over stimulation leads to exhaustion that triggers coping behaviors, individuals are also assessing their overall achievements against their expectations of success. Personal accomplishment (*self*) is a measure of this global assessment. A link between personal accomplishment (*self*) and personal accomplishment (*others*) suggests the an individual's global assessment is also influenced by external assessments of the (lack of) achievement driven by feelings of exhaustion.

Limitations

The current study is not without limitations. First, self-report data can be influenced by common method variance however, according to Bakker et al. (2000), constructs measured by the MBI are quite similar to these affective and cognitive or perceptual constructs which Spector (1987) found little evidence of common method variance. Also several researchers (e.g., Fried and Ferris, 1987; Wagner and Crampton, 1990) believe the inflation caused by common method variance has been exaggerated. Second, according to Toppinen-Tanner et al., (2000) the burnout process may vary among different job because of the multi-causal nature of burnout and therefore, the finding of the current study may not be generalizability to other occupations.

Conclusion

The original three factor model of the MBI (Maslach and Jackson, 1981) has dominated burnout research for the last twenty-two years. The current study's investigation of the modified five-factors of the MBI (Densten, 2001) identified the Sequential Model of Leiter and Maslach (1988) as the superior model and allowed for a new perspective on the burnout process to be developed. Several key findings clarified the conceptualization of burnout factors and their interrelationships. For example, emotional exhaustion (*psychological strain*) was identified as the trigger for the coping behaviors of depersonalization and personal accomplishment (*others*). The results raised several issues which require further investigation, such as the role of emotional exhaustion (*somatic strain*) and personal accomplishment (*self*) in the burnout process. The clarification of the burnout process in this study should be a first step in advancing our understanding of how stressors impact on the burnout process and therefore, lead to early recognition of indicators of burnout which could facilitate intervention at an early stage.

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Table 1*Means, Standard deviations, Correlations and Reliabilities of Burnout Factors*

Burnout Factors	Mean	SD	α	1	2	3	4
1 Emotional Exhaustion (<i>Psychological Strain</i>)	1.50	1.35	.84				
2 Emotional Exhaustion (<i>Somatic Strain</i>)	2.52	1.69	.89	.67			
3 Depersonalization	2.11	1.47	.73	.55	.49		
4 Personal Accomplishment (<i>Others</i>)	4.63	1.21	.72	-.31	-.28	-.25	
5 Personal Accomplishment (<i>self</i>)	5.01	1.12	.67	-.27	-.20	-.17	.41

Note: if $r \geq .65$, $p < .05$; $r \geq .75$, $p < .01$; $r \geq .85$, $p < .001$.

Table 2*Overall Goodness-of-Fit Indices for Structural Equation Models of Burnout*

	Absolute Fit Indices					Incremental Fit Indices			Parsimonious Fix Indices		
	χ^2	<i>d.f.</i>	<i>P</i>	GFI	RMSR	TLI	NFI	NCS	AGFI	PNFI	AIC
Base Model	45.79	6	.000	.946	.146	n/a	n/a	n/a	.865	n/a	55.79
Model 1	37.54	3	.000	.956	.134	.736	.180	12.51	.778	.50	47.54
Model 2	2.24	2	.327	.997	.023	.994	.990	1.12	.980	.91	12.24

Note: GFI = Goodness-of-fit index; RMSR = Root Mean Square Residual; TLI = Tucker Lewis index; NFI = Normed Fit Index; AGFI = Adjusted Goodness-of-fit Index; NCS = Normed chi-square; PFI = Parsimonious Normed Fit Index; AIC = Akaike Information Criterion; n/a=not applicable.

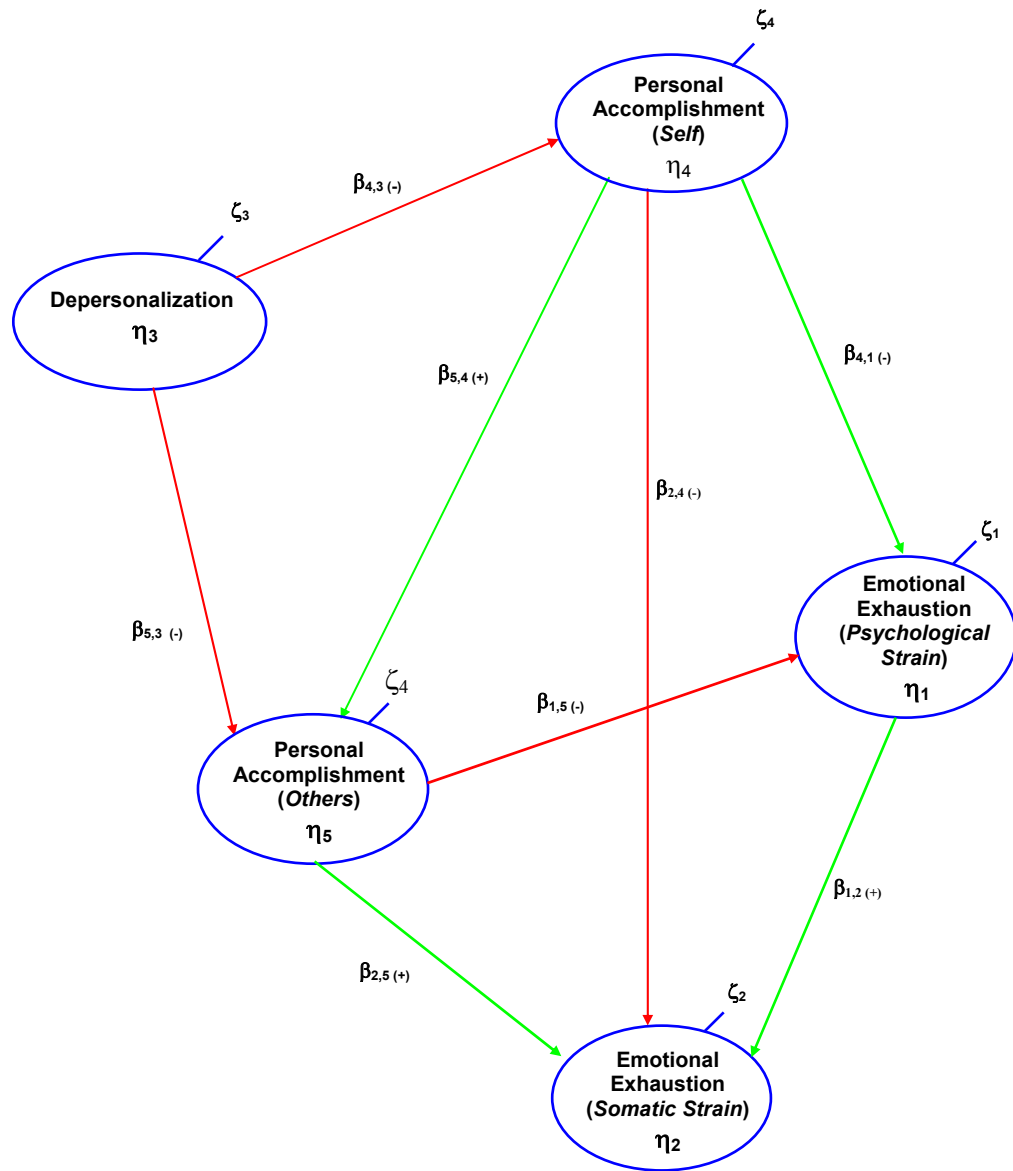


Figure 1
Path Model of Structural Equation Model 1 for Burnout
(Based on Golembiewski and Munzenrider, 1988)

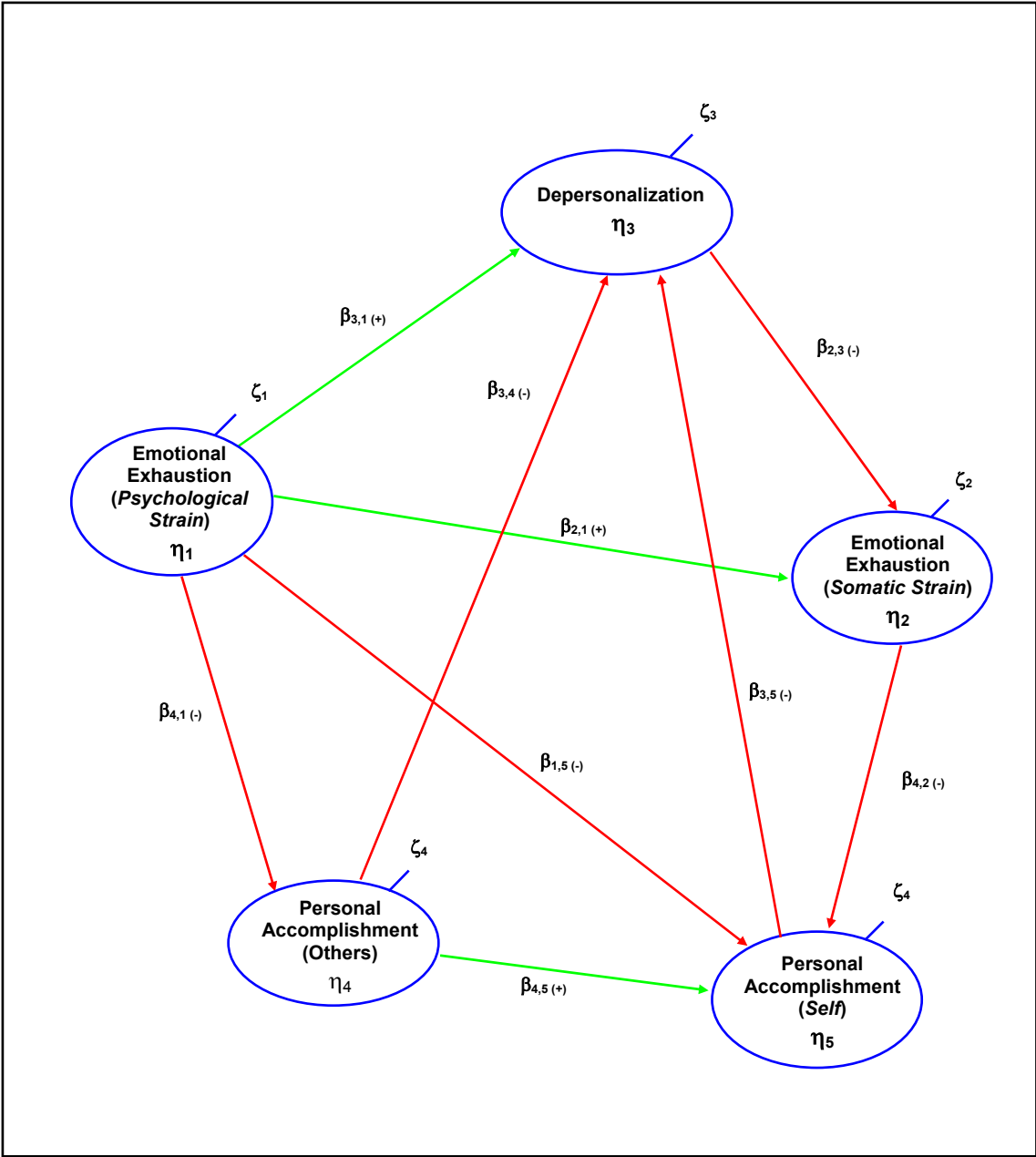
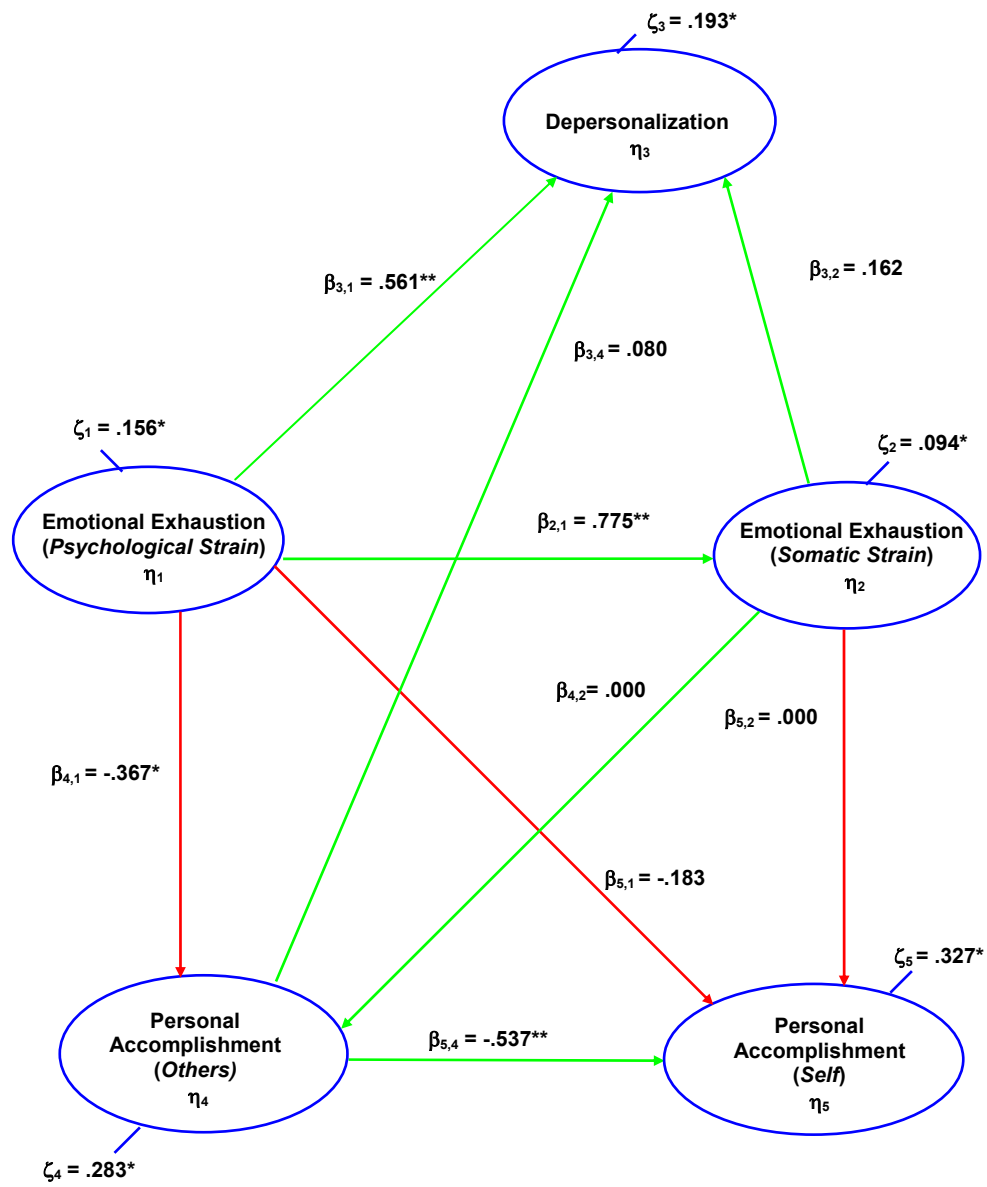


Figure 2

Path Model of Structural Equation Model 2 for Burnout
(Based on Leiter and Maslach, 1988)



$\chi^2 = 2.24$; d.f. = 2; $p = .327$
 $GFI = .997$; $AGFI = .986$; $RMSR = .023$;
 $*p < .05$; $**p < .01$; $***p < .001$

Figure 3

Structural Equation Model for Maslach Burnout Inventory

POLITICAL CLIMATES: THEORETICAL PROCESSES AND MULTI-LEVEL ANTECEDENTS

Aimed at understanding the development of political climate in university departments, this study explored the theoretical role of two types of conflict and multi-level antecedents (paradigm development, rank heterogeneity, and role perceptions). Findings provide insight into this phenomenon, addressing some of the gaps in research on this area.

Organizational Politics

Organizational politics (OP) involves behaviour that is directed toward furthering self or group interest at the expense of others' well being (Kacmar & Baron, 1999). Research on OP has typically sought to understand the antecedents and consequences of politics using single-level models, usually directed at the individual level of analysis (Kacmar & Baron, 1999). While researchers agree that OP can exist at different levels of analysis (Drory & Romm, 1990), they have failed to adequately examine OP as a group-level construct. In addition, it is being increasingly recognized that organizational phenomena do not occur in a single-level vacuum and are often a product of dynamic multi-level processes (Chan, 1998). While the need for cross-level models in OP research is reflective of the field of organizational behaviour (OB) in general (Cappelli & Sherer, 1991; Johns, 2001; Mowday & Sutton, 1993; Rousseau & Fried, 2001), another concern specific to OP research is the lack of empirical evidence concerning the theoretical underpinnings of this phenomenon (Welsh & Slusher, 1986). The purpose of this study is to address some of these identified gaps in research on organizational politics. This is accomplished by examining politics at the sub-organizational level by identifying theoretical precursors to politics by exploring the effects of multi-level antecedents (individual, departmental, disciplinary) on departmental political climates.

Theoretical assumption: Role and nature of Conflict

Implicit in Pfeffer's (1981) definition of OP is the required condition of dissensus or conflict, which gives rise to political activities within groups or organizations. The precursory role of internal or organizational conflict is also emphasized in Cyert and March's (1963) and Narayan and Fahey's (1982) perspectives on organizations. Yet empirical research has failed to adequately examine the impact of group conflict processes on political activity or perceptions. As Welsh and Slusher (1986) explained, previous studies (e.g., Pfeffer & Moore, 1980) have simply inferred the presence of dissensus in decision making, never really measuring or verifying its presence. Although Welsh and Slusher (1986) demonstrated a positive association between conflict and the use of influence strategies in colleges with interdependent departments, several limitations (e.g., restricted focus on a single decision, college as the unit of analysis) restrict the generalization of their findings to routine decision making in organizational groups. Therefore, there still remains a need to understand the role of conflict processes in politics. Consequently, the multi-dimensional nature of conflict (Jehn, 1995; 1997) has yet to be explored in terms of potential differential effects of various types of conflict on politics.

Conflict has mainly been distinguished in terms of disagreements over substantive or

work-related tasks, known as task conflict, and disagreements of an interpersonal nature, known as relationship or emotional conflict (Jehn, 1995; 1997). Task and relationship conflict have most often been described in terms of their effects on group performance or group effectiveness (e.g., Jehn & Mannix; 2001; Pelled, Eisenhardt & Xin, 1999). While moderate amounts of task conflict enhance group effectiveness because it increases members' understanding of the task through identification and discussion of various diverse perspectives (Amason & Schweiger, 1994), any amount of relationship conflict is detrimental to group effectiveness as it takes time and energy away from technical or task-related issues (Jehn & Mannix, 2001; Pelled, 1996). Members in groups experiencing relationship conflict tend to become preoccupied with activities such as reducing threat, increasing power, and building cohesion with other members (Jehn, 1997). While these activities appear to be similar to those described as being political (e.g., Pfeffer, 1976; 1981), we argue that activities associated with relationship conflict are likely to be similar to non-sanctioned political activities, while those associated with task conflict are similar to sanctioned political activities.

Non-sanctioned behaviours are those that are not usually supported by the organization and are considered to be socially undesirable, while sanctioned political behaviours are typically sought and encouraged (Mayes & Allen, 1977; Vrendenburg & Maurer, 1984). Zanzi and O'Neill's (2001) factor analysis of a number of political tactics identified intimidation, manipulation, and blaming or attacking others as non-sanctioned activities, while actions such as persuasion, image building, networking, and use of expertise were categorized as sanctioned. The interpersonal nature of such non-sanctioned activities is similar to that experienced by members of groups with high relationship conflict. For example, group members experiencing relationship conflict often describe it in terms of friction, personality clashes, or threat between members (Argyris, 1962; Jehn, 1995; Staw, Sandelands, & Dutton, 1981). In addition, non-sanctioned tactics and relationship conflict have both been found to contribute to dysfunctional outcomes (e.g., Cropanzano, Howes, Grandey, & Toth, 1997; Jehn & Mannix, 2001).

In contrast, sanctioned tactics and task conflict are thought to have functional consequences (Mayes & Allen, 1977; Pelled, Eisenhardt, & Xin, 1999) and are often encouraged in organizational settings (Zanzi & O'Neill, 2001). For example, the use of persuasion by managers was found to promote cooperation among subordinates in achieving organizational goals (Brown, 1995). In Harrell-Cook, Ferris, and Dulebohn's (1999) examination of ingratiation and self-promotion behaviours, the stronger association between ingratiation behaviours of subordinates and perceived politics by supervisors was explained in terms of the ease/difficulty in ascertaining ingratiation versus self-promotion as political, suggesting that supervisors may actually encourage subordinates to act competent through self-promotion. We argue that both types of conflict are likely to increase perceptions of political activity. However, task conflict will have a weaker association with perceptions of political activity because such activities tend to be sanctioned in nature, and hence, less likely to be perceived in political terms.

Hypothesis 1: Departments with higher levels of intra-departmental task and relationship conflict will have more politicized climates.

Hypothesis 2: Intra-departmental relationship conflict will be more strongly related to political climate level than will intra-departmental task conflict.

Etiology of Political Climates

Two main perspectives on climate etiology have dominated the literature (Schneider & Reichers, 1983): the structural approach (Payne & Pugh, 1976) which postulates that climates arise from objective or structural aspects of the organizational setting, and a micro perspective (the selection-attraction-attrition model) which suggests that organizational selection/attrition processes result in individuals having similar perceptions of organizational events (Schneider, 1987). The inherent tension between person and situation, resulting from treating these two

views independently, gave rise to Schneider and Reichers' (1983) own perspective, in which they explain that climates emerge because individuals interact with each other through socialization, giving rise to shared perceptions of events. As no single study has empirically confirmed the superiority of either of these perspectives, all associated factors are likely to influence climates. In an effort to be consummate in our examination, we explore structural, individual, and interaction antecedents of political climates.

Macro-level antecedents of climate. In studying climate, macro-level factors such as organization size and routinization (Payne & Pugh, 1976) are regarded as contexts within which individuals function. With respect to political climate perceptions, uncertainty appears to be the most frequent antecedent. Its facilitating role on self-serving behaviours and its existence at various levels have also been emphasized in Johns (1999). For example, March and Simon (1958) discussed how environmental uncertainty due to unequal distribution of resources can promote negotiation and coalition strategies. Similarly, elements such as specialization and routinization, which refer to a set of rules or operating procedures that guide work-related activity, can promote uncertainty about actions when the rules or procedures are not clearly defined (Galbraith, 1973). Even though task certainty (Riley, 1983) and formalization (Ferris & Kacmar, 1992) have been found to be negatively associated with perceptions of politics, a true test for the cross-level effects of macro-level elements on politics is lacking because neither of these studies fulfilled Cappelli and Sherer's (1991) prescriptions for truly examining cross-level contextual effects.

With respect to the sample under consideration in this study, we are interested in organizational departments within universities. While each department is viewed to be a product of the university and the discipline to which it belongs, a department's core teaching and research activities are usually organized around its discipline (e.g., mathematics or economics). Each discipline is guided by its own scientific paradigm or set of rules or programs (Lodahl & Gordon, 1972). Paradigms or disciplines range from being well-developed to less well-developed, where decision making in the former is based upon universalistic or standardized criteria, while the latter use particularistic criteria which introduces discretion in decision making (Yoels, 1974). As disciplines or paradigms exist above the departmental level of analysis, Cappelli and Sherer's (1991) requirement for a true test of cross-level effects is maintained.

We argue that ambiguity resulting from low paradigm development (PD) will influence political climate perceptions through its effect on task and relationship conflict. Yoels (1974) found that editors-in-chief of social science journals were more likely to use less objective or particularistic criteria such as assumed favouritism in appointing editors to their boards than those in the physical or natural sciences. Pfeffer and Moore (1980) also found that faculty turnover, resulting from dissensus or conflict in decision making, was higher in departments with lower PD than in those with higher PD. Therefore, less well-developed paradigms act as contexts for intra-departmental conflict because they provide multiple alternatives in decision making. Consequently, PD may influence political climate levels through its effect on task and relationship conflict.

Hypothesis 3: Paradigm development will be negatively related to political climate such that departments belonging to well-developed paradigms will exhibit lower levels of politics.

Hypothesis 4: Departmental task and relationship conflict will mediate the relationship between paradigm development and political climate.

Individual-level antecedents of climate. In identifying individual correlates of uncertainty, role ambiguity and role conflict are especially relevant. Although role ambiguity has been implicated in previously-found negative associations between formalization and perceptions of politics (e.g., Ferris et. al., 1996; Ferris & Kacmar, 1992), it has never been directly nor

adequately measured. In addition, there has been a tendency to refer to low formalization and role ambiguity interchangeably (see Parker, Dipboye, & Jackson, 1995). This distinction is important, because the association between formalization and role ambiguity has been found to depend on the type of organizational environment (Nicholson & Goh, 1983) and also on individual personality, needs, values, and experience (Schuler, 1980).

We hypothesize positive associations between these two role perceptions and departmental task and relationship conflict. Individuals experiencing higher levels of role ambiguity and role conflict have to choose between multiple alternatives and decisions concerning their work, which gives rise to disagreements over task issues, resulting in intra-departmental task conflict. In addition, those experiencing role conflict also have to deal with competing demands from people, which has the potential of escalating into relationship conflict. Indeed, interpersonal conflict among faculty has been described as resulting from ideological differences (Gmelch, 1991). Fried and Tieg (1995) found that supervisors who experienced high role conflict deliberately inflated their subordinates' performance ratings, an undesired political behaviour. They further explained that engaging in such non-sanctioned activities may be a useful tool for coping with high levels of role conflict. Consistent with this study's interest in cross-level effects, individual-level role ambiguity and role conflict are examined as potential sources of department conflict and politics.

Hypothesis 5: Role ambiguity and role conflict will be positively related to intra-departmental task and relationship conflict.

Hypothesis 6: Those experiencing high levels of role ambiguity and role conflict will report a more political climate.

Hypothesis 7: Intra-departmental task and relationship conflict will mediate the relationships between role perceptions and political climate.

Interaction antecedents of climate. Group interaction has often been studied within the area of demographic diversity. However, the nature of its relationship with group heterogeneity has been speculated to depend on the type of demographic attribute explored (Pelled, 1996; Williams & O'Reilly, 1998), and researchers are often urged to be more explicit in their choice of attribute chosen for study. In this study, we examine heterogeneity in academic rank because it indexes a number of other attributes. For example, Jehn, Northcraft, and Neale (1999) regarded differences in position or status as reflecting differences in experience and expertise, which they labelled as informational diversity. Similarly, rank and age have often been found to be negatively associated with each other (e.g., Vigoda, 2002), and as a result group members that are different in rank can also be said to differ in age. Rank heterogeneity is expected to result in higher task conflict because differences in experience and expertise result in debates about the task (Jehn, 1995; 1997; Jehn et al., 1999). However, such debates and disagreements can also lead to frustration and dissatisfaction among group members (Amason & Schweiger, 1994; Baron, 1991), resulting in relationship conflict within the group. Departments with higher rank heterogeneity are likely to have higher levels of task and relationship conflict, and consequently more intense political climates.

Hypothesis 8: At the department level, rank heterogeneity will be positively associated with perceptions of political climate.

Hypothesis 9: At the departmental level, the relationship between rank heterogeneity and political climate level will be mediated by task and relationship conflict.

Method

Sample and Procedure

After screening for missing cases, the sample consisted of 626 full time tenured or tenure

track assistant, associate, and full professors employed in 12 departments in each of six prominent Canadian universities. To ensure that the chosen departments were typical in terms of paradigm development, universities with very active research profiles, determined by grant and contract awards, were chosen. In total, approximately 2201 questionnaires were distributed and 649 were returned for a response rate of 29%. By university, response rates ranged from 25% to 38%. By discipline, response rates ranged from 22% (math) to 40% (geology and anthropology). As there were no significant demographic differences across universities, and across the pattern of intercorrelations among variables within each university, the data were combined and examined as a single sample. The average age of this sample was 48.28 years, with 92% male respondents. Ninety percent of the sample indicated that they were tenured, with 60% at the rank of full professor, 30% at the rank of associate professor, 9% at the rank of assistant professor, while the remaining two percent responded as belonging to the “other” category. As there were no respondents from three departments, 69 departments were available for group-level analyses. The number of respondents from each department ranged between 2 and 21, with an average of 9.07.

Measures

Department conflict. Perceived conflict within a respondent’s academic department was measured with Rahim’s (1983) eight-item intragroup organizational conflict scale. For each item, the word *group* was replaced by the word *department*. Although Rahim’s scale assumes conflict to be unidimensional, later literature (Jehn, 1995; 1997) suggests the presence of three distinct types of conflict: task, relationship, and process. As a result, an exploratory factor analysis was conducted to discern the dimensionality of our measure of conflict. Corresponding closely to Jehn’s descriptions of the nature of conflict, four items (e.g., “there is friendliness among members of my department,” reverse coded) were found to load on a factor which we labeled relationship conflict, three items (e.g., “there is difference of opinion among members of department”) loaded on a second factor labeled task conflict, and one item (“we have lots of bickering over who should do what job”) loaded on the third factor, labeled process conflict.

Support for these exploratory findings was determined by comparing three models using a confirmatory factor analysis (CFA): single factor, correlated two-factor, and a correlated three-factor model of conflict. An examination of the overall fit indices indicated that the correlated two-factor model ($\chi^2 = 71.81$, $df = 13$, CFI = 0.98, NFI = 0.97, NNFI = 0.96, RMSEA = 0.09) fit the data better than the single factor model ($\chi^2 = 207.42$, $df = 20$, CFI = 0.93, NFI = 0.92, NNFI = 0.90, RMSEA = 0.12) and the correlated three-factor model ($\chi^2 = 107.22$, $df = 17$, CFI = 0.97, NFI = 0.97, NNFI = 0.94, RMSEA = 0.09). All items in the two-factor model had significant factor loadings. The internal consistency reliabilities of the relationship and task conflict subscales were .88 and .77 respectively, with a zero-order correlation of .70 at the individual level. Based on these findings, two dimensions of conflict, task and relationship, were examined in all subsequent analyses.

To justify aggregation at the department level, we examined within-group agreement on departmental task and relationship conflict for each department in our sample using James, Demaree, and Wolf’s (1984) estimation approach (r_{wg}). For departmental relationship conflict, the median r_{wg} was .70, while that for departmental task conflict was .60, with 50% of the departments having values of r_{wg} greater than .60 on both measures. While these estimates may be less than optimal, they must be examined in light of the reduced number of items in each measure (James et al., 1984). Nevertheless, an ANOVA test (cf. George & Bettenhausen, 1990) suggests that there are discernable between-department differences in relationship conflict ($F = 2.93$, $p < 0.001$) and task conflict ($F = 3.64$, $p < 0.001$).

Department politics. A 13-item measure of political activity within a respondent’s academic department was used. The measure was designed prior to Kacmar and Ferris’ (1991) generic measure of OP, and was designed to capture the context-specific nature of academic

politics (cf. Johns 2001; Rousseau & Fried, 2001). Respondents described their department's practices regarding each activity (e.g., promotion decisions, curriculum design) on a five-point scale ranging from *not at all political* to *extremely political*. A factor analysis confirmed a unidimensional structure, with item loadings ranging between .57 and .80, and an internal consistency reliability of .92. As this measure was to be used at the group level, we employed James et al.'s (1984) estimate of within-group agreement. The median r_{wg} was .93, with approximately 95% of departments having values greater than .60.

Paradigm Development. Paradigm development ranks were assigned to academic departments and their corresponding members based on rankings obtained from previous primary research (see Lodahl & Gordon, 1972; Salancik, Staw, & Pondy, 1980; Pfeffer & Moore, 1980). Paradigm development was indexed as the average rank of the twelve academic departments common to Pfeffer and Moore (1980) and Salancik et al. (1980), excluding biology, which exhibits an unstable ranking. The rank order assigned to the twelve departments studied here (from lowest to highest paradigm development) is: sociology (ranked 1); political science; history; anthropology; geology; economics; psychology; chemistry; mechanical engineering; physics; electrical engineering; mathematics (ranked 12).

Role ambiguity and role conflict. Six items, adapted from Rizzo, House, and Lirtzman (1970), were used to measure role ambiguity. Respondents were required to indicate the extent to which they agreed with each statement, using a 7-point Likert-type scale ranging from 1 = disagree strongly to 7 = agree strongly. The internal consistency reliability estimate for this measure was .78. Role conflict was also measured using eight items from Rizzo et al. (1970), which had an internal consistency reliability of .84.

Rank heterogeneity. We used Blau's (1977) heterogeneity index to measure rank diversity for each department. Information on rank composition was obtained by consulting each university's annual calendar. As our sample comprised individuals at the assistant, associate, or full professor rank, we counted the number of faculty in each of these three rank categories only. As two departments within a single university did not organize their faculty list by rank, we could not compute measures of heterogeneity for these departments.

Control variables. Department size and demographic variables such as age, gender, and years in department were controlled because these variables have been found to be associated with perceptions of politics (e.g., Madison, Allen, Porter, Renwick, & Mayes, 1980; Anderson, 1994; Ferris, Frink, Bhawuk et al., 1996; Ferris & Kacmar, 1992). A measure of department size was created by obtaining information from annual university calendars. The measure reflected the number of faculty from the three ranks listed previously. As departmental task and relationship conflict measures varied across universities, it was necessary to control for university when examining associations involving either of these variables. Five dummy coded vectors were formed to signify membership in a university, and individuals and departments were both assigned a value of 1 or 0 because many hypotheses involved cross-level associations.

Discriminant validity. To ensure that our self-report measures of role ambiguity, role conflict, department conflict, and politics assess different constructs, we conducted a principal components factor analysis. Results of a four-factor, rotated solution confirmed the distinctness of these measures, with items loading on their respective factors (see Appendix A).

Results

Tables 1 and 2 present descriptive statistics and correlations for variables at the individual and department levels. At the individual level (Table 1), age, rank and years in department are highly and positively associated with each other. As expected, role ambiguity and

role conflict are positively related to political perceptions. The strong association between task and relationship conflict is also consistent with that reported in conflict research. At the department level (Table 2), department size varies with paradigm development, while the aggregated conflict variables are positively related to political climate.

Department-level analyses

Hypotheses 1 and 2, which concerned the influence of department task and relationship conflict on political climate, were tested using a hierarchical regression analysis. As reported in Part I of Table 3, relationship conflict had a stronger association ($\beta = .51, p = .001$) with political climate than task conflict ($\beta = .35, p = 0.02$). To determine the unique contribution of each type of conflict, we entered both variables sequentially, reversing their order in each analysis. When relationship conflict is entered first, it accounts for 54% of the variance in political climate, while task conflict explains an additional 3%. When task conflict is entered first, it accounts for 50% of the variance, but relationship conflict explains an additional 8%. Taken together, these results support Hypotheses 1 and 2. To alleviate concern over the use of these aggregated variables, given the large variation in r_{wg} values in our sample, we retested these hypotheses using only those departments ($N = 31$) with r_{wg} values greater than .50. The resulting regression analysis revealed that relationship conflict is still more strongly related to political climate levels ($\beta = .48, p = .04$) than is task conflict ($\beta = .29, p = .21$), but is nonsignificant due to lowered power of this test to detect an effect when smaller sample sizes are used (Cohen, 1988).

Table 1. Descriptive statistics and correlations for the individual-level variables of interest

Variables	Mean	SD	1	2	3	4	5	6	7	8
1. Age	48.28	8.52								
2. Rank	2.51	.66	.57**							
3. Sex	1.07	.26	-.16**	-.21**						
4. Years in dept.	16.22	8.12	.78**	.54**	-.21					
5. Role ambiguity	2.57	1.11	-.08*	-.14**	.03	-.05				
6. Role conflict	3.45	1.35	-.05	-.01	.04	-.01	.50**			
7. Task conflict	4.59	1.50	-.06	-.04	.09*	-.02	.25**	.44**		
8. Relationship conflict	3.29	1.53	-.04	-.02	.09*	-.00	.35**	.41**	.70**	
9. Political perceptions	2.30	0.78	-.10*	-.10*	.04	-.11**	.34**	.50**	.54**	.63**

* $p < .05$, ** $p < .01$; $N = 626$; Gender coded as 1 = Male, 2 = Female; Rank coded as 1 = assistant professor to 3 = full professor

We also tested for the potential operation of common method variance in the obtained associations using split-sampling techniques. Splitting the data from each department into half, aggregated departmental politics (computed from one half of the split) was regressed onto aggregated task and relationship conflict (computed from the other half of the split). As the control variables were not significant, they were left out of this analysis. Recognizing that two sets of analyses are possible by simply reversing the split variable chosen as predictor or outcome, we conducted both analyses. Focusing on effect sizes, in the first analysis, the beta coefficient of task conflict was found to be .21, while that of relationship conflict was .06. However, when relationship conflict was examined separately, it had $\beta = .22$. In the second analysis, the beta coefficient of relationship conflict was .43, while that for task conflict was -.04. But, when task conflict was entered alone, $\beta = .28$. While these analyses present mixed findings concerning the superiority of conflict type in predicting politics, it does suggest that the association between department conflict and politics is not solely a product of common method variance. Interpretation must, however, be cautious because of concerns such as lowered

reliability due to computation of aggregates using fewer cases (Nunally, 1978), larger within-group variance (Klein & Kozlowski, 2000), and sampling error.

Table 2. Descriptive statistics and correlations for the department-level variables of interest

Department Level							
Variables	Mean	SD	1	2	3	4	5
1. Dept.size	33.38	14.9					
2. Paradigm Dev.	6.65	3.46	.28*				
3. Rank heterogeneity	.52	.10	-.07	-.36**			
4. Dept. task conflict	4.5	.85	.30*	.01	.02		
5. Dept. relationship conflict	3.24	.82	.18	.04	-.00	.81**	
6. Dept. political climate	2.27	.36	.07	.07	-.02	.71**	.76**

* $p < .05$, ** $p < .01$; $N = 69$

Hypothesis 8 predicted that rank heterogeneity in a department would be positively associated with political climate levels. However, our findings failed to support this association (see Part I of Table 3). Consequently, hypothesis 9 could not be tested because of lack of a significant association between rank heterogeneity and politics, a required criterion for testing mediation effects (Baron & Kenny, 1986).

Cross-level analyses

Hypothesis 3 predicted that paradigm development would explain department political climate levels. The James and Williams (2001) procedure of assigning an aggregated independent variable score to each lower level unit to be analyzed was used, where each department from the same discipline was assigned the same paradigm development score. As seen in Part II of Table 3, results from a hierarchical regression analysis revealed no cross-level effects of paradigm development on department political climate levels, failing to support Hypothesis 3. Consequently, Hypothesis 4, which concerned the mediating role of conflict on the paradigm development-politics association, could not be tested because the required condition of significant association between the independent and dependent variable was not met (Baron & Kenny, 1986).

Table 3. Regression of climate and conflict variables on multilevel antecedents

Outcome Variable	Predictor	β	R^2	ΔR^2
Part I. Department-level results (N = 69)				
Political climate	Control variables		.08	
	Task conflict	.34*		
	Relationship conflict	.51**		
	Rank heterogeneity	-.03	.62***	.55***
Part II. Cross-level results (N = 626)				
Political climate	Control variables		.06	
	Paradigm development	.09	.06	.00
Task conflict	Control variables		.20***	
	Role conflict	.19***		
	Role ambiguity	.01	.23***	.04***
Relationship conflict	Control variables		.12***	
	Role conflict	.15**		
	Role ambiguity	.06	.154***	.03***
Political climate	Control variables		.05***	
	Role conflict	.23***		
	Role ambiguity	.04	.11***	.06***
Mediation effects				
	Control variables		.05***	
	Role conflict	.09**		
	Role ambiguity	.00		
	Task conflict	.31***		
	Relationship conflict	.55***	.68***	.56***

* $p < .05$; ** $p < .01$; *** $p < .001$

Hypotheses 5, 6, and 7 concerned the effects of individual-level role ambiguity and role conflict on department conflict and political climate levels. Again, to test for these cross-level effects, respective department aggregates of conflict and political climate were assigned to each individual. As presented in Part II of Table 3, only role conflict emerged as a significant predictor of department task conflict ($\beta = .19, p < 0.001$), relationship conflict ($\beta = .15, p < 0.01$), and political climate ($\beta = .23, p < 0.001$). Taken together, these findings provide partial support for Hypotheses 5 and 6. As all three conditions for a mediation test (Baron & Kenny, 1986) were met, department task and relationship conflict were tested for their mediating role in the role conflict-political climate association. Role conflict continues to remain significant when task and relationship conflict are added to the equation; however, its beta coefficient drops from .23 to .09 (see mediation effects, Part II of Table 3). While these findings may be taken as evidence for a partial mediation effect, role conflict accounts for a miniscule amount of variance ($R^2 = .008$) in political climate when task and relationship conflict are present in the equation. To examine the extent to which common method variance was responsible for the obtained cross level relationships between role conflict and each dependent variable, we re-analyzed these associations using departmental averages of task and relationship conflict for each individual, computed without the individual's score, as the dependent variable. The resulting coefficients, although slightly lower, continue to remain significant.

Discussion

As one of the few studies to test the theoretical role of conflict in politics, our findings support extant theory in that departments with high levels of conflict also had high levels of political climate. The strength of this association varied with the specific nature of conflict, with relationship conflict having a stronger association with political climate than did task conflict. This stronger association is attributed to the interpersonal nature of conflict activities witnessed by departmental members, and is consistent with Kacmar and Baron's (1999) portrayal of politics as actions that further one's own self-interest without concern for others' well-being. Task conflict's contribution to political climate is not, however, negligible, and may also facilitate the development of political perceptions because of its strong association with relationship conflict. Simons & Peterson (2000) discussed how task conflict activities can often be perceptually misconstrued and inferred as promoting relationship conflict. In other words, biased information processing of task conflict behaviours may have contributed to the misjudgement of these actions as political.

Our second objective was to examine various antecedents of political climates. Contrary to our hypotheses, macro-level paradigm development and rank heterogeneity did not emerge as significant predictors of departmental conflict or politics. The null effect of PD is noteworthy in itself, and we speculate several reasons for this outcome. The first concerns the proximity-distance dimension of contextual variables (Mowday & Sutton, 1993). Paradigm development can be seen as being quite distant from routine sub-organizational activities, incapable of easily influencing such activities. Although PD was been found to be an influential variable in early research (e.g., Levitt & Nass, 1989; Zuckerman & Merton, 1971), the dependent variables in such studies tended to be discipline-specific in nature (e.g., manuscript rejection rates, textbook content sequencing). In other words, the effects of PD may be stronger between disciplines than within. The null effects of PD may also be due to our selective sample of universities with active research profiles. In Lodahl and Gordon's (1973) study, departments of higher quality, regardless of discipline, were found to have equally moderate-to-high levels of faculty and individual influence. Because of the high visibility of consequences (i.e., outstanding research performance), central administrative influence is lower in such departments, with governance based on collegiality. In such departments, faculty are directly involved in administrative decision making, and conflict becomes more likely because differing philosophies are brought into the process (Hopkins & Sullivan, 1981; Gmelch, 1991).

Another speculation concerns Kuhn's (1964) weakening of developed paradigms, which gives rise to differentiation within a discipline. Lodahl and Gordon (1972) discussed how differentiation gives rise to problems of integration. Our finding concerning department size, which may also represent the presence of disparate goals and specialization (Dearborn & Simon, 1958; Pfeffer & Moore, 1980), offers support for this speculation in that high PD departments ($M = 40.78$) were significantly larger in size than low PD departments ($M = 30.71$). In other words, any informational benefits associated with well-developed paradigms might have been offset by problems of assimilating larger, specialty subgroups within high PD departments. Recognizing that statistical controls are not perfect, size might have attenuated the effects of PD on outcomes. Conflicting interests or communication issues within departments are often addressed through the formation of committees (Lodahl & Gordon, 1972; 1973). Additional information obtained from respondents revealed that high and low PD departments spent equal amounts of time on committees, and were consequently equally exposed to conflict issues. The role of committees in organizational politics is not all that clear. On one hand, decision making in committees may be equally frustrating in resolving multiple interests; yet, their very existence provides legitimacy because it gives the impression that individual interests are being adequately represented (Pfeffer, 1981). It could also be speculated that low PD departments, through gradual adjustment in dealing with low paradigmatic issues, are more adept at using committees to address conflicting

interests.

We speculate the null effects of rank heterogeneity to be due to range restriction in our sample. Rank was chosen because it indexed other variables such as tenure. Sample descriptive statistics reveal that 90% of respondents were tenured, 60% were at the full professor rank, while only 9% were at the assistant professor rank. However, this null association may also be reflective of the field of demographic diversity, where findings from a recent meta-analysis suggest that demographic indicators of diversity may be unrelated to intragroup conflict (Webber & Donahue, 2001) because they fail to capture deeper-level differences in attitudes or information within a group (Jehn, et. al., 1999).

Of the individual-level antecedents examined in this study, role conflict was the only significant contributor to departmental conflict and politics. This finding is consistent with literature that describes role conflict in terms of its interpersonal nature. As Nicholson and Goh (1983) explained, role conflict is concerned with incompatible requests from people, and hence directly involves interaction with others. Similarly, those experiencing role stress tend to engage in coping tactics oriented towards the focal source (Fried & Tiegs, 1995). The non-significance of role ambiguity, which stems from uncertainty about work procedures and demands, may have to do with potential moderating influences of formalization, which has been found to be negatively related to role ambiguity (Fisher & Gitelson, 1983) and politics (Ferris et. al., 1996).

In contrast to the current research focus on micro- and single-level examinations of politics, this study addresses some of the gaps in OP research. In exploring politics as a group-level construct and in integrating literature on intra-group conflict, we now have a better understanding of the nature and influence of conflict on political climates. However, future replication of this finding, using other measures of multidimensional conflict (e.g., Jehn, 1995) and politics (e.g., Kacmar & Ferris, 1991) would be useful. Our cross-level examination of multi-level antecedents points to the need to pay close attention to the level at which these variables are examined, and to the extent to which they are likely to influence outcomes of interest. By choosing the particular sample in our study, we address Bess's (1985) concern about the paucity of examination of OB theories in university settings. In addition, elements (i.e., paradigm development) deemed to be important in early research in such settings may have to be carefully reconsidered in light of the issues raised in our discussion.

Appendix A. Evidence for discriminant validity of self-report measures

Items	Factor 1	Factor 2	Factor 3	Factor 4
C1	.10	.16	.80	.03
C2	-.05	-.03	.73	-.17
C3	.16	.12	.66	.15
C4	.04	.00	.80	-.13
C5	.17	.20	.68	.13
C6	-.02	-.16	.61	-.17
C7	.14	.13	.67	-.04
P1	.48	-.03	.11	-.13
P2	.79	.00	-.13	-.11
P3	.64	-.05	.11	.04
P4	.70	-.04	-.07	-.14
P5	.79	.06	0.07	.21
P6	.62	.03	.10	-.13
P7	.77	.10	-.01	.11
P8	.63	.08	.03	.07
P9	.54	-.08	.02	-.14
P10	.76	.08	.11	.14
P11	.71	-.02	.01	-.08
P12	.67	-.03	.17	.00
P13	.76	-.05	-.08	-.11
RC1	-.03	.22	-.03	-.54
RC2	.08	.19	.02	-.52
RC3	.07	.10	.07	-.66
RC4	.02	.00	.26	-.56
RC5	-.02	-.09	.11	-.59
RC6	.20	.01	-.04	-.65
RC7	.09	.09	.09	-.67
RC8	.18	.10	-.02	-.59
RA1	.00	.49	.10	-.05
RA2	-.04	.70	.18	.02
RA3	.07	.82	-.04	-.05
RA4	.06	.80	-.04	.02
RA5	.02	.69	.05	-.06
RA6	-.07	.44	-.15	-.28

C = conflict items, P = politics items, RC = role conflict items, RA = role ambiguity items
 Extraction method: Oblimin with Kaiser normalization

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SOCIAL INFLUENCE EFFECTS ON THE PERFORMANCE OF ORGANIZATIONAL CITIZENSHIP BEHAVIOR

The study presented in the paper argues that the enactment of a role as organizational member by employees involves social influence processes on what types of OCB to perform. Different influence mechanisms in different social relationships are shown to predict behavioral similarity for OCB that benefit individuals only or OCB that benefit the collective.

Introduction

The study of social influence in organizations constitutes a well-established field whose roots can be traced to a seminal article by Salancik and Pfeffer (1978). Of particular interest to organizational scholars in this field have been the social processes and social mechanisms through which employees come to adopt similar perceptions and attitudes or engage in similar behaviors as their peers. A fundamental premise of this approach is that the job, the organization, and how individuals see themselves in them are socially constructed phenomena (Pfeffer, 1981; Salancik & Pfeffer, 1978). According to these ideas, the manner in which an employee perceives organizational responsibilities and duties as well as his or her affective responses to them are not only based on objective conditions but also on conformity with information provided by co-workers. Previous research has unearthed a wealth of employee perceptions and attitudes about jobs and the organization that are influenced by similar perceptions and attitudes of peers in the workplace, including organizational commitment (Johansen, 2000), work group identification (Meyer, 1994), inter-group conflict (Ibarra & Andrews, 1993), and organizational justice (Lamertz, 2002). Much less attention has been given to how social influence processes may affect employee performance behavior.

Yet there are good reasons to believe that it is now more important than ever to examine the ways in which social influence affects the performance behavior exhibited by employees in their jobs. One key reason is that employees tend to stay with a given employer for shorter time periods than they did only two decades ago, choosing instead to pursue flexible career paths focused on professional development or life balance (Hall & Moss, 1998; Von Hippel, Mangum, Greenberger, Heneman, & Skoglund, 1997). The resulting employee turnover means that both employers and employees face a greater number of encounters during which they must manage a socialization process (Feldman, 1981; Van Maanen & Schein, 1979). For employees, new work situations involve uncertainty about their responsibilities and duties and demand that employees search for information about the appropriate behaviors performed by a competent person in the new organization's normative system (Ashford & Cummings, 1983). For employers, reduced tenure and ongoing employee turnover means greater efforts need to be expended on orientation sessions and training programs to help newcomers integrate into the social system of the organization. The normative nature of behavior to be learned during socialization and the importance of uncertainty reduction for employees during this process both suggest that social influence by colleagues and co-workers are major factors that shape the emergence of regular behavior patterns by new employees (Morrison, 2002; Salancik & Pfeffer, 1978; Van Maanen & Schein, 1979).

A second important reason to examine how social influence may affect employee performance behavior is that today's jobs tend to be less clearly and rigidly defined, more frequently involve teamwork, and require more knowledge sharing among employees. The

resulting increase in discretion over how employees might enact their role as organizational members (Organ, 1997) raises the salience of non-managerial and non-bureaucratic means of influencing employee role behavior. Peer influence is a primary source of such influence (Thomas & Griffin, 1989). While certain core tasks of the role an employee enacts in an organization may be clearly identified by the nature of the work to be performed or by the employment contract, other dimensions of role performance are not under the formal control of structural design or managerial direction (Borman & Motowidlo, 1993; Organ, 1988). These facets of employee performance behavior are increasingly important in the context of competitive pressures that put a premium on smooth coordination and organizational adaptation (Katz, 1964; Scott, 2003). In the organizational behavior literature, one construct that models these dimensions of performance is “organizational citizenship behavior,” or OCB (Podsakoff, MacKenzie, Paine, & Bachrach, 2000).

OCB is formally defined as behaviors that are discretionary, do not pertain directly to formal job requirements, but support the interpersonal and social context in which formal jobs are performed (Borman & Motowidlo, 1993; Organ, 1988; 1997). Examples of OCB include helping co-workers and participation in optional governance activities, such as meetings and committees. The most commonly accepted theoretical framework proposes that OCB are discretionary contributions to the employment exchange relationship (Organ, 1990; Moorman, 1991; Morrison, 1994). According to this model, employees include the performance of OCB in their role definition for organizational membership as a supplement to the contractual relationship with the employer, in which they exchange work performance for organizational benefits. Consequently, an explicit assumption in research on OCB is that its performance is intended to be cooperative and benefit either the organizational collective or its individual members (Organ, 1988; Williams & Anderson, 1991, but see Bolino (1999) for an alternative interpretation). Altogether, the discretionary and cooperative nature of OCB make its performance a viable target of social influence effects because employees are likely to look to their peers for information about normative exchange standards and can identify with their peers as legitimate role models (Ashford & Cummings, 1983; Shah, 1998). Thus, the research reported in this chapter develops a model of social influence on the performance of OCB and reports the results of an empirical study to test the predictions of that model.

Theoretical Framework

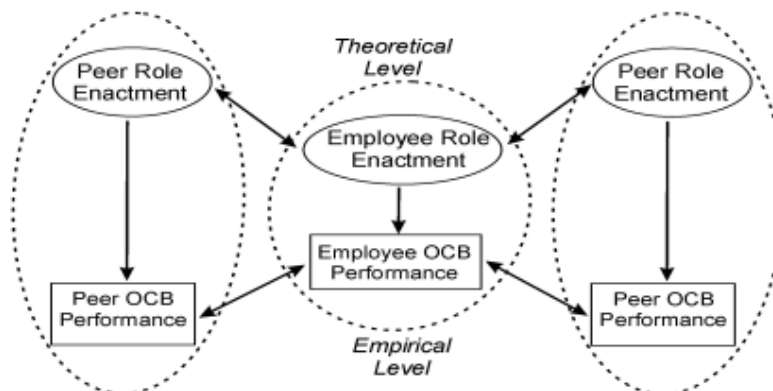
Role Enactment and OCB

Organizations have been described as social systems in which meaning is socially constructed through the interpretation of ambiguous information or stimuli (Pfeffer, 1981; Salancik & Pfeffer, 1978). According to this perspective, the ways in which employees experience organizational conditions and respond to them are anchored by a social consensus that develops through inter-personal influence processes (Johanson, 2000). Objective workplace conditions are modeled as inherently ambiguous, and employees are assumed to search their social environment for information to help them interpret what the organization is like and how they should act to perform in their jobs (Salancik & Pfeffer, 1978). These interpretations are affected by social cues by one's peers that define what facets of a job are deemed important, evaluations by others about job facets that are thus defined as important, and self-justifications to make personal evaluations conform with a socially constructed reality (Thomas & Griffin, 1989). Based on these assumptions, the key argument developed in this chapter is that the performance of OCB should evidence social influence effects because such performance represents the enactment of the way individuals interpret a potentially ambiguous role as responsible participant in the exchange relationship with the organization. Specifically, I will argue that the social network relations through which an employee is connected in role-relevant ways to his or her peers can be used as a basis for identifying which peers are likely to exert social influence.

As suggested by Van Dyne, Cummings, and Parks (1995), I use the role concept in a theoretically capacity in this chapter. It will serve to establish a conceptual link between social influence and the performance of OCB through the notion of role enactment. However, I depart from the work by Van Dyne et al. (1995) in that I define the role not as a fixed set of formal expectations for behavior to be performed by an individual but as a social category, or performance image, comprising a flexible menu of possible expectations for behavior that an individual might perform as occupant of particular social position (Callero, 1994; Goffman, 1961; Katz & Kahn, 1978; Stryker, 1980). Role and position are institutionalized categories in the symbolic order of a social system (Callero, 1994). The position designates a category of person (e.g., a manager, an employee) while the role supplies a category of behaviors an actor in a particular person category can perform (e.g., issuing commands, carrying out work tasks). However, the role is conceived as a guide for performing and understanding behaviors in different social situations, not as a precise prescription for what to do (Goffman, 1961; Stryker, 1980).

Thus, I do not assume that role expectations have a deterministic impact on the behavior performed (cf. Merton, 1957). Instead, I presume that roles affect behavior through enactment, a process in which the occupant of a given position (e.g., an employee) selects to engage in a specific array of behaviors from the larger menu of possible behaviors that comprise a role (e.g., the organizational citizen) associated with that position. Role expectations are thus conceptualized to be flexible, indeterminate, and variable (Callero, 1994; Stryker, 1980). Social influence is likely to impact the types of behaviors performed by an employee because this indeterminacy results in uncertainty about which behaviors can and should be enacted, and such uncertainty can be reduced in consultation with co-workers (Meyer, 1994; Morrison, 1994). Thus, I theorize that an individual's enactment of his or her role (i.e., the array of behaviors he or she selects to perform) will be influenced by the way in which peers, who occupy the same position and to whom the individual maintains relevant social relationships, enact their roles (See Figure 1). At the empirical level, observed performance of behavior should thus be associated with observed performance of peer behavior.

Figure 1
Role Enactment And Performance Of Ocb



In the OCB literature, a distinction is traditionally made between in-role and extra-role behavior (Van Dyne et al., 1995; Williams & Anderson, 1991). This distinction is rooted in a model that defines an organizational role as expectations for behavior that are prescribed by formal job definitions. Behaviors that are formally prescribed are in-role (i.e., task performance, compliance with managerial commands). OCB and similar behaviors are considered extra-role because they are voluntary contributions to the employment exchange relationship (Van Dyne et

al., 1995). However, the distinction between in-role and extra-role becomes problematic when considering how employees perceive the scope of their own role in the organization (Morrison, 1994; Organ, 1997). Specifically, Morrison (1994) conducted a study of personal role definitions by employees and found that 18 of 20 so called “extra-role” OCB-type behaviors were rated as “in-role” by 50% or more of the sample. In addition, not a single one of these ratings evidenced a significant positive correlation with similar ratings by supervisors.

These results show that employees’ subjective role perceptions do not correspond well to some formal and objective set of expectations for behavior. Extrapolating to the current model, if the way employees perceive behaviors as in-role or extra-role is highly variable, then the organizational role most employees enact is probably not that of a “hired hand” (Dansereau, Graen, & Haga, 1975), who only performs the duties specified in a formal contract. A more likely role is that of a “valued member” (Lind & Tyler, 1988), or citizen, of the organization, and behaviors in the enacted role are likely to include both formal duties and OCB. This conclusion supports the argument above that the role is a flexible category, and that role enactment by employees involves a selection from among a broad menu of possible behaviors. Thus, one could speak of an organizational citizen role as a fuzzy category (Lakoff, 1987), which includes formal role behaviors that are core to the category, as well as discretionary role behaviors, which are peripheral. There is unlikely to be much ambiguity about the appropriateness of core role behaviors, such as carrying out work tasks, because everyone knows that an organizational citizen should perform them and because they are part of formal task interdependencies in the organizational structure (Thompson, 1967). In support of this contention, Meyer (1994) found that formal role clarity was not affected by social influence.

Hence, I focus in this study on behaviors that are peripheral in the organizational citizen role category, such as OCB, because their performance is discretionary (Organ, 1988). This discretion suggests that the choice of behaviors to include in role enactment by an individual may be affected by the similar discretionary choices made by others. Evidence suggests that social influence affects employee perceptions of OCB-related role definition (Morrison, 1994), but whether social influence is also associated with performance of OCB role behavior is not clear. Demonstrating such influence would appear to be an important task because the link between perception and behavior is imperfect and because organizations and co-workers are more directly affected by actual behavior than by perceptions (Johns & Saks, 2001). Social influence during role enactment may affect choices about the discretionary because a social role serves not only as a guide for behaviors but also as a mutually understood label through which others make sense of the behavior performed by an actor (Callero, 1994; DiMaggio, 1992). In this sense, enactment of an organizational member role involves a mutual consultation among occupants of the same position (i.e., employees) about which behaviors are understandable and acceptable for their social situation.

To summarize, the theory proposes that employees enact the discretionary facets of a role as organizational citizen by performing a set of OCB that can be chosen from a menu of possible behaviors. Because ambiguity exists about which of these behaviors are appropriate to perform in a given organization, role enactment is likely to be influenced by social information received through consultation with co-workers who enact the same role (i.e., peers). Consequently, one should observe similarity of observed behavior between peers. Below, I hypothesize about the types of relationships in which such social influence between co-workers might occur for different kinds of OCB. Because the subject of investigation is social influence, I focus not on the specific array of behavior enacted by an individual but on the extent of similarity between the behaviors performed by pairs of actors (Erickson, 1988). This dyadic approach is consistent with the study of social influence in organizational behavior (Ibarra & Andrews, 1993; Johanson, 2000; Meyer, 1994).

Social Influence Mechanisms

Because social influence is argued to occur through consultation among colleagues, it must involve a contagion process: resource exchange and communication between people (Johanson, 2000). Contagion may be associated with two different types of social influence mechanism: Direct social influence between two actors and indirect social influence that results from two actors interacting with the same third parties (Johanson, 2000; Shah, 1998). Direct social influence is likely to occur between actors who are involved in a mutual relationship between them (Friedkin, 1984). In the context of such a relationship, two actors directly exchange social cues or persuasive messages that influence each other's interpretation of what role behaviors are appropriate and how frequently they should perform these behaviors. Indirect influence occurs when two social actors maintain relationships to the same other actors, a social mechanism known as structural equivalence (Burt, 1976). Structurally equivalent actors may perform similar behaviors because they receive similar social cues about appropriate role behaviors and performance through the indirect interaction between them that arises by virtue of maintaining relationships to the same set of third party actors. Thus, they receive the same social information from others but do not necessarily transmit cues directly between them.

Social influence through contagion may also differ depending on the form of relationship in which colleagues interact and communicate with each other. The context of the relationship is important because it designates the type of social resources that are exchanged among actors and, hence, may raise the salience of different role behaviors that are subject to social influence. There are two generic types of relationships among individuals in organizations that form two different social networks (Ibarra, 1992; Lincoln & Miller, 1979). Instrumental relationships designate a network of interactions for the purpose of exchanging work-related resources and information, while expressive relationships designate a network of associations on the basis of friendship and social affiliation. The question thus arises: What types of social influence effects on OCB might exist in these two different networks?

An established distinction made in the OCB literature is between interpersonal OCB and collective OCB. This distinction is based on the intended beneficiary of a particular behavior performed by an organizational member (Podsakoff et al., 2000; Williams & Anderson, 1992). On the one hand, interpersonal OCB are targeted at individual actors, facilitate interactions among individuals, and encourage morale and cooperation among individuals (Borman & Motowidlo, 1993; Podsakoff et al., 2000). Interpersonal OCB are exchanged between employees and contribute indirectly to organizational effectiveness by supporting the social context in which employees perform their tasks. These behaviors may include giving help to one's co-workers or assisting interpersonal cooperation among employees. On the other hand, collective OCB are targeted at an impersonal beneficiary, the organization in general, and are tendered in more direct exchange to contribute to the collective as a whole (Podsakoff et al., 2000; Van Dyne et al., 1995). These behaviors constitute contributions to the effective functioning of the organizational system and include such behaviors as participating in committees or making innovative suggestions (Organ, 1988). Based on the distinctions between different types of social network relationships and between different classes of OCB, several simple predictions can be made.

The first prediction is that interpersonal OCB should be most subject to direct social influence in mutual expressive relationships. This prediction is premised on the idea from social information processing theory (Salancik & Pfeffer, 1978) that behaviors which benefit a specific other individual and are designed to support a cooperative interpersonal context should be made salient by interactions that involve the interpersonal exchange of friendship and social support. Furthermore, because interpersonal OCB and expressive relationships both focus on personal exchanges, social influence is likely to derive from a mechanism that unfolds directly between actors rather than indirectly through widely shared social definitions of organizational reality (Johanson, 2000). Thus, interpersonal exchange processes between individuals are likely to give

rise to strong pressures for conformity between close colleagues who exert mutual influence on each other's role enactment to sustain and symbolize their valued exchanges (Festinger, 1954). Overall, this rationale implies that one would find significant behavioral similarity in the performance of interpersonal OCB between actors who maintain a mutual expressive relationship between them.

Second, indirect social influence should have the greatest effect on collective OCB performed by structurally equivalent actors in the network of instrumental relationships. This proposition is premised on the idea that interactions in which employees discuss work related matters and exchange resources for the purpose of performing their organizational duties are likely to raise the salience of behaviors that can be performed to contribute directly to an exchange with the organizational collective (McNeely & Meglino, 1994). If the nature of exchange with an organizational collective is socially constructed and rooted in a shared reality of what it takes to be a member of that collective (Lamertz, 2002), then social influence processes on role enactment of collective contributions should derive from widely diffused sources of social understanding (Johanson, 2000). Thus, widely distributed indirect influence through contact with the same set of third party actors, rather than more local direct influence between two actors, should be the primary source of contagion for these behaviors. Overall, this argument leads to the prediction that employees who are structurally equivalent in a network of instrumental relationships would evidence significant similarity in their performance of collective OCB.

Methods

The data for this study were collected as part of a larger investigation into the association between social network structures and OCB. Participants in the study were clerical and operator personnel in a large Canadian telecommunications company. Data were collected in eight different work units from four different sites in the same metropolitan area. Excluding supervisors, 138 individuals were surveyed, of which 120 returned complete and usable data, resulting in an overall response rate of 87%. The initial number of respondents and obtained response rates in the operator units were 16 respondents (88% response rate), 17 (82%), 19 (89%), and 15 (93%). Corresponding data for the clerical units were 19 (84%), 15 (93%), 8 (100%), and 28 (78%). The final number of employees and dyads used in the analysis for the eight samples are reported in Table 1. The sample comprised 78% women and 62% were full-time employees. Each work unit also included between one and three senior associates, who acted in an assistant supervisory capacity to support other employees. During the data collection period, the host company announced a downsizing decision, which affected operators through job or task re-assignments. Interview data suggested that an extensive downsizing program covering three years had affected all sites on prior occasions. Thus, in order to control for differential effects of the downsizing and in order to accommodate the nature of the data collected (see below), all analyses were performed within each work unit separately.

TABLE 1
Summary Statistics

Work Unit	N	Dyads	Mean Friendship	Mean Advice Relationship	Behavior Similarity Support Behavior Mean (S.D.)	Behavior Similarity Civic Virtue Mean (S.D.)
Unit 1	14	182	0.18	0.44	2.50 (1.34)	2.26 (0.85)
Unit 2	14	182	0.26	0.42	1.84 (1.03)	2.52 (1.05)
Unit 3	16	240	0.11	0.28	1.76 (0.87)	2.41 (0.77)
Unit 4	15	210	0.16	0.41	1.48 (0.70)	2.41 (1.01)
Unit 5	14	182	0.09	0.30	2.43 (1.21)	2.20 (1.05)
Unit 6	17	272	0.10	0.19	1.82 (0.81)	2.93 (1.01)
Unit 7	8	56	0.14	0.32	2.42 (0.92)	2.32 (0.61)
Unit 8	22	462	0.09	0.21	2.15 (0.96)	2.26 (1.02)

Dependent Measures: OCB

Data on the dependent variable were collected through ratings conducted by the supervisory personnel. Because the predictions in this study were based on an explicit distinction between behaviors that are targeted to benefit individuals (i.e., interpersonal OCB) and behaviors that are targeted to benefit the organizational collective as a whole (i.e., collective OCB), two classes of OCB were chosen to emphasize this difference. To operationalize OCB that are targeted at other individuals and do not directly benefit the collective, a *Social Support* dimension was measured, defined as interpersonal behaviors that improve morale and support the interpersonal context of the workplace (Borman & Motowidlo, 1993; McNeely & Meglino, 1994). To operationalize OCB that are targeted directly at the collective and do not benefit any specific individuals, a Civic Virtue dimension was measured, defined as responsible and constructive participation in organizational governance activities (Organ, 1988; Podsakoff *et al.*, 2000). Using items from Niehoff and Moorman (1993), McNeely and Meglino (1994) and Morrison, (1994), each employee was rated on four items measuring Social Support (e.g., “Coordinates staff get-togethers and social events,” “Takes time to listen to colleagues’ personal problems and worries”) and five items measuring Civic Virtue (e.g., “Volunteers for serving on committees of any kind,” “Avoids extra duties and responsibilities at work” – reverse coded). All items were scored on 5-point Likert-type scales, anchored by “Almost Never” and “Almost always.” The reliability coefficients for these data were 0.80 for Social Support and 0.70 for Civic Virtue.

The OCB ratings for each individual were then converted into dyadic similarity data for pairs of individuals in order to test the hypotheses of the study. The key dyadic variable of interest was similarity of OCB performance, which was operationalized as the Euclidean distance between the vectors of behavior ratings of a given pair of respondents. This measure was computed in the social network data analysis software package UCINET IV (Borgatti, Everett, & Freeman, 1999). As Euclidean distance is a measure of *dissimilarity*, smaller values on this variable indicate greater similarity of behavior. A Euclidean distance measure was used in order to incorporate precise differences not just in the types of behavior performed but also in the frequency of performance. Doing so was considered important in order to capture similarity in the array of behavior enacted by a given pair of actors. Summary statistics for both variables are displayed in Table 1.

Independent Measures: Social Influence Mechanisms

Data about expressive and instrumental relationships were collected as social network data with a sociometric roster procedure (Marsden, 1990). Each individual respondent was

presented with a complete list of all members of his or her work unit and then asked questions about the relationships with them. Two relationships were measured that are associated with social referent choice in organizations (Shah, 1998). First, friendships were measured to operationalize expressive relationships by asking “who do you consider a personal friend?” Second, advice seeking was measured to operationalize instrumental relationships by asking “who do you ask for advice with work related matters?” For each question, respondents simply chose “yes” or “no” for each of their colleagues to indicate the presence or absence of a particular relationship. Table 1 shows summary statistics of these sociometric data.

Using UCINET IV (Borgatti *et al.*, 1999), the data were then converted into dyadic indices of the way in which two actors relate to each other in a social network. These variables operationalized the mechanism through which actors are subject to direct and indirect social influence in a social network (Johanson, 2000). Direct social influence between two individuals was calculated as a mutual relationship, in which the potential for reciprocal communication and association between them exists. Following common methods in influence studies (Meyer, 1994; Johanson, 2000), this variable was created by retaining a given relationship between two actors in a given work unit if both chose each other as a friend or if they both indicated that they ask each other for advice. Please note that given this measure, a significant social influence effect is indicated by a negative relationship with the dependent variables, which measure dissimilarity of behavior.

Indirect social influence was computed as structural equivalence, which examines the extent to which a given pair of actors exhibited similar patterns of giving and receiving relationship choices (i.e., friendship or advice) with the same other individuals in their work unit (Burt, 1976; Shah, 1998). In order to maintain consistency of methods with the computations of the dependent variable, structural equivalence between two actors was computed using Burt's (1976) Euclidean distance routine in UCINET IV. For each actor, this routine creates a relationship profile by stacking the vector of relationship choices the actor received from other actors on top of the vector of relationship choices the actor made him or herself. Structural equivalence is then computed as the Euclidean distance between the profiles of a given pair of actors.

Control Variables

Because the study examined social influence on role enactment of discretionary (i.e., *non-formal*) performance behavior, several variables were included in the analysis to control *formal* role behavior. Two variables were developed to model respondents' formal positions in the vertical and horizontal organizational structure. Vertically, a variable was created to indicate whether a pair of actors occupied the same formal position as regular employee or as senior associate. Horizontally, a variable was created to indicate whether a given pair of actors was interdependent by virtue of the same formal task assignment. For example, employees in two of the operator units were responsible for dispatching underground cable repair personnel. This work was divided on the basis of area code, and the control variable indicated whether a given pair of employees worked on dispatch for the same area code region. Other distinctions were made on the basis of customers served, long-distance or local telephone service, and work technologies employed. In addition, because employment status may affect OCB (Van Dyne & Ang, 1998) a variable was included to distinguish between full-time and contract employees. For work unit 7, only vertical position was included as a control variable because there were no task divisions and all individuals were employed on a full time basis.

Data Analysis

The data were analyzed at the dyadic level using the quadratic assignment procedure (QAP) regression technique in UCINET 5 (Borgatti *et al.*, 1999). This analysis was a natural and

appropriate choice given the focus in this study on behavior similarity between pairs of actors and the use of relationships to model social influence mechanisms. In addition, a problem with using variables computed from social network data (i.e., relationships between individual actors) in conventional statistical testing is dyadic auto-correlation and the resulting non-independence of observations. Krackhardt (1988) has shown the potential for conventional regression to estimate biased parameters under such conditions. QAP confronts the autocorrelation problem by using a non-parametric test, which compares observed parameter estimates with a population of corresponding estimates produced from random permutations of the data. The significance estimates for the results in Tables 2 and 3 correspond to the proportion of randomly computed parameter estimates that were as extreme as the observed parameter estimate and can be interpreted in the conventional manner (Shah, 1998). In addition, as data about relationships were collected only between members of the same work unit, all analyses were performed separately in each unit. Inferences about the sample as a whole were then made using Rosenthal's (1978) meta-analysis procedure for combining results from different samples (see Krackhardt & Porter, 1986).

Results

Regression coefficients for all social influence effects are displayed in Tables 2 and 3. The general pattern of results support the predictions made in this study. Table 2 shows the results for the social influence effects on Social Support, an interpersonal OCB. The top panel of Table 1 shows that in three of the work units, the presence of a mutual expressive (i.e., friendship) relationship between two actors was significantly associated with greater similarity in the performance of these behaviors. Combining the results across the eight work units also yielded a significant effect of direct social influence on behavioral similarity (Combined $Z = -2.95$, $p < 0.01$). Panel 2 in Table 2 shows that indirect social influence between structurally equivalent actors in the expressive network had no significant effect on the similarity of Social Support behavior (Combined $Z = 0.97$), although one work unit did exhibit a significant coefficient. The lower two panels in Table 2 show the results for relationships in the instrumental network. The direct social influence effect of a mutual advice relationship on behavioral similarity was marginally significant (Combined $Z = -1.57$, $p < 0.06$). There was no evidence of indirect social influence between structurally equivalent actors in the advice network (Combined $Z = 0.48$).

Table 2
QAP Regression Coefficients for Social Influence on Social Support Behavior

Variable Name	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
<i>Expressive Network</i>								
Direct Influence	-0.18*	-0.23*	0.03	-0.05	-0.07	-0.16*	-0.10 ^{\$}	-0.22
Indirect Influence	0.02	0.17 ^{\$}	-0.06	0.41**	-0.30 ^{\$}	-0.05	-0.10	0.05
<i>Instrumental Network</i>								
Direct Influence	-0.18	-0.03	0.14 ^{\$}	-0.22*	-0.01	-0.08	-0.11 ^{\$}	-0.17
Indirect Influence	0.10	0.10	0.02	0.17*	-0.30 ^{\$}	-0.04	-0.11	-0.01

Table 3
QAP Regression Coefficients for Social Influence on Civic Virtue Behavior

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8
<i>Expressive Network</i>								
Direct Influence	0.11	-0.28*	-0.11	0.08	-0.01	-0.02	-0.10 ^s	-0.39*
Indirect Influence	0.02	0.17 ^s	-0.04	0.14	-0.28 ^s	0.12	-0.30*	0.07
<i>Instrumental Network</i>								
Direct Influence	0.08	-0.09	0.02	-0.47**	0.11	0.08	0.04	-0.54**
Indirect Influence	0.28**	0.20 ^s	-0.07	0.34**	0.33 ^s	0.24*	0.12	0.14

** $p \leq 0.01$

* $p \leq 0.05$

^s $p \leq 0.10$

The bottom panel of Table 3 shows the key results of interest for the indirect social influence effect on Civic Virtue OCB, which directly benefits the collective. The results provide strong support for the prediction that structural equivalence in the advice network is significantly associated with behavioral similarity of these behaviors (Combined $Z = 4.01$, $p < 0.001$). Three work units evidenced significant effects in the predicted direction and two additional units show marginally significant effects. Although there are a number of other significant coefficients in Table 3, combining results across all work units for a given social influence effect suggested that neither a mutual advice relationship (Combined $Z = -1.45$) nor structural equivalence in the friendship network (Combined $Z = 0.15$) were significantly associated with behavioral similarity of Civic Virtue. However, direct social influence in a mutual expressive network did affect behavioral similarity of Civic Virtue across all work units (Combined $Z = -1.71$, $p < 0.05$), with a significant the effect in two individual units.

Discussion

This study started with the proposition that the manner in which employees enact their role as organizational members by performing OCB should be subject to social influence processes. The logic of this prediction was that sufficient ambiguity would exist in a given workplace context about which of such behaviors employees should perform and with what frequency, so that some degree of joint social construction among employees would be part of the role enactment process. The results of the study showed that the presence of a mutual expressive friendship relationship between two employees was significantly associated with the extent to which they performed the same types of interpersonal and collective OCB with similar frequency. In addition, the results demonstrated that when two actors have advice relationships with the same set of third party actors, even though they may not have a direct advice relationship to each other, they exhibit a similar pattern of performing collective OCB.

Key foci of recent research on social influence in organizations have been the search for boundary conditions and the investigation of specific influence processes. For example, Meyer (1994) sought to clarify systematically whether social influence processes differentially affect job level or organization level perceptions, while Johanson (2000) developed a precise specification for investigating different influence processes through different influence mechanisms. The study reported in this chapter extends both these perspectives by expanding the boundary domain of organizational phenomena that appear to be affected by social influence and comparing how a new set of phenomena is affected by different influence mechanisms.

At the most general level, this study has shown that role enactment is likely to involve some form of joint social construction by employees about the appropriate forms of discretionary non-task behaviors to perform in a given organizational context (Salancik & Pfeffer, 1978). These findings are important because they illustrate that social influence affects not just organizational perceptions but also behavior. Social contagion (i.e., influence through contact between individuals) affected OCB performance through two mechanisms: direct influence and indirect influence. However, direct influence was the more important predictor, affecting both interpersonal and, to a lesser degree, collective OCB, while indirect influence was associated only with collective OCB. Thus, it appears that the symbolic significance of informal role behavior, regardless of its specific beneficiary, diffuses primarily among close colleagues. Nevertheless, social influence effects on collective OCB did evidence strong support for the idea that a shared understanding about the social exchange contract with organization may exist as a widely dispersed social reality among employees (Johanson, 2000).

Taken together, these results suggest that enactment of a role as organizational citizen may be the outcome of social identification with significant others and a desire to display a positive self-image in front them. Actors involved in a mutual relationship are likely to have ample opportunity to observe each other's behaviors and find out about each other's discretionary activities during their day-to-day interaction. Because mutual relationships model strong, reciprocal involvement (Krackhardt, 1992), the individuals involved should experience motivation to appear favorably in front of each other by performing as the other performs or refusing to perform as the other refuses (Bolino, 1999). In this case, it may make little difference whether the behavior in question is targeted to benefit individuals or the collective as a whole, what may be important is that the performance of behavior makes sense and is acceptable to the significant other. For behavior that is targeted at the collective, an additional concern with presenting a favorable image in the eyes of multiple others may arise, where performance must make sense specifically as a collective contribution (or lack thereof) in the manner members of the work unit jointly define it.

The results of the study also suggest that different types of relationships may act as conduits for influence on different kinds of behavior. The standards of performance for behaviors that benefit other individuals were shown to diffuse in friendships but not in advice relationships. Conversely, collective OCB were affected by social influence primarily in advice relationships. Previous evidence has shown that most social influence effects on employee perceptions take place in the context of instrumental relationships, such as task advice (Ibarra & Andrews, 1993; Johanson, 2000) or work-related communication (Meyer, 1994). The results of this study thus suggest that research on social influence is likely to achieve greater precision by considering the interactional referent implied by a specific relationship context (Meyer, 1994). More generally one should consider the extent to which the substantive focus of a phenomenon affected by social influence matches the foci of information exchange and salience of issues likely to arise in a particular type of relationship.

Conclusion

Researchers of social influence in organizations have recently produced significant advancements toward the objective of attaining a better understanding of the precise mechanisms and targets of influence that unfold among employees in the work place. Yet most of this work has been limited to employee perceptions and attitudes (Ibarra & Andrews, 1993; Johanson, 2000; Meyer, 1994), which, arguably, are first level outcomes of influence processes (Salancik & Pfeffer, 1978). Notwithstanding the importance of employee perceptions and attitudes, the position argued in this chapter was that a neglect of how social influence might affect employee behavior is a shortcoming in the literature because today's organization needs to find new ways of soliciting employee cooperation that are independent of management rule. Peer social influence is one such means, and its power to affect behavior was evident in the study presented. Peer consultation highlights the contextual nature of role enactment processes in organizations (Meyer, 1994) and represents a key tool of realizing the potential of organizational culture to affect member performance behavior (Van Maanen & Schein, 1979). In particular, where interpersonal exchanges between employees can serve as a basis for role modeling, as well as the emergence of informal cliques or sub-groups can foster cooperative norms, the drain on managerial time and effort to help orient new organizational members may be significantly reduced. However, care needs to be taken in order to maintain a focus in these efforts on cooperation not just with other individuals, but also with the organizational collective (Bolino, 1999).

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TEST OF CLIMATE PREDICTORS OF FEEDBACK SEEKING AND PERFORMANCE INTENTIONS

This study examined the impact of reward and organizational citizenship climates on employee feedback seeking and performance intentions. Data for this study were provided by the survey responses of 186 alumni from an undergraduate business program. The model was tested using *LISREL* analysis. Results showed that feedback seeking mediated the relationship between the altruistic climate and performance intentions. The implications of these relationships are offered. Limitations of the study and directions for future research are also included.

Introduction

One way of capturing the context or environment in which employees perform their day-to-day duties is to describe the organizational climate or climates. The concept of climate refers to a variable, or a set of variables, that represent the norms, policies, and practices both formal and informal, that are prevailing in a workplace (Litwin & Stringer, 1968; Payne, 1971; Reichers & Schneider, 1990, p22). Climate is expressed as perceptions shared by members of the organization or relevant group and reflects the way these members comprehend and describe their contextual environment (Vardi, 2001). There may exist, a number of climates, each related to the various norms, policies, and practices within each organization, department, or work group. A growing number of studies show that measures of climate perceptions correlate with measures of individual behaviour. For instance perceptions of a positive organization climate have been significantly related to higher performance levels in a print shop (Landau, 1981) and in hospital units (Sheridan, Vredenburg, & Ableson, 1984). Moreover, positive climate perceptions have predicted lower turnover intentions (Jackofsky & Slocum, 1988), lower levels of organizational misbehaviour (Vardi, 2001), and higher levels of job satisfaction (Jackofsky & Slocum, 1988). Although bivariate relationships have been found between measures of climate perceptions and measures of work behaviors and attitudes, it is not clear how or why this happens. Specifically, a fundamental question is *how* do climate perceptions affect aspects of the micro-level psychological processes that direct and energize behaviour. By testing the relationship between climate perceptions and intentions, a pivotal motivational process variable (see Locke & Latham, 1990), our study addresses a gap in the organizational behavior literature, and begins our search for answers to this fundamental question.

The role of behavioral intentions (personal goals) is a core concept within current cognitive-motivational theory (for a review, see Mitchell, Thompson & George-Falvy, 2000), and has been used to explain variance across a variety of individual behaviours (e.g., turnover, task performance). Indeed, the vast majority of motivational research has examined the dispositional and situational causes of goals/intentions (see Mitchell et al., 2000). A cognitive process, that appears closely intertwined with cognitive-motivation processes, is feedback seeking. Feedback seeking involves employees' active, deliberate and purposeful inquiries about "how they are

performing on the job.” Presumably once credible performance information has been found, this forms the basis for action. For example, the feedback may signal that expectations are met, or that greater effort is required (e.g., Nadler, 1979; Renn & Fedor, 2001). When viewed this way, the outcome or results of feedback-seeking processes should be integral with cognitive-motivational process variables, like intentions/goals, that govern and regulate effort expenditure. In this study we look more closely at the relationship between feedback seeking and intentions/goals, and we test how both are shaped or influenced by climate perceptions. A model proposing relations among climate perceptions, feedback seeking, and intentions/goals is tested using data collected from employees exposed to a variety of different climates. Before we present and discuss the results of an empirical study, in the next sections we describe our study variables and present a series of hypotheses.

Reward Climate

A significant accumulation of research exists emphasizing the importance of rewards for motivating employee behaviour and performance. When rewards are made contingent upon good performance then the resulting levels of performance are substantially higher (Porter & Lawler, 1968; Vroom, 1964). Consequently, employee beliefs about organizational reward policies or practices should be critical to their motivational behaviours. In support of this supposition, the research of Sheridan, Vredenburg, and Ableson (1984) showed that the performance-reward climate of a hospital had a significant direct effect on nurse's job performance. Consequently, perceptions of a positive relationship between performance and organizational rewards should influence employees to act in ways consistent with achieving the rewards. That is, under these conditions employees should be more likely to seek feedback information and based upon that feedback, set performance goals that will lead them to the rewards.

Hypothesis 1: Perceptions of the reward climate will positively predict reported feedback seeking behaviour.

Hypothesis 2: Perceptions of reward climate will positively predict performance intentions.

Citizenship Climate

Derived from organizational citizenship behaviour (OCB), organizational citizenship climate refers to those organizational norms related to discretionary behaviour. While there has been some debate regarding the variety of behaviours determined to fit organizational citizenship, Organ (1988) has recognized two primary constructs: altruism and conscientiousness. Altruism encompasses behaviours directed at helping others with organizationally relevant tasks or problems. On the other hand, compliance is a more impersonal sort of OCB-referring to conscientiousness in attendance, use of work time, and adherence to various rules, but it is a conscientiousness that far surpassed any enforceable minimum standards. It implies more of a "good soldier" syndrome of doing things that were "right and proper". Both OCB behaviours may produce positive gains for the organization (Katz & Kahn, cf Vigoda, 2000), however, there has been little research examining how OCBs will influence group or organizational effectiveness, nor whether the various factors of OCB will have unique or equivalent effects (Podsakoff, et.al., 2000). The model below proposes that only the altruistic climate will directly influence feedback seeking behaviour.

A key determinant of whether or not an individual will seek feedback information is the perceived cost of feedback seeking (Ashford & Tsui, 1991). The act of feedback seeking places individuals in a conflicted situation where feedback may be valuable for correcting behaviour, yet at the same time involves both individual and social risks because the information may be potentially threatening to one's ego or image. Asking for feedback can result in receiving negative information about one's self or may make one appear incompetent or insecure, resulting

in unfavorable impressions from those who are relied on for promotions. Thus individuals may avoid feedback seeking in order to preserve ego or image. A consistently negative relationship has been found between perceived risk of seeking feedback and the amount of feedback sought (Ashford, 1986; Fedor, Rensvold, & Adams, 1992).

It is generally accepted that individuals will assess the accessibility of feedback prior to inquiry (Madzar, 1995). As cost of feedback inquiry increases actual inquiry decreases. Should the person be working in an environment where helping behaviour is *not* the norm the cost of feedback seeking should increase but when working in an environment where helping behaviour is the norm the cost of feedback seeking should decrease. Edmondson (1999, p376) investigated a number of hypotheses centered around team member reactions to perceptions of the similar concept of psychological safety. Their results consistently showed that people's beliefs about how others might respond affected their willingness to take interpersonal risks. This indicates that for those who consider engaging in information inquiry, their perceptions of an altruistic climate should have an impact on whether or not they follow through. In a climate of helping behaviour, perceptions of risk in feedback seeking should be reduced, consequently feedback seeking should increase. Therefore, perceptions of an altruistic citizenship climate should create conditions conducive to feedback seeking behaviour. On the other hand, perceptions of the compliance climate should have little impact on the act of feedback seeking. Compliance primarily consists of a general code of basic work behaviours including attendance and taking personal time while at work. A compliance climate will have little impact on perceptions of costs of feedback seeking and may include behaviours more clearly evident to the individual without seeking specific or continual feedback. Therefore, while an altruistic climate, can be expected to influence feedback seeking, a conscientiousness climate or perceptions that organizational members engage in, would not be expected to impact feedback seeking.

Hypothesis 3: Perceptions of an altruistic citizenship climate will positively predict reported feedback seeking behaviour.

Hypothesis 4: Perceptions of the compliance citizenship climate will have no impact on reported feedback seeking behaviour.

At the individual level, there has been some question as to whether those who engage in OCB will perform at higher levels than those who do not engage in OCB. At the group level, a positive relationship has been found between OCB behaviours and performance. Waltz and Niehoff's (1996) research showed significant positive correlation between aggregated organizational measures of OCB and measures of operating efficiency, revenue-to-full-time equivalent, and quality performance.

Given that there appears to be a relationship between OCB and performance outcomes, it is proposed that a positive citizenship climate should raise individually set goal levels. In defence of this proposition, it has been found that supportive supervisors can facilitate employee initiative and development (Oldham & Cummings, 1996). Within an environment where high levels of altruism exist, an individual should have greater expectations of others giving assistance when needed, and consequently have higher expectation of effectively accomplishing tasks. For example, Noe and Wilk (1993) found that situational support was related to individual motivation and self-development. Additionally, those working in a climate where it is expected that organizational members will carry out day to day activities or roles beyond the minimum required level should have higher performance expectations than those working in an environment where this expectation does not exist. Consequently, to the extent that the altruistic and compliance citizenship climates are perceived as positive, individuals should have high performance expectations.

Hypothesis 5: Perceptions of the altruistic citizenship climate will be

positively related to performance intentions.

Hypothesis 6: Perceptions of the compliance citizenship climate will be positively related to performance intentions.

Feedback Seeking and Performance Intentions

Information received from the active inquiry about performance should be key to the cognitive development of future goal intentions. Feedback is widely accepted as used by individuals to set or adjust future goals (Locke & Latham, 1991). In addition, Bandura (1991) argued that individuals who pay close attention to their performance tend to set higher performance levels. Thus, it can be expected that information received from feedback seeking should impact future goals and also that those individuals who seek feedback will be more likely to set improvement goals. In 2001, Renn and Fedor set a similar hypothesis suggesting that feedback seeking and the information derived from it would determine levels of individual goals. They found a strong positive correlation between feedback inquiry and personal goals. In addition, they found that these goals were significantly related to performance. In fact, these previous results may suggest a strong mediating role for feedback seeking between the climate perceptions and performance intentions. Therefore, consistent with previous research, it is expected that feedback seeking behaviour will be significantly related to performance intentions.

Hypothesis 7: Feedback seeking behaviour will positively predict performance intentions.

Method

Participants and Procedure

Data for this study were provided by the survey responses of alumni from an undergraduate business program at a Canadian-based university. All of our study measures were contained within a pencil-and-paper survey that was mailed directly to participants using addresses obtained from an existing alumni mailing list. In total, we mailed out 1,554 surveys. Of these, 186 or 12% of the population sample were returned via Canada Post. Our sample was more or less split along gender with 55.6% and 42.3% of the sample reporting their sex as male or female, respectively. Respondents reported being in the workforce an average of 6.82 years (SD=4.73) since graduation, and had been with their current organization for an average of 4.43 years (SD=4.75). The average reported age was 33.46 years (SD=6.93). As expected, respondents came from a variety of occupations and organizations. A little less than half (47.6%) reported holding management positions.

Measures

The exogenous climate variables were made up of items measuring the reward climate and the citizenship climate (altruistic and compliance). The measures of perceptions of the organizational reward climate were developed for this study. Five items were created to identify individual perceptions of the behaviours rewarded and recognized within the organization. Responses were given on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Items assessed activities like supporting the organization and carrying out extra duties. The measures of the organizational citizenship climate, were adapted from the 16 item OCB scale developed by Smith, Organ, and Near (1983) and referred to by Organ (1988; p. 116). Participants were asked to report on how people generally behaved. Examples of items include: "help others with heavy work loads" and "give advanced notice if unable to come to work." As with the previous climate measure, responses were given on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The citizenship climate factors of altruism and

compliance were used separately to test the model. Two items, used to assess feedback inquiry, were assessed on a 5-item scale ranging from 1 (very frequently) to 5 (very infrequently). Performance intentions were measured with 5 items developed for this study and based on definitions of contextual performance (Borman & Motowidlo, 1993; Motowidlo & Van Scotter, 1994). Items assessed goals related to increased effort, volunteering, helping, and supporting the organization over the upcoming 12-month period. Participants were presented five “intention” statements and asked to express their level of agreement, from 1 (strongly agree) to 7 (strong disagreement).

Results

Means and standard deviations for individual item responses as well as scale reliabilities are reported in Table 1. We then specified a theoretical model that (a) incorporated the measurement models as described in Table 1, and (b) proposed direct and indirect relations, via feedback seeking behaviour, between three forms of climate perceptions and performance intentions (see Figure 1). In the structural model, direct paths were specified between the three climate perceptions (reward, altruism, and compliance) and feedback seeking behaviour. Direct paths were also specified between the three exogenous variables (climate perceptions) and performance intentions, and between feedback seeking behaviour and performance intentions. The model allowed testing of the role of feedback seeking behaviour as a mediator of climate perceptions on motivational cognitions. Complete mediation would be demonstrated if the following three conditions are met: (a) the effect of a climate perception variable on the proposed mediator (feedback seeking behaviour) was significant; (b) the path between the mediator and the criterion (performance intentions) was significant; and (c) the direct path between the climate perception and the criterion was not significantly different from zero. Partial mediation would be demonstrated if (a) and (b) were true but (c) was not (see James & Brett, 1984).

Insert Table 1 and Figure 1 about here

To test whether our theoretical model provided a reasonable explanation for the observed variances and covariance among our indicator variables, we subjected the data to *LISREL 8.12* analyses using maximum likelihood estimates of path coefficients (Jöreskog & Sörbom, 1993). The completely standardized path estimates for both the measurement and structural models are portrayed in Figure 1. In addition to the chi-square statistic, we report the following fit indices: the goodness-of-fit index (GFI; Jöreskog & Sörbom, 1993) and the non-normed fit index (*NNFI*; Bentler & Bonett, 1980). The GFI is a stand-alone index, ranging from 0-1, that describes the relative amount of observed variances and covariances accounted for by the model. The *NNFI* evaluates the incremental fit of a model in relation to a baseline model, which is often the most restricted or null model where all the variables are assumed to be uncorrelated (see Bentler, 1990; Marsh, Balla, & McDonald, 1988; McDonald & Marsh, 1990). The fit indices suggest that our theoretical model provides a reasonable explanation for the pattern of observed relations among study variables ($\chi^2(242)= 428.14, p<.000; GFI=.83; NNFI= .88$). The model was shown to explain approximately 16% of the variance in feedback seeking behaviour, and 38% of the variance in performance intentions. As can be seen in Figure 1, only three structural paths were significant ($p<.05$): (a) the path between altruism climate and feedback seeking behaviour; (b) the path between feedback seeking behaviour and performance intentions; and (c) the path between reward climate and performance intentions. Thus our findings suggest that the relationship between altruism climate and performance intentions is completely mediated by feedback seeking behaviour, but reward climate has a direct effect on performance intentions. We did not find that compliance climate affected feedback seeking behaviour or performance intentions when the other climate perceptions were controlled. Consequently four of the seven

proposed hypotheses were supported. We found support for hypotheses 2, 3, 4, and 7 but no support for hypotheses 1, 5, and 6. Correlations among the latent constructs are presented in Table 2.

Insert Table 2 about here

Discussion

The impact of contextual environments or climates, have rarely been investigated as predictors of motivational behaviours and cognitions. Previous research has suggested that climates do have an impact on performance, however, this study examined pathways through which these variables may be linked. The purpose of this study was to develop and test a model to assess the impact of reward and citizenship climates on feedback seeking and performance intentions. The full model show a reasonably good fit to the data and the several significant pathways add new and interesting information to our understanding of climates and motivational behaviour.

A unique addition of this study was the investigation of the citizenship climates. Despite the intuitive allure of the assumption that OCBs lead to improved group and organizational effectiveness, this hypothesis has received little empirical attention (Podsakoff et al., 2000). This field of research has focused almost exclusively on antecedents rather than consequences of OCB. Through our investigation of the construct at the climate level, we are able to suggest a mechanism whereby OCBs may, in fact, lead to motivational behaviours and higher performance. First, results indicate that the altruistic climate may be an important motivator of performance related behaviours. The altruistic climate was significantly and positively related to feedback seeking. As individuals perceived a higher level of helping behaviour within their contextual environment they became increasingly more likely to seek performance feedback. This suggests that an altruistic climate reduces the perceived risks of feedback seeking thereby increasing feedback seeking behaviour. The results of this study become particularly relevant, given previous findings (Morrison & Cummings, 1992) showing that poor performers are reluctant to obtain feedback information. These results suggest that those working in a helping climate will feel much less inhibited from obtaining performance improvement information. Consequently, organizations should be able to increase feedback seeking in poor performers by influencing group or departmental norms to create a less risk adverse environment. Also, as noted by Williams, et. al. (1999) organizations must take responsibility to create environments conducive to feedback seeking. So while feedback seeking is dependent upon individual initiative, it is important that the employer and organization set the stage for employees to feel motivated to improve their performance and to seek out performance feedback.

Also of consequence was the mediating role of feedback seeking behaviour. Feedback seeking fully mediated the link between the altruistic citizenship climate and performance intentions. This presents feedback seeking and the information derived there-from as a crucial link in the motivation process. It has been previously proposed that people respond to situational cues concerning the appropriateness of feedback seeking behaviours (Ashford & Northcraft, 1992) and then use the feedback as a resource to produce and achieve goals (Crant, 2000). Theory suggests that feedback seeking should enhance performance by aiding in the evaluation of current performance levels and in the adjustment of future goals to overcome any performance deficiencies. The results given here support these propositions and add to previous evidence collected by Renn and Fedor (2001) showing that information derived by feedback seeking is used to establish individual performance goals.

While the results show that the altruistic climate did affect individual motivations, the compliance climate had no impact on either feedback seeking or performance intentions. Even as it was expected that compliance would have little influence on feedback seeking, the overall lack of effect of the compliance climate suggests that, at the climate level, the two factors of OCB (altruism and compliance) may be better viewed as distinct rather than collective contributors to organizational behaviour. It seems reasonable that organizations will benefit from compliance behaviour, in that adherence to organizational rules and regulations such as attendance and break policies generates a greater efficiency of human resources (Organ, 1988). However, compliance norms appear to be low level regulators of organizational behaviour with little impact on motivational states or activities. In their review article of OCB research, Podsakoff et.al. (2000) noted the lack of investigation into the unique effects of the forms of citizenship. This study provides a step forward in understanding the differential impact of these forms on employee behaviours and motivations.

Finally, the data confirmed the predicted significant positive correlation between perceptions of reward climate and performance intentions. In this case, the climate perception measured the individual's general beliefs about organizational reward practices. The results showed that those who perceived a positive relationship between performance and organizational rewards developed performance goals consistent with achieving those rewards. This result confirms a basic tenant of motivation theory (Porter & Lawler, 1968; Vroom, 1964): individuals will be motivated to perform to the extent that they believe that there is a link between performance behaviours and organizational rewards. In total, the results of this study indicate that the contextual environment within which employees work can influence motivation both directly and indirectly and suggests a beneficial relationship between positive work climates and employee motivation.

Limitations

Several limitations that could impact the validity of the study need to be recognized. These limitations are, however, common to survey data. Given that all the variables in this study were measured using self-report scales, there is a risk that findings can be attributed to common method variance. We accept this as a potential weakness. However, common method variance may not be as much of a limitation as once thought. Common method variance inflates zero-order correlations and increases the shared variance among the independent variables (Shaffer, Harrison, & Gilley, 1999). If the results were heavily influenced by common method variance, we would expect to observe a less differentiated set of results than was found in this study. However, future studies would benefit from inclusion of objective measures.

A second concern of survey research is that the data collected are all cross-sectional in design. This is a weakness that obviously limits our ability to make 'causal' claims. This needs correcting with longitudinal research designs, but again this limitation does not invalidate our major claim that organizational climates contribute to individual motivation.

A final criticism of the study may be that the climate variable was not examined at the group level. The measure consisted of the individual's perception of the environment within which he or she worked. While there is a preference to measure climate through averaging of individual perceptions, it is not unprecedented to take individual measures (see Vigoda, 2000). Additionally, the methods of measuring at the group level could attenuate the variance in the data, when group measures come from a single organization or a limited number of organizations. The data of this study came from a large number of individuals working in a wide variety of jobs and occupational groups. Consequently, the results may provide a good representation of the effects of these variables throughout the general population. The generalizability of the results may have been enhanced through this methodology. Yet further study of these measures at the group level will also provide further insight into climate effects.

Conclusion

This research has made several contributions to the literature. The analyses demonstrated positive links between contextual climates and individual motivations. Forms of OCB had unique effects on the dependent variables suggesting that future research should continue to investigate the independent influences of these forms. Also, feedback seeking played an important role in mediating the link between the altruistic citizenship climate and performance intentions. These results indicate that motivational processes are shaped or influenced by climate perceptions and that the feedback-seeking processes are an integral with the cognitive-motivational intentions that govern and regulate effort expenditure.

Table 1
Descriptive Statistics: Scale Items

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Alpha</i>
<u>Reward Climate</u>				
Persist with enthusiasm and extra effort to complete their task activities successfully (rewc1)	184	5.02	1.57	
Volunteer to carry out task activities that are not formally part of their own job (rewc2)	184	4.58	1.53	
Help and cooperate with others (rewc3)	184	4.83	1.53	
Follow organizational rules and procedures (rewc4)	184	4.64	1.36	
Endorse, support, and defend organizational objectives (rewc5)	184	4.83	1.38	
Scale (5 items)	184	4.78	1.21	.88
<u>Altruism Climate</u>				
Assist the supervisor with his or her work (altc1)	183	4.89	1.62	
Help others with heavy work loads (altc2)	183	4.62	1.64	
Make innovative suggestions to improve the department (altc3)	183	4.79	1.45	
Help orient new people (altc4)	183	4.93	1.49	
Help others with problems (altc5)	183	5.38	1.15	
Help others who have been absent (altc6)	183	4.49	1.52	
Scale (6 items)	183	4.85	1.09	.83
<u>Compliance Climate</u>				
Spend a great deal of time with personal phone calls (R) (comc1)	184	5.17	1.55	
Coast toward the end of the day (R) (comc2)	184	4.54	1.69	
Have work attendance that is above the norm (comc3)	183	5.17	1.37	
Take undeserved work breaks (R) (comc4)	183	5.15	1.56	
Complain about insignificant things at work (R) (comc5)	182	3.93	1.72	
Do not take unnecessary time off work (comc6)	184	4.67	1.69	
Scale (6 items)	182	4.77	1.19	.84
<u>Feedback Seeking Behaviour</u>				
I ask members of my work group for information concerning my performance (fsb1)	183	2.88	1.12	
I seek information from colleagues to understand how they perceive my work performance (fsb2)	183	3.59	1.06	
Scale (2 items)	183	3.24	0.92	.59
<u>Performance Intentions</u>				

Be more enthusiastic and exert extra effort on the job (int1)		185		5.35		1.20
Volunteer to do tasks that are not formally part of my job (int2)	185		4.95		1.38	
Do more in terms of helping and cooperating with others (int3)	185		5.61		1.03	
Carefully follow organizational rules and procedures (int4)		185		5.11		1.21
Endorse, support, and defend organizational objectives (int5)		185		5.37		1.25
Scale (5 items)	185		5.28		0.89	.78

Figure 1. Completely Standardized Solution

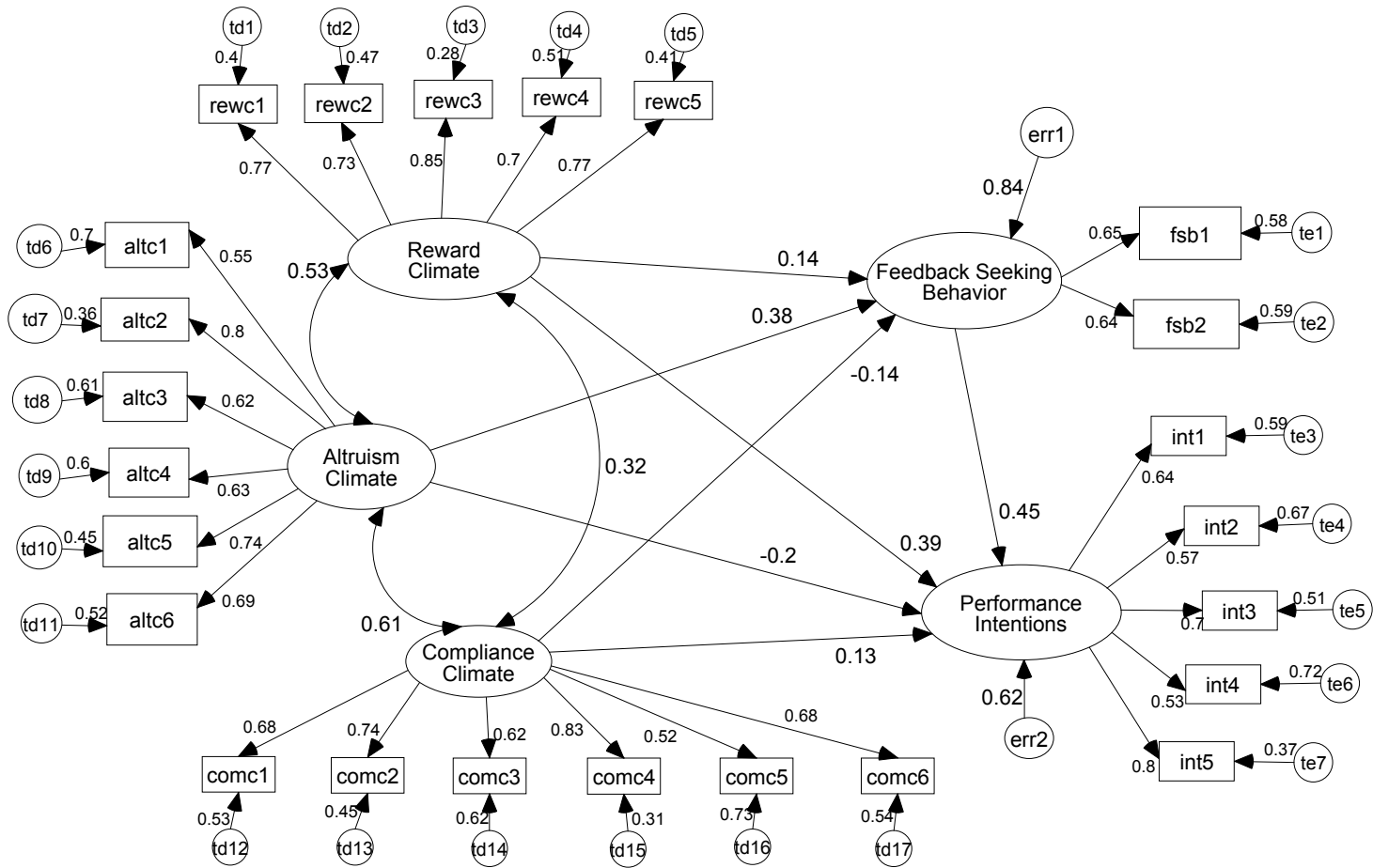


Table 2
Correlations Among the Latent Constructs

Factors	1	2	3	4	5
1. Feedback Seeking Behaviour	1.00				
2. Performance Intentions	.51	1.00			
3. Reward Climate	.29	.46	1.00		
4. Altruism Climate	.36	.25	.53	1.00	
5. Compliance Climate	.13	.19	.32	.61	1.00

Note: $N=182$; Listwise deletion of missing data.

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**CULTURE, HABILITATION ET COMMUNICATION SUPÉRIEUR- SUBORDONNÉ :
ANALYSE SYSTÉMIQUE DE L'APPRENTISSAGE ORGANISATIONNEL AUPRÈS
DES CADRES SUPÉRIEURS DE LA FONCTION PUBLIQUE**

Depuis plusieurs années, les chercheurs s'intéressent vivement à mieux comprendre le concept d'apprentissage organisationnel et l'importance des facteurs d'influence de cet apprentissage. Parmi ces facteurs d'influence on retrouve au niveau macro la culture organisationnelle qui selon plusieurs auteurs est un déterminant majeur de l'apprentissage organisationnel. Au niveau méso, la littérature suggère que le degré de contrôle ou d'habilitation (empowerment) détenu par l'individu sur son travail crée des opportunités d'expérience qui enrichissent l'apprentissage. Enfin, au niveau micro, les comportements quotidiens du supérieur envers ses subordonnés influenceraient de façon significative l'apprentissage individuel et collectif. Toutefois, les écrits actuels sur l'importance de ces dimensions sont la plupart du temps descriptifs et prescriptifs, et peu de recherches empiriques sont venues confirmer les relations entre ces variables et l'apprentissage organisationnel. Dans le cadre de l'étude de l'APEX (Association professionnelle des cadres de la fonction publique fédérale) les chercheurs ont recueilli, auprès de 1822 cadres de la fonction publique, des données sur les variables précitées. Les résultats montrent que la culture d'apprentissage et l'habilitation joue un rôle important dans l'acquisition des compétences clés d'apprentissage organisationnel de Senge (1990). En ce qui a trait à l'impact de la qualité de la communication supérieur-subordonné, les résultats montrent que cette dimension n'ajoute aucune explication supplémentaire à la prédiction de l'apprentissage organisationnel. Les résultats sont discutés à la lumière de certains modèles théoriques et des pistes de recherches futures sont proposées.

L'apprentissage organisationnel est devenu aux cours des dix dernières années un concept incontournable dans la recherche en gestion. Son importance se justifie par l'idée que la survie d'une organisation dépend de sa capacité à s'adapter aux changements de l'environnement et que cette capacité passe inévitablement par un apprentissage individuel et collectif. Autrement dit, puisqu'une organisation est avant tout un système social, l'adaptation de l'organisation à son environnement n'est possible qu'à la condition que ses membres prennent conscience des

changements qui s'opèrent dans leur domaine d'activités, en comprennent les conséquences, trouvent et implantent les solutions appropriées aux problèmes actuels et anticipés. Pour que les solutions soient adaptées, l'apprentissage individuel et collectif est alors fondamental à chaque étape de ce processus. Dans la littérature, l'apprentissage organisationnel est décrit de multiples façons, telles un cycle ou un processus permettant l'acquisition de connaissances (Hubert, 1991; Dixon, 1992), un processus d'apprentissage collectif par l'interaction avec l'environnement (Cyert et March, 1963; Hedberg, 1981), une théorie de détection d'anomalies et de corrections par une restructuration de la théorie de l'action des acteurs (Argyris et Schon, 1978), l'expansion des capacités à créer des résultats désirés (Senge, 1990a), la capacité pour une organisation de maintenir et d'améliorer sa performance par l'expérience (DiBella, Nevis et Gould, 1996).

Plusieurs auteurs soutiennent le point de vue que même si l'apprentissage passe nécessairement par l'individu, l'apprentissage organisationnel n'est pas la somme des apprentissages de chaque membre. En effet, l'apprentissage organisationnel doit impliquer un processus organisationnel dans lequel l'apprentissage fait par un individu sera partagé, évalué et intégré avec les apprentissages des autres (Dixon 1994). Pour Senge (1990a, 1990b), l'apprentissage organisationnel s'inscrit dans la théorie des systèmes, c'est-à-dire un ensemble d'éléments qui interagissent et s'influencent mutuellement sur une période de temps en vue d'atteindre un objectif commun. Cet auteur propose une méthode pour guider les organisations à améliorer constamment leur capacité d'apprendre. Il distingue cinq compétences ou disciplines à maîtriser par les acteurs soit la pensée systémique, la maîtrise personnelle, la remise en question des modèles mentaux, la construction d'une vision partagée et l'apprentissage en équipe. Selon ce modèle, il est essentiel pour établir une organisation apprenante, que ses acteurs principaux, particulièrement les gestionnaires, maîtrisent cinq disciplines ou compétences. En proposant le développement de ces cinq compétences, Senge fait en sorte le lien entre l'apprentissage individuel et l'apprentissage organisationnel; une organisation n'apprend qu'au travers ses individus qui apprennent. En théorie, l'apprentissage individuel de ces cinq compétences ne garantit pas l'apprentissage organisationnel, mais sans celle-ci aucun apprentissage organisationnel n'est possible. Selon cet auteur, le degré de manifestation de ces cinq compétences deviendrait des indicateurs d'une organisation apprenante et une mesure du potentiel d'apprentissage organisationnel. Toutefois, malgré l'abondance de publications sur le sujet, le concept d'apprentissage organisationnel provoque encore des débats quant à sa signification, sa mesure et ses frontières conceptuelles.

Bureaucratie et apprentissage organisationnel

En général, les auteurs s'entendent pour affirmer que l'environnement joue un rôle vital dans tout processus d'apprentissage organisationnel (Argyris et Schon 1978; Hedberg 1981; Weick 1979; Senge, 1990a, Dixon, 1992). D'autre part, le concept d'apprentissage organisationnel est le plus souvent étudié dans des organisations avec des structures organiques alors que très peu de recherches sont effectuées auprès d'organisations de type bureaucratique. En effet, les bureaucraties sont souvent critiquées pour leur incapacité à gérer l'incertitude et la complexité environnementale et à maintenir des activités d'apprentissage nécessaire à l'adaptation aux changements. Selon certains auteurs, la structure bureaucratique crée une barrière définitive à l'apprentissage (Myers, 1985). Toutefois, une telle conclusion ne s'appuie pas sur des recherches empiriques et la question de savoir comment les organisations bureaucratiques apprennent reçoit encore peu d'attention des chercheurs. Bien que des caractéristiques telles que la spécialisation et la formalisation puissent limiter possiblement l'apprentissage, on ne peut affirmer que la structure bureaucratique est le seul élément nécessaire et suffisant pour limiter l'apprentissage dans ces

organisations. D'autre part, une structure bureaucratique n'est pas une structure mécaniste, c'est-à-dire un milieu où à peu près tout serait déjà programmé. Des différences importantes sont observables entre diverses bureaucraties en termes de missions, stratégies, cultures, climats de communication et systèmes informels et formels qui favorisent l'apprentissage dans divers départements (Richard et Goh, 1995). Force est donc de constater à la lecture des recherches que très peu d'auteurs se sont vraiment attardés à vérifier dans quelles mesures ces éléments peuvent contribuer à l'apprentissage organisationnel dans ce milieu. Un des rares chercheurs sur ce plan affirme que "bureaucratie" et "apprentissage" ne sont pas des termes contradictoires et que dans une bureaucratie, l'apprentissage existe et peut-être développé (Zayed, 1989). Pour devenir apprenantes, les organisations ont besoin de flexibilité mais aussi de stabilité dans la gestion de la complexité environnementale (Kahn, 1982). En conséquence, la stabilité n'est pas en soi un élément négatif à l'apprentissage. D'autre part, on peut penser que la création de flexibilité dans un environnement bureaucratique permettrait à ces organisations de stimuler le processus d'apprentissage tout en maintenant une certaine stabilité.

En théorie, de multiples facteurs tant au niveau organisationnel, structurel, comportemental et cognitif contribueraient à faciliter ou à nuire à l'apprentissage individuel et collectif. Parmi ces facteurs, la culture organisationnelle est fréquemment citée comme un déterminant majeur de l'apprentissage organisationnel (Gephart, Marsick, Van Buren, et Spiro, 1966; Schein, 1993a, 1996; Yeung, Ulrich, Nason et Van Glinow, 1999). En ce qui concerne le niveau structurel, plusieurs chercheurs soulignent l'influence sur l'apprentissage du degré de latitude décisionnelle qu'a l'individu sur son travail (Daft, 2001). L'augmentation de la latitude décisionnelle détenue par l'individu sur ses tâches créerait des opportunités d'expériences riches et plus variées favorisant un apprentissage supérieur. Sur ce plan, il existe un assez large consensus que la diversité et la qualité de l'expérience est un facteur critique lié à l'acquisition des connaissances et habiletés tacites nécessaires à la résolution optimale des problèmes au travail, en particulier des problèmes de gestion (Barrette et Durivage, 1997; McCauley, Ruderman, Ohlott, et Morrow, 1994; Wagner et Sternberg, 1987). Enfin, au niveau micro, des auteurs soutiennent que la qualité de la communication supérieur-subordonné influence de façon significative l'apprentissage individuel et collectif. Ces trois aspects, culture, habilitation et communication supérieur-subordonné, s'incrivent également dans le modèle théorique de l'organisation apprenante proposé par Daft (2001).

Niveau organisationnel: culture et apprentissage organisationnel

La culture organisationnelle est définie comme le partage de philosophies, idéologies, valeurs, hypothèses, croyances, attentes, attitudes et normes qui lient étroitement ensemble une communauté (Kilman, Saxton, Serpa, 1985). Pour Dixon (1994), ceci représente un ensemble de structures signifiantes collectives que les membres d'une organisation utilisent pour interpréter la nature de leur monde et eux-mêmes dans leurs relations avec ce dernier. La culture organisationnelle est aussi associée à une forme d'entrepôt d'information implicite, une mémoire organisationnelle, qui guide les comportements des membres d'une organisation (Huber, 1991). Les connaissances contenues dans cette mémoire organisationnelle affecteraient l'acquisition et le traitement des nouvelles informations et connaissances (Walsh et Ungson, 1991). Plusieurs chercheurs affirment qu'une organisation peut créer une culture intentionnellement orientée vers l'apprentissage (Daft, 2001; Schein, 1992, 1993a, 1993b; Fiol et Lyles, 1985; Yeung et al., 1999). Selon Miles et Randolph (1980), une organisation avec une culture d'apprentissage adopte une approche proactive en regard de l'apprentissage en mettant en place des plans d'action qui stimulent et enrichissent l'apprentissage individuel et collectif. Elle instaurerait des valeurs,

structures, politiques, systèmes, et pratiques qui soutiennent et accélèrent l'apprentissage individuel et le partage des apprentissages entre les subordonnés dans un esprit de collaboration (Bennett et O'Brien, 1994). Une culture d'apprentissage influencerait fortement l'apprentissage organisationnel en permettant la création d'un milieu de travail facilitant l'exploration, l'expérimentation, la pensée positive, la rétroaction et la communication ouverte (Yeung, Ulrich, Nason, Van Glinow, 1999). Une telle culture favoriserait l'innovation par l'apprentissage génératif en permettant aux membres d'étendre leurs capacités, d'anticiper les besoins du milieu et d'améliorer la résolution des problèmes opérationnels et organisationnels (Barrett, 1995; Senge 1990a; Argyris et Schon, 1978). Compte tenu de l'importance que revêt la culture comme facteur d'influence sur l'apprentissage, l'on devrait s'attendre à ce que plus la culture d'apprentissage organisationnel est présente dans l'organisation plus l'apprentissage organisationnel s'accroît (hypothèse 1).

Niveau structurel: décentralisation du pouvoir, habilitation et apprentissage

Selon le modèle de design organisationnel de Daft (2001), l'apprentissage organisationnel est étroitement lié à des éléments de structure formelle dont en particulier le degré de décentralisation du pouvoir et de l'augmentation de la latitude décisionnelle. Concrètement, la décentralisation du pouvoir se traduit pour le subordonné par une augmentation de son contrôle sur la prise de décision en ce qui concerne son travail. Cette latitude décisionnelle représente un élément central du concept d'habilitation. En effet, dans un milieu où le pouvoir est décentralisé, la personne possède plus d'autonomie et un niveau supérieur de responsabilité lui permettant d'utiliser sa discrétion, ses connaissances et ses habiletés pour résoudre les problèmes et rencontrer un but. Dans la littérature en gestion, la décentralisation du pouvoir, la latitude décisionnelle, le degré de contrôle ou la délégation de responsabilités accompagnée d'une augmentation de la capacité d'agir est centrale à la notion d'habilitation (empowerment) (Burke 1986; Kanter 1983; Conger et Kanungo, 1988). En fait, comme le soulignent Conger et Kanungo (1988), ces expressions sont souvent utilisées de façon interchangeable avec le terme d'habilitation.

Selon Ford et Fottler, (1995) l'habilitation débute lorsque l'on demande aux subordonnés d'accepter plus de responsabilités dans la définition, le contenu, la qualité et les conséquences de leur travail. Pour ces auteurs, l'habilitation résulte d'une autorité accrue sur la capacité d'agir sur les problèmes qui surviennent, et implique une délégation de la prise de décision et de la responsabilité face à ses propres actions. Conger et Kanungo (1988) considèrent l'habilitation comme un processus d'enrichissement du sentiment d'efficacité personnelle par l'identification et l'élimination des conditions qui limitent le pouvoir des individus, de même que par l'entremise de pratiques organisationnelles formelles et informelles favorisant une communication d'information efficace. En terme de dynamique relationnelle, l'habilitation est un processus par lequel un leader ou gestionnaire partage son pouvoir avec ses subordonnés. Toutefois, ce pouvoir délégué doit être perçu pour qu'il puisse avoir un effet sur le comportement de l'acteur et son sentiment d'efficacité personnel (Kanter, 1983; Miller 1980).

L'habilitation est considérée par plusieurs auteurs comme un ingrédient essentiel à l'apprentissage en milieu de travail (Wright, 1997; Daft, 2001). L'habilitation permettrait l'expression des forces et du potentiel plutôt que de créer des obstacles qui l'empêchent, favorisant ainsi l'expérimentation et la prise de risques (Whetten et Cameron, 2001). Toutefois, malgré la popularité du concept, très peu de recherches empiriques ont été conduites sur le lien entre l'habilitation et l'apprentissage organisationnel. Dans cette optique, le deuxième objectif de cette recherche vise à vérifier dans quelle mesure l'habilitation est liée à l'apprentissage

organisationnel et, dans le cas échéant, si cette dernière contribue à la prédiction de l'apprentissage organisationnel au-delà de l'influence de la culture organisationnelle d'apprentissage.

Niveau comportemental: communication leader-subordonné

Plusieurs écrits sur l'apprentissage organisationnel suggèrent que la qualité des communications entre les supérieurs et ses subordonnés favorise un apprentissage supérieur. Dans le passé, plusieurs recherches se sont attardées à vérifier l'impact de la qualité de la communication supérieur-subordonné sur le rendement des subordonnés, leur satisfaction, leur motivation ou leur qualité de vie (Jablin, 1979; Latham et Wexley 1994; Whetten et Cameron, 2001). Toutefois, très peu d'entre elles ont vérifié ce lien en ce qui concerne l'apprentissage. Bien sûr, la relation supérieur-subordonné dans la création d'une dynamique de communication positive est de la responsabilité des deux partis. Toutefois, le supérieur de par sa position d'influence formelle, joue un rôle de premier plan dans la création de cette dynamique. Si ce dernier ne cultive pas ce climat d'ouverture et d'échange entre lui-même et ses subordonnés, il devient très difficile d'imaginer que ce dernier soit ouvert à remettre en question des objectifs ou stratégies organisationnels, propose des idées génératrices de performance et s'exprime sur les problèmes, autant professionnels que personnels, qui affectent les résultats de son travail et de son organisation.

La qualité de la communication entre le supérieur et le subordonné est un élément important de la théorie de l'apprentissage organisationnel d'Argyris et Schon (1978). Pour ces auteurs, la qualité de la communication dans l'organisation est un facteur qui contribue à la création d'un climat non défensif en stimulant le questionnement sur les prémisses sous-jacentes à la prise de décision; ce qu'ils appellent l'apprentissage de deuxième ordre (double loop learning). Selon cette théorie, l'apprentissage de deuxième ordre est influencé négativement par l'attitude normale des humains à créer des routines défensives afin de protéger leur estime de soi et préserver leur image. Argyris (1993) définit les routines défensives comme étant des actions qui minimisent les embêtements ou les embarras pour soi et pour les autres. Cette attitude agit comme une barrière à l'apprentissage en limitant l'interrogation personnelle sur les problèmes de base de l'organisation tels que la pertinence des objectifs ou des projets actuels sur lesquels le sujet travaille. En théorie, cette attitude défensive peut être réduite s'il existe entre la gestion et le subordonné une communication ouverte et un climat de confiance. Dans une relation de confiance les mécanismes de défense visant à protéger l'estime de soi tels l'évitement du blâme, la justification, l'accusation, les excuses, l'évitement d'initiatives, seraient diminués. Pour atténuer ces routines défensives, Argyris (1993) prône un style de communication de gestion direct, honnête, supportant et crédible de façon à ce que les problèmes importants soient soulevés sans peur de représailles. Une relation positive avec le supérieur encouragerait le subordonné à questionner lui-même la pertinence de ses objectifs, la qualité de son travail, la façon qu'il le réalise mais également à soulever des questions de base inconfortables, c'est-à-dire celles qui remettent en cause certaines normes corporatives, valeurs, politiques, pratiques et procédures sans crainte de conséquences négatives personnelles. Plusieurs comportements de gestion favorisant cette relation de confiance ont été proposés. Ils touchent la participation à l'établissement des objectifs et la clarification des attentes afin que le subordonné saisisse le sens de ses efforts et la rétroaction constructive sur le rendement et les comportements (Evered et Selman, 1989; Marsh, 1992; Yukl, 1994). Pour sa part, Elliger (1997) soutient que les gestionnaires qui assument un rôle d'enseignant, de "facilitateur" et "d'aidant" auront un impact supérieur sur l'apprentissage organisationnel. Les comportements sous-jacents à ces rôles sont assez similaires aux

comportements liés à la communication de soutien et de “coaching” tels que l’encouragement, la démonstration d’une compréhension du travail du subordonné, la critique objective, la congruence, l’honnêteté, l’ouverture à l’erreur et l’acceptation des désaccords (Whetten et Cameron, 2001).

Jusqu’à présent très peu de recherches empiriques ont été conduites sur le lien entre la qualité de la communication supérieur-subordonné et l’apprentissage organisationnel (Ritchie, 1999). Le troisième objectif de cette recherche vise donc à vérifier dans quelle mesure l’apprentissage organisationnel est lié à la culture d’apprentissage, l’habilitation et à la qualité de la communication supérieur-subordonné.

En résumé, le but de cette recherche vise donc à vérifier dans quelle mesure la culture d’apprentissage, l’habilitation et la communication supérieur-subordonné sont des variables prédictives de l’apprentissage organisationnel auprès des cadres de la fonction publique. Il est attendu dans les hypothèses que l’apprentissage organisationnel sera lié positivement à la culture d’apprentissage (h. 1), à un accroissement de l’habilitation (h.2) et la qualité de la communication supérieur-subordonné (h.3).

Méthodologie

Les données recueillies proviennent de l’enquête nationale de l’APEX (Association professionnelle des cadres de la fonction publique fédérale) et s’inscrivent dans une étude plus large visant à évaluer l’état de santé des cadres et à identifier les paramètres organisationnels optimaux pour la création d’une organisation “apprenante”. Dans ce cadre, le questionnaire a été envoyé en février 2002 sous la direction de l’équipe de chercheurs par le Service des ressources humaines de chaque ministère et agence. Le réseau de l’appareil gouvernemental canadien constitue un terrain intéressant pour l’étude de ces paramètres dans une bureaucratie. En effet, la fonction publique comprend un nombre important de cadres supérieurs (approximativement 8500 hauts fonctionnaires de niveau dits exécutif (EX-1 à Ex-5) directement impliqués dans la gestion de l’information et des connaissances. Au total, 3670 participants de direction de la fonction publique ont reçu le questionnaire. Les trousseaux comprenaient un questionnaire en français et en anglais, une lettre de recrutement et de consentement éclairé bilingue, une enveloppe de retour pré-affranchie, pré-adressée à une boîte postale hors-gouvernement. Les réponses sont demeurées anonymes et les résultats compilés par l’équipe de chercheurs. Près de 40 % des cadres ont répondu. Le tableau 1 présente la composition de l’échantillon comparativement à la composition de la population des cadres de la fonction publique. L’analyse comparative indique que l’échantillon reflète étroitement la composition de la population des cadres tant au niveau du sexe, du niveau hiérarchique (EX1 à EX5) et de l’âge. En ce qui a trait à la scolarité, 2.1 % sont des fonctionnaires de niveau secondaire, 10.4 % de niveau collégial et le reste de niveau universitaire.

Tableau 1
Composition en pourcentage de l'échantillon comparativement à la composition
de l'ensemble des cadres de la fonction publique fédérale

	Sexe		Niveaux hiérarchiques					Âge ^a					
	Hommes	Femmes	EX1	EX2	EX3	EX4	EX5	1	2	3	4	5	6
Population	68.1 %	31.9 %	52 %	25 %	16 %	5 %	2 %	6%	13%	24%	35%	18%	4%
Échantillon	66.8 %	33.2 %	51 %	26 %	15 %	6 %	2 %	5%	13%	23%	35%	19%	4%

a) 1 = âge de moins de 40 ans, 2 = de 40 à 44 ans, 3 = de 45 à 49 ans, 4 = de 50 à 54 ans, 5 = de 55 à 59 ans, 6 = plus de 60 ans.

Mesures des variables indépendantes

La mesure du construit « culture organisationnel d'apprentissage » provient des travaux de Yeung et al., (1999) et comprend 10 items (tableau 2) avec une fidélité interne de .92 (moy. = 4.42, et E.T. = 1.07). Pour mesurer ce construit nous avons demandé aux participants de répondre, sur une échelle en 7 points (complètement en désaccord à complètement en accord), aux instructions suivantes : *Les questions suivantes concernent l'apprentissage au sein de votre organisation, ainsi que votre propre apprentissage et perfectionnement. En vous basant sur les expériences que vous vivez dans votre organisation actuelle, dans quelle mesure êtes-vous en accord ou en désaccord avec les affirmations suivantes?: Mon organisation: 1) a tendance à privilégier l'action; 2) considère l'apprentissage comme faisant partie de ses valeurs culturelles; 3) etc.....*

La mesure « d'habilitation » provient des travaux de Hurrell, Nelson et Simmons (1998) portant sur le sujet. Il s'agit de 10 items (tableau 2) mesurant le degré de contrôle, de pouvoir et de latitude décisionnelle détenus par le répondant sur divers aspects de son travail. La fidélité interne de l'échelle est de .84 (moy. = 3.47, E.T. = .66). Nous avons demandé aux participants de répondre, sur une échelle en 5 points (très peu à énormément), à l'instruction suivante: *Indiquez le degré d'influence que vous exercez actuellement dans chacun des différents secteurs ci-dessous. Par "influence", nous entendons le degré de contrôle que vous exercez sur ce qui est fait par les autres et la liberté de choix que vous avez dans votre propre travail. Quelle influence avez-vous: 1) lorsqu'il s'agit d'obtenir le matériel et l'équipement nécessaires pour faire votre travail? ; 2) quant à l'ordre dans lequel vous accomplissez vos tâches professionnelles? ; 3) etc..*

La mesure de « communication supérieur-subordonné » est une sélection d'items tirés des travaux de Duxbury et Higgins (2001). Il s'agit là de 9 items (tableau 2) mesurant la qualité de la relation et de la communication supérieur-subordonné. La fidélité interne de l'échelle est de .90 (moy. de 3.64, E.T. = 0.81). Nous avons demandé aux répondants d'évaluer ces 9 énoncés sur une échelle en 5 points (fortement en désaccord à fortement d'accord) en répondant à l'instruction suivante: *Mon directeur / superviseur: 1) me complimente lorsque je fais bien mon travail; 2) m'explique clairement ce qu'il attend de moi, (c.-à -d. qu'il sait m'expliquer quels sont les buts et les objectifs; 3) etc...*

Tableau 2	
Échelles de mesure de la culture d'apprentissage, l'habilitation, la communication et l'apprentissage, incluant les corrélations de chaque item avec l'apprentissage organisationnel	
Mesure de la Culture d'apprentissage (Yeung, Ulrich, Nason, et Van Glinow, (1999)	
Ces questions concernant l'apprentissage au sein de votre organisation, ainsi que votre propre apprentissage et perfectionnement. En vous basant sur les expériences que vous vivez dans votre organisation actuelle, dans quelle mesure êtes-vous en accord ou en désaccord avec les affirmations suivantes?	
<p style="text-align: center;"><u>Mon organisation:</u></p> <ol style="list-style-type: none"> 1. a tendance à privilégier l'action (.06). 2. considère l'apprentissage comme faisant partie de ses valeurs culturelles (.20). 3. apprécie les auto-questionnements et les auto-analyses (.21). 4. a une attitude enjouée mais sérieuse dans l'accomplissement des tâches (travailler est amusant) (.22). 5. encourage les essais (.21). 6. accepte les échecs qui résultent de la prise de risques (.20). 7. perçoit le changement comme une occasion à saisir et non comme une menace (.21). 8. encourage chacun à rester en permanence au courant des processus internes et de l'environnement externe (.23). 9. va au devant des besoins futurs au lieu de se reposer sur ses lauriers (.19). 10. estime que le savoir est plus important que le titre (.16). 11. encourage la réciprocité (.22). 12. s'assure que l'engagement de partager les idées apparaît dans tous les documents stratégiques officiels (.20). 	
Mesure du degré d'habilitation (Hurrell, Nelson et Simmons, 1998)	
Indiquez le degré d'influence que vous exercez actuellement dans chacun des différents secteurs ci-dessous. Par "influence", nous entendons le degré de contrôle que vous exercez sur ce qui est fait par les autres et la liberté de choix dans votre propre travail.	
<p style="text-align: center;"><u>Quelle influence avez-vous:</u></p> <ol style="list-style-type: none"> 1. lorsqu'il s'agit d'obtenir le matériel et l'équipement nécessaires pour faire votre travail? (.14). 2. quant à l'ordre dans lequel vous accomplissez vos tâches professionnelles? (.17). 3. pour ce qui est de la quantité de travail que vous abattez? (.13). 4. quant à votre rythme de travail, c'est-à-dire la rapidité ou la lenteur avec laquelle vous travaillez? (.11). 5. sur les décisions de répartition des tâches dans votre service? (.21). 6. quant à vos heures ou à votre horaire de travail? (.11). 7. sur les décisions concernant le moment où les choses se feront dans votre service? (.21). 8. lorsqu'il s'agit d'obtenir les ressources humaines dont vous avez besoin pour faire votre travail? (.18). 9. sur la formation des autres employés dans votre service? (.23). 10. sur les politiques et les méthodes de votre service? (.21). 	

Mesure de la qualité de la communication superviseur-employé (Duxbury et Higgins, 2001)
<p style="text-align: center;"><u>Mon directeur / superviseur:</u></p> <ol style="list-style-type: none"> 1. me complimente lorsque je fais bien mon travail. (.09). 2. m'explique clairement ce qu'il attend de moi, (c.-à -d. qu'il sait m'expliquer quels sont les buts et les objectifs, comment procéder) (.11). 3. fait des critiques constructives quant je n'atteins pas les normes de rendement (.12). 4. m'écoute parler de mes inquiétudes (.09). 5. partage les informations avec moi (.07). 6. est prêt à répondre aux questions (.06). 7. me demande mon avis avant de prendre des décisions touchant mon travail (.10). 8. me confie des tâches stimulantes (.14). 9. appuie mes décisions (c.-à-d. avec les clients, la haute direction) (.13).
Mesure des compétences clés d'apprentissage organisationnel (Senge, 1990)
<p style="text-align: center;"><u>Au cours de la dernière année, dans mon rôle de leader, j'ai:</u></p> <ol style="list-style-type: none"> 1. évalué correctement les ouvertures et menaces organisationnelles touchant mon équipe de travail. 2. revu certaines façons de penser et de faire les choses qui empêchaient d'améliorer le travail de mon équipe. 3. reconnu que je devais faire les choses différemment pour obtenir des résultats supérieurs. 4. découvert certaines des causes qui nuisaient à mon rendement. 5. corrigé mes propres préjugés pour favoriser les améliorations. 6. saisi les occasions de m'améliorer. 7. acquis une vision claire de mon équipe. 8. donné à mon équipe une vision commune. 9. favorisé le travail d'équipe dans mon équipe. 10. tiré profit des points forts de mon équipe pour atteindre les résultats visés.

Mesure de la variable dépendante : apprentissage organisationnelle

Dans le cadre de cette étude, la mesure dépendante a été créée par les chercheurs sur la base du modèle de Senge (1990a) et constitue ce que nous appelons une mesure globale "des compétences clés d'apprentissage organisationnel". Dans le cadre de cette recherche, il s'agit d'une mesure du degré de maîtrise qu'a le répondant en ce qui concerne ses compétences clés, soit l'utilisation de la pensée systémique, la maîtrise personnelle, la remise en question des modèles mentaux, la vision partagée et l'apprentissage en équipe. Les chercheurs ont opté pour une mesure globale permettant de couvrir également les cinq compétences du modèle de Senge. La fidélité interne de l'échelle globale est de .83 (moy. de 3.92, E.T. = .48). Pour mesurer ces compétences, nous avons demandé aux participants de répondre, sur une échelle en 5 points (fortement en désaccord à fortement d'accord), à l'instruction suivante: "*Au cours de la dernière année, dans mon rôle de leader, j'ai: 1) évalué correctement les ouvertures et menaces organisationnelles touchant mon équipe de travail; 2) revu certaines façons de penser et de faire les choses qui empêchaient d'améliorer le travail de mon équipe; 3) reconnu que je devais faire les choses différemment pour obtenir des résultats supérieurs; d) etc...*"

Résultats

Les analyses suivantes ont pour but de vérifier dans quelle mesure l'apprentissage organisationnel est prédit par une culture d'apprentissage forte et un accroissement de l'habilitation et de la qualité de la communication supérieur-subordonné. Le tableau 3 présente les moyennes, écart-types ainsi que les intercorrélations entre les variables. Ces résultats indiquent que la variance obtenue sur les variables communication supérieur-subordonné (écart-type = .81), habilitation (écart-type = .66) et apprentissage organisationnel (écart-type = .48) est restreinte. Toutefois, malgré cette restriction des variances, des corrélations significatives ($p < .001$) sont obtenues entre les variables indépendantes et la mesure de l'apprentissage organisationnelle. L'analyse des corrélations entre les variables prédictives et l'apprentissage organisationnel indique que celles-ci vont toutes dans le sens attendu. Des analyses de régression hiérarchique sont effectuées pour vérifier l'importance relative des trois variables principales soit la culture organisationnelle, l'habilitation et la qualité de la communication supérieur-subordonné dans la

prédiction des compétences clés d'apprentissage organisationnel. Les variables de contrôle (âge, sexe, niveau de scolarité) sont introduites en bloc à l'étape 1 de la régression. Par la suite, les variables "culture organisationnelle", "habilitation" et "qualité de la communication supérieur-subordonné" sont entrées bloc par bloc dans cet ordre aux étapes 2, 3 et 4 de la régression. Les variables sont entrées dans cet ordre afin de respecter le modèle théorique de départ, soit en premier la variable macro (culture), par la suite la variable meso (habilitation) et enfin la micro (communication supérieur-subordonné).

L'hypothèse 1 est corroborée, il était attendu que plus la culture organisationnelle d'apprentissage serait élevée plus la maîtrise des compétences clés d'apprentissage organisationnel s'accroîtrait. Les résultats du tableau 4 indiquent que la culture organisationnelle explique une augmentation significative de la variance sur la mesure de l'apprentissage organisationnel ($\Delta R^2 = .08$, $F = 124.95$, $p < .001$).

L'hypothèse 2 est également corroborée, il était attendu dans cette hypothèse que l'habilitation apporterait une augmentation de la prédiction au-delà de celle fournie par la culture organisationnelle. Les résultats du tableau 4 montrent que l'habilitation explique un accroissement significatif de la variance sur la mesure de l'apprentissage ($\Delta R^2 = .03$, $F = 56.57$, $p < .001$). L'hypothèse 3 prévoyait que la qualité de la communication supérieur-subordonné contribuerait à la prédiction de l'apprentissage organisationnel au delà de la culture et de l'habilitation. Bien que cette variable soit corrélée significativement avec la mesure d'apprentissage ($r = .13^{***}$) celle-ci n'est pas significative dans la régression ($F = 2.09$, $p > .05$).

Tableau 3

Moyennes, écart-types et intercorrélations des variables

	M	E.T.	1	2	3	4
1. Culture	4.47	1.07	1.00			
2. Communication supérieur-subordonné	3.64	.81	.36 ^{***}	1.00		
3. Habilitation	3.47	.66	.49 ^{***}	.35 ^{***}	1.00	
4. Compétence d'apprentissage	3.92	.48	.27 ^{***}	.13 ^{***}	.25 ^{***}	1.00

Tableau 4

**Régression entre la mesure “d’apprentissage organisationnel” et les variables prédictrices
“culture, “habilitation (empowerment)” et “communication supérieur-subordonné”**

Variables Dépendantes	Bloc	Variables indépendantes	β	F	ΔR^2
Apprentissage organisationnel	1	Contrôle (âge, scolarité, sexe)		6.57	.01***
	2	Culture organisationnelle	.21	124.95	.08***
	3	Habilitation	.19	56.57	.03***
	4	Communication supérieur-subordonné		2.09	n.s.

Note: n = 1822

* p < .05, ** p < .01, *** p < .001

Discussion

Il existe un assez fort consensus parmi les auteurs que l’apprentissage organisationnel est un facteur critique associé à la survie des organisations. D’autre part, la littérature abonde en prescription sur les variables prédictrices de cet apprentissage. Toutefois, jusqu’à maintenant, les recherches empiriques sont plutôt rares sur le sujet. Parmi les variables prédictrices de l’apprentissage organisationnel, proposées dans les modèles théoriques, on retrouve la culture organisationnelle, l’habilitation et la communication supérieur-subordonné. Nos résultats viennent supporter l’importance de deux d’entre elles dans la prédiction de l’apprentissage organisationnel, soit la culture et l’habilitation.

Bien que des liens théoriques aient été souvent proposés entre la culture et l’apprentissage, peu de recherches empiriques ont vérifié cette relation dans les organisations en général et encore moins dans une bureaucratie. La présente recherche est une des rares qui s’intéresse cette problématique dans le secteur public. Les résultats indiquent que la culture d’apprentissage est liée positivement au développement des compétences d’apprentissage dans ce milieu. Ces résultats vont à l’encontre des idées établies qui affirment que les bureaucraties ne peuvent devenir des organisations apprenantes. En effet, la culture bureaucratique a souvent été définie comme une culture hiérarchique et homogène où les règles, procédures, pratiques et politiques formelles dominant et encadrent les comportements, laissant peu de latitude aux acteurs et à l’apprentissage. Celles-ci sont perçues comme des organisations aux structures hiérarchiques peu flexibles s’adaptant mal aux changements compte tenu de leurs caractéristiques structurelles. Toutefois, les bureaucraties comme les autres organisations doivent s’adapter aux changements si elles veulent réaliser leur mission. D’autre part, une organisation de la taille du gouvernement fédéral n’est pas une organisation unique et homogène faisant face à un environnement identique. Au contraire, cette institution comprend en fait de multiples organisations, ministères et agences, avec des missions, stratégies et cultures suffisamment distinctes. Ces organisations, malgré leurs caractéristiques de stabilité, ont besoin de s’adapter aux défis que pose leur environnement particulièrement sur le plan de la technologie, des facteurs socioculturels, internationaux, de ressources humaines ainsi que de leur marché respectif, c’est-à-dire les citoyens cibles qu’elles desservent.

Les résultats obtenus suggèrent que la culture d’apprentissage dans l’ensemble de cette

organisation n'est pas uniforme et que le développement des compétences liées à l'apprentissage organisationnel serait influencé par un milieu qui prône des valeurs et comportements soutenant l'apprentissage individuel et collectif. Le défi pour les ministères et agences gouvernementales qui font face à un environnement de plus en plus complexe est de changer leur culture traditionnelle vers une culture d'apprentissage. Sur ce plan, la promotion des éléments culturels d'apprentissage repose en grande partie sur les épaules de la gestion supérieure dont le rôle premier est de créer une culture forte (Schein,1992). Les résultats obtenus offrent des pistes de réflexion pour orienter les actions des leaders dans cette direction. En effet, des analyses ad hoc indiquent que certaines caractéristiques organisationnelles favorisent plus que d'autres le développement des compétences clés d'apprentissage organisationnel. Ainsi, l'analyse des corrélations supérieures à .20 (tableau 2) entre les items de mesure et la variable dépendante indique que le développement des compétences clés d'apprentissage organisationnel serait favorisé par un milieu: a) qui considère l'apprentissage comme une valeur importante et s'engage officiellement en ce sens, b) qui apprécie le travail fait, et encourage les essais, l'auto-questionnement et la réciprocité, c) qui entretient un climat de travail agréable et d) qui tient informé ses membres de l'environnement interne et externe. Il serait intéressant dans les recherches futures d'identifier les actions entreprises par les ministères et agences ayant une culture d'apprentissage particulièrement élevée. De plus, l'identification des caractéristiques qui facilitent ou nuisent à l'apprentissage dans ce milieu permettrait l'élaboration d'interventions mieux ciblées.

En théorie, l'apprentissage organisationnel est étroitement lié à des éléments de structure formelle (Daft, 2002). En fait, les deux sont indissociables et l'on ne peut exprimer une culture d'apprentissage sans que des facteurs structuraux soient mis en place; la culture influençant la structure et vice et versa. Sur ce plan, les résultats des analyses ont montré que plus la culture d'apprentissage s'accroît plus le niveau de latitude décisionnelle augmente. D'autre part, l'impact de l'habilitation sur l'apprentissage des compétences clés, au-delà de l'effet de la culture d'apprentissage, supporte l'idée que l'habilitation est une variable clé pour stimuler l'apprentissage organisationnel. On peut avancer que la latitude décisionnelle, à la base de l'habilitation, est une démonstration concrète d'une valeur organisationnelle, soit la confiance envers ses membres.

Le modèle de Robbins, Crino et Fredenhall (2002) concernant le processus d'habilitation permet de mieux comprendre l'impact de cette variable clé sur l'apprentissage. Dans leur modèle, les auteurs clarifient le rôle des variables contextuelles, environnementales, cognitives et comportementales dans le processus d'habilitation. Pour eux, l'étape principale est la création d'un environnement de travail local, à l'intérieur d'un contexte organisationnel plus large, qui fournit des opportunités d'exercer des comportements habilitants et fournit une motivation intrinsèque pour s'engager dans ce type de comportements. Dans ce contexte, la latitude décisionnelle qu'a le subordonné envers ses tâches constitue un levier favorisant un apprentissage accru par la création d'opportunités d'expériences plus diverses et l'augmentation du sentiment d'efficacité personnelle (self-efficacy), générateur d'une motivation plus élevée au travail (Conger et Kanungo, 1988). De plus, la mise en place d'habilitation s'accompagne presque inévitablement de partage d'information nécessaire pour une prise de décision éclairée. En théorie, le partage d'information et de son interprétation sont considérés comme deux caractéristiques d'une organisation apprenante (Dixon,1993; Huber, 1991). Enfin, des liens intéressants ont été trouvés entre l'habilitation et l'énergie qu'investit l'individu dans son travail (Spreitzer, 1995), l'effort et la persistance face à une situation difficile (Kanter, 1983) ainsi que l'initiation à de nouvelles tâches (Thomas et Velthouse, 1990). Il est logique d'affirmer que l'ensemble de ces comportements sont des prédicteurs d'un plus grand apprentissage. En résumé, l'augmentation de l'habilitation de l'individu devrait créer des conditions favorables à un apprentissage supérieur.

Le changement d'une culture hiérarchique vers une culture d'apprentissage est un processus à

long terme qui implique des efforts considérables de changement au niveau des comportements de la gestion supérieure, des pratiques de gestion en général, et des systèmes de gestion des ressources humaines en particulier. À plus court terme, des changements sur des éléments structureaux tels que la décentralisation du pouvoir et l'augmentation de l'habilitation sont plus facilement réalisables. En fait, l'augmentation de l'habilitation pourrait bien être une première confirmation de la volonté d'un changement vers une culture d'apprentissage. Nos résultats suggèrent qu'une organisation bureaucratique possède un moyen concret et relativement rapide pour influencer positivement l'apprentissage organisationnel. Toutefois, l'engagement de la haute direction au processus d'habilitation serait déterminant sur l'implication réelle des individus à accepter des responsabilités et un pouvoir accru (Robbins et al, 2002).

En ce qui a trait à l'impact de la qualité de la communication supérieur-subordonné, les résultats montrent que cette dimension n'ajoute aucune explication supplémentaire à la prédiction de l'apprentissage organisationnel. Ces résultats sont surprenants dans la mesure où la qualité de la relation est un élément important d'une des théories de base de l'apprentissage organisationnel (Argyris et Schon, 1978). En théorie, une bonne communication supérieur-subordonné réduit les routines défensives et favorise chez le sujet l'interrogation personnelle sur ses propres objectifs et sur ceux de l'organisation. Toutefois, bien que la littérature établisse des liens entre la qualité de la communication et la réduction des comportements défensifs, la littérature offre aussi des exceptions à cet égard (Argyris, 1994; Green et Scheimann, 1978). Sur ce plan, Green's (1978) dans son étude montre qu'une communication positive supérieur-subordonné n'entraîne pas nécessairement une ouverture et une volonté de questionner ses propres comportements et objectifs, de même que la façon de faire de l'organisation. Il est possible que l'absence de résultats significatifs s'explique par une définition trop étroite du construit lorsqu'il est limité à la stricte relation supérieur-subordonné. Autrement, dit, la seule qualité de la communication supérieur-subordonné n'est probablement pas suffisante pour développer une confiance suffisante de la part du sujet à risquer ce questionnement. On peut avancer l'hypothèse que le subordonné limitera ses remises en question s'il croit que son supérieur ne pourra lui-même exprimer ses propres remises en question envers ses supérieurs. En effet, pour qu'un individu se questionne lui-même et questionne le statu quo, la relation de confiance doit s'étendre au-delà de la dyade supérieur-subordonné et inclure une perception globale de confiance touchant l'ensemble de son organisation.

Pistes De Recherche Et Limites

Il serait souhaitable dans des recherches futures d'enrichir les mesures utilisées, particulièrement celles ayant trait aux construits relatifs à la "communication supérieur-subordonné" et aux "compétences clés d'apprentissage", où peu de variance ont été obtenue réduisant ainsi leur pouvoir de prédiction. Il est possible que l'absence de résultats significatifs relativement à la première variable puisse s'expliquer par une échelle moins valide pour la population touchée ou encore par une échelle qui ne couvre pas complètement le domaine du construit. Afin de mieux cerner ce concept il faudrait y ajouter des mesures concernant la communication avec les pairs, avec les subordonnés, avec les autres départements, la direction et aller au-delà de la stricte relation supérieur-subordonné. D'autre part, il serait nécessaire d'enrichir la mesure "des compétences clés d'apprentissage organisationnel" afin de couvrir plus complètement les cinq facteurs théoriques de Senge (1990a) et de vérifier leur structure factorielle. Malgré des résultats significatifs liant le degré d'habilitation à l'apprentissage organisationnel, cette mesure pourrait être néanmoins enrichie. En effet, bien que le transfert de pouvoir et la latitude décisionnelle soient des éléments fondamentaux du concept (Burke, 1986; Kanter, 1977), le construit touche aussi la motivation extrinsèque des tâches (Conger et Kunungo, 1988; Thomas et Velthoure, 1990), les structures de soutien au travail (Hardy et Leiba-O'Sullivan, 1998) et des actions de leadership spécifiques (Block 1987). Sur ce plan, le modèle théorique de Robbins et al., (2002) est un outil conceptuel intéressant pour mesurer plus

complètement ce construit. Ces changements devraient améliorer la mesure de ce construit et augmenter la variance afin d'améliorer le pouvoir de prédiction. Malgré ces limites, cette étude fournit aux chercheurs un soutien empirique démontrant que la culture et l'habilitation sont deux dimensions liées à l'apprentissage organisationnel. Sur le plan pratique, cette recherche permet aux gestionnaires de la fonction publique d'identifier un levier important sur lequel agir afin d'accroître l'apprentissage organisationnel et influencer la culture de leur organisation dans ce sens.

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TOXIN HANDLER BEHAVIOUR: AN INITIAL ASSESSMENT OF A NEW MEASURE

In this article we present an initial empirical investigation of Peter Frost's Toxin Handler concept. We examine and test a new measure designed to investigate the use of toxin handler behaviours used to alleviate the pains of organizational life.

Pain And Compassion At Work

Sometimes I know that I am portraying my employer as professionals who care, when they are neither professional nor caring. Employers do not relate to the client at the end of the chain. That becomes tiring and draining, especially if the employer lets you down a lot” Interview Participant

Pain pervades the workplace in many forms. Events that occur in people's lives in and outside of work affect how they feel and how they perform their job (Dutton & Heaphy, 2003). Difficult situations disturb people's emotional states. In addition to this, many people are exposed to toxic situations at work. The cause can come from many different sources, some intended and some not. Consider the following examples: The acquisition of a smaller company can make employees from both companies feel uneasy as they question their role in the newly shaped organization. A verbally abusive customer can ruin anyone's day. Abusive, or simply incompetent, bosses are a far too common occurrence (Ashforth 1994; Tepper 2000). Yet, organizations generally function and operate in a relatively undisrupted manner despite these potentially toxic situations. But how do people in organizations process and manage the stress, anxieties, and pain that exist in daily work life? How do organizations continue to function in spite of these difficulties?

Researchers recently asked these questions and they suggest that workplaces function because they contain compassionate people. A promising new concept suggested by Peter Frost (Frost, 1999; 2003; Frost and Robinson, 1999) examines both the pain and the compassion found in organizations. He coined the term 'toxin handler'¹ to describe a boundary spanning extra-role behaviour where employees help their coworkers deal with pain. These toxin handlers help their colleagues deal with pain caused by others in the organization, yet are also of great support and strength when the pain is external and affecting how the employee feels and performs on their job. Because this is a new concept, little is known about the underlying dimensions of handling toxins and what specific types of helping behaviours might exist. In this article we describe the initial results of an empirical stream of research focusing on toxin handler behaviours and toxin handlers.

¹ Frost and Robinson (1999) use the term "toxic handler" in their seminal article on this subject but Frost (2003) has changed the term to "toxin handler" in his upcoming book.

What is a toxin handler?

In two articles and a book (Frost 1999; 2003; Frost and Robinson 1999), Frost provides the conceptual foundation for the notion of the toxin handler concept and toxin handler behaviours. A toxin handler is a person who will often carry the personal confidences of clients and coworkers and may find it difficult to say “no” to others when called upon for help or when others confide confidences. They find it difficult to stand by and ignore the distress of others. The toxin handler often protects others from abusive managers and plays a peacemaker role between an organization and others inside and outside the organization. They step forward to suggest solutions that may reduce stress in the workplace and work behind the scenes to reduce or prevent emotional pain. Adept at organizational politics, these employees publicly stand up for others even though it may put them in a risky or tenuous position. Even so, and in spite of office politics, they remain focused on accomplishing organizational goals and volunteer to help others when deadlines loom large. As a result, the toxin handler’s own work often is put aside until later and they may often spend early or late hours at work getting their regular tasks done because many working hours are spent helping others with personal or work problems.

A toxin handler may be someone who occupies a boundary-spanning role as a way to help others. While their actual position may not be a boundary-spanning role, it is worth considering that the toxin handler role is usually peripheral to the incumbents’ “real” area of job responsibility. Thus acting as a toxin handler is an extra-role behaviour (Van Dyne, Cummings McLean, Parks 1995). Although this may seem to benefit organizations, there are costs involved as well. On the one hand, extra-role behaviour is discretionary behaviour that benefits or is intended to benefit the organization and goes beyond existing role expectations. On the other hand, there is increasing pressure and stress from trying to balance multiple roles, especially if they compete for time resources, emotional resources, or even conflict in the image they portray. Similarly, Frost and Robinson (1999) recognize the multiple demands of work in their description of a toxin handler.

Although some individuals may appear to handle these toxic situations with apparent ease, there is often a high personal emotional cost of continually performing these demanding roles. Acting as a toxin handler is an emotional burden and may also lead to physical and psychic ills (Frost & Robinson, 1999). Additionally, toxin handlers may be more prone to burnout and withdrawal (Frost 2003). This may lead to decreased commitment and higher turnover rates (Meyer, Allen and Smith 1993).

We argue that there are two concepts within Frost’s conceptual framework (Frost 2003). He points primarily to people he labels ‘Toxin handlers’ and describes them as leaders within the workplace. Underlying this idea is the notion that there are toxin handler behaviours that anyone in an organization may use to help reduce pain and improve interactions (Dutton & Heaphy, 2003). Organizations may have toxin handlers within the organization but they may also have varying levels of toxin handler behaviours being used by members in the organization. While any person may use toxin handler behaviours, and may use them quite frequently, there is an important distinction between using toxin handler behaviours and being a toxin handler. The difference is similar to the idea that anyone may be able to use leadership behaviours but not everyone is a leader.

We also consider toxin handler behaviour to be an Organizational Citizenship Behaviour (Organ 1990). Consistent with this perspective, we use Social Exchange Theory (Blau 1964) in our examination of Toxin Handlers and toxin handler behaviour. Social exchange involves the exchange of often diffuse and symbolic benefits and obligations. It is an activity among multiple actors with variable dependencies. Recurring social exchanges help promote group relationships, potentially because it helps reduce uncertainty and/or increases positive emotions in the group (Lawler, Thye, & Yoon 2000).

The role of the toxin handler appears to be an important one for organizations. Just as the different dimensions of the toxin handler concept suggest different aspects of compassion, they also suggest different outcomes for the organization. We expect people who are active toxin handlers to be highly committed to the organization and believe that their actions make a difference (Meyer, Allen and Smith 1993). This may parallel the effects of “voice” in an organization, where people feel they can affect change (Mooreman 1991). They see that things are wrong and try to do something about it. These people are highly committed to the organization and experience greater rewards and satisfaction because of their high involvement. In contrast, those who perform covert acts may be quite different. A personality difference may make them more prone to acts that are less noticeable, or as suggested above, they may be already burnt out.

In an interview, Edgar Schein (Quick & Kets de Vries 2000) described Frost’s metaphor about toxins in the workplace as very appropriate and appealing. As in the human body, these toxins can be a normal part of the system. The stress and anxieties produced by the functions of the organization are normal by-products. Healthy organizations, like healthy human bodies, have means for processing and dealing with these social toxins. Toxin handler behaviour and toxin handlers are important to keeping an organization functioning and healthy. These informal leaders may serve as the metaphorical equivalent of the liver, kidneys, and immune system.

Given the widespread nature of pain and the increasing attention on compassion, it seems appropriate to explore the types of helping that people do and subsequently, how these helping behaviours are important for organizations and their employees. There are many questions that emerge out of Frost’s conceptual foundation.

In this article we present the preliminary results of a survey on toxin handler behaviours. Building on a pilot study of toxin handler behaviours in salespeople (Hilscher 2001), we created a new 21-item self-report instrument to examine toxin handler behaviours in an organization. We present the results of a factor analysis of our instrument as well as test for convergent validity by assessing our measure against several established measures. While this article presents preliminary data, it is worth noting that we are scheduled to collect additional data over the next few months and will have a complete analysis available in June at the conference.

Methodology

Measures

Our primary purpose for this research is the development of a self-report measure of toxin handler behaviour. The measure we use builds on a pilot study that examined toxin handler behaviours in medical lab equipment salespeople (Hilscher 2001). The pilot study used a measure of toxin handler behaviour that included 14 items, collected responses from 93 salespeople, and conducted various analyses on the results. Although the pilot study produced support for many of its hypothesis, the results were tempered by a very low response rate to the survey (>2%), concerns about the content validity of the measure, and a lower than desirable reliability alpha (.67) on the toxin handler measure. Although these problems raise concerns, the results encouraged us to pick up where the pilot study left off.

We conducted exploratory factor analysis on the pilot study data and this analysis suggested the presence of three underlying factors. On the basis of this analysis, we created a new measure for this research. We eliminated three of the original questions, retained eleven questions, and created ten new questions. The 21-item scale is provided in Table 1 below.

One of our concerns about the toxin handler measure used in the pilot study was the

potentially limited scope and content validity of the questions used in the study. As noted above, we conducted an item analysis and a factor analysis of the data and, as a result, retained some of the questions from the survey and added additional questions. We designed the questions to fit within the three factors we noted in the Factor analysis of the pilot study. The factors are labeled in Table 1 as A, B, & C to denote the three underlying dimensions of this measure.

We labeled the first dimension (A) as “Social Amelioration”. Amelioration is the process of improving something, to make it better. The questions included in this dimension reflect the willingness to help by using actions to ameliorate the social situation within their organization. Toxin Handlers find ways to reduce stress; they ‘step forward’ to suggest solutions or ‘work behind the scenes’ to prevent pain. By ameliorating toxins in an organization, the conditions are improved as uncertainty is reduced and positive emotions increased within the group (Lawler, Thye, & Yoon 2000). If this is the case these may be the benefits, as suggested by Social Exchange Theory (Blau 1964), provided by toxin handlers or through the use of toxin handler behaviour.

We labeled the second dimension (B) as “Social Obligation”. The questions included in this dimension reflect the feeling of obligations toward colleagues and the reluctance to say no when people ask for assistance. Social exchange theory notes that people not only provide benefits, they also feel obligations for benefits received. We would not argue that the benefits provided by the toxin handlers create these obligations. Instead, because benefits and obligations are often diffuse and symbolic (Blau 1964), the toxin handler may feel obligated for other benefits received as part of the organization. As we noted earlier, we consider toxin handler behaviour to be a type of extra-role behaviour and, in social exchange relationships, there is an underlying tacit expectation that such efforts will be rewarded over time (Ryan 2001).

We labeled the third dimension (C) as “Social Confidence”. These questions reflect the idea that toxin handlers are confident in their ability to handle difficult situations in the workplace. Frost’s (2003) conception of the toxin handler as a leader in the organization suggests that these people are confident in their abilities to process and handle pain.

As a check for content validity, we sent these questions to Peter Frost for his comments and suggestions and then made changes accordingly. In addition to examining the content validity of the toxin handler measure, we also test construct validity by testing the measure for convergent validity.

Table 1: Toxin Handler Behaviour Items

Code	Factor	Question
TH1	A	I volunteer to help others when they face problems at work. Rather than stand by, I take helpful action when I see others in my workplace in
TH2	A	distress
TH3	A	I feel that I “play peacemaker” among management, coworkers and clients.
TH4	A	I step forward to suggest solutions to reduce stress in my workplace
TH5	A	I do not prejudge other people’s actions or motives at work. I often reframe difficult messages from management when discussing them with
TH6	A	others. When necessary, I will “work behind the scenes” to prevent more pain in my
TH7	A	workplace If other people at work need to vent off frustrations, I spend time silently listening to
TH20	A	them. When other people at work want to let it out, they tend to come to me because I
TH21	A	listen.
TH8	B	I have a hard time saying “no” to others at work when they call on me to help
TH9	B	I have a hard time saying “no” to people who want to confide in me.
TH10	B	I do not feel obligated to help a co-worker who asks for personal assistance. (R) I often have to deal with the personal matters of other people when they seek my
TH11	B	help.
TH12	B	I would feel guilty if I did not volunteer to help someone in distress.
TH13	B	It is a weight on my shoulders to have people come to me for help and support.
TH14	C	I believe I have the ability to carry the confidences of others.
TH15	C	I think I should publicly stand up for others at work even when it is risky.
TH16	C	I feel I have the ability to “be there” for someone when it is needed. I do not think it is important to take the time to listen to other people’s emotional
TH17	C	problems. (R)
TH18	C	I suppose that others often to come to me for help and emotional support at work.
TH19	C	I do not think I have the strength to carry the pains of other people at work. (R)

Convergent Validity Measures

Empathy – Empathic Concern and Perspective Taking. We included empathy in our study because we expect to find a strong association between empathy and toxin handler behaviour. Empathy describes the reaction of individuals to the observed experiences of others (Davis 1983). We include two measures of empathy—empathic concern and perspective taking. *Empathic concern* is feelings of sympathy toward others and a concern for unfortunate people and *Perspective taking* is the tendency to spontaneously adopt the psychological point of view of others.

Felt responsibility is the degree to which a person feels responsible for the work they do and the work of others (Hackman & Oldham 1980). Self Felt Responsibility is the degree to which the employee feels personally accountable and responsible for the results of the work he or she does. Other Felt Responsibility is the degree to which the employee feels personally accountable and responsible for the results of the work of others (van der Vegt, Emans, van de Vleirt 1998). We included these measures of felt responsibility to investigate whether people engage in toxin handler behaviours because they feel a high degree of personal responsibility for what gets done in the workplace.

Role Conflict occurs when an employee perceives conflicting expectations and demands from two or more others in the work group or groups (Rizzo et al. 1970). We included this measure to examine whether toxin handler behaviour was potentially associated with conflicting

work role demands. In this survey, we used the thirteen-item measure from Rizzo, Hause, & Lirtzman (1970).

We also included a short-form version of a social desirability scale as a control measure for potential bias (Crowne & Marlowe 1960).

Data

The HR department of a provincial health care organization provided a vetted list of 251 names with associated email addresses for employees of an organizational branch. We sent individualized participation invitations to all email addresses on the list. Participation was voluntary and required the completion an 84-item online survey. Participants could also request a printed version of the survey. Twenty-six of the addresses provided produced autoresponses indicating that the recipient was on vacation or that the email address was no longer valid. 70 participants completed the online survey and 2 completed a printed survey resulting in a 32% response rate of the valid email addresses of available employees (72/225). Participation was verified with a reply email thanking them for their participation and a request to inform us if the email was received in error. No recipients noted such an error.

The average age of the respondents was 41 years, with an average of 7 years of experience at the branch and 13 years in their current career. 64 (89%) women and 8 (11%) men completed the survey. The entire participant pool was 78% female and 22% male. Since the data was not collected using random probability methods, caution is required for any generalizations. There may be unknown self-selection bias problem within the data since we do not know why some people chose to participate and some did not. We did examine the data for indications of potential problems and we did include methods within the survey as checks for possible biases. Using various statistical techniques, we examined all of the questions and measures for indications of non-normality or biases and did not find any noticeable problems. We consistently found normal distributions among the data; the reliability tests of the established measures produced results consistent with prior research

Results

In Table 2 we present the correlations for the focal measure and the measures used for an initial test of construct validity. In Table 3 we provide the results of an OLS regression analysis with the toxin handler behaviour measure as the dependent variable.

The results in Table 3 provide support for the construct validity of our self-report toxin handler behaviour measure. As expected, we find significant associations between toxin handler behaviour and empathic concern, perspective taking, and other-felt responsibility. The strong connection to empathy is encouraging and provides significant support for the convergent validity of our measure. It is also a concern as these two measures may be measuring the same underlying latent construct. Conceptually, however, our toxin handler scale examines beliefs about actions while the empathic concern scale examines beliefs about feelings. We believe this is a significant conceptual difference.

Table 2: Descriptive Statistics; Correlation Coefficients; and Reliability Scores

	N	mean	s.d.	EC	OFR	SFR	PT	RC	SD	TH
1 Empathic Concern Other-Felt	72	38.3	5.3	0.77						
2 Responsibility Self-Felt	72	15.5	5.1	0.27	0.81					
3 Responsibility	72	24.2	2.6	0.52	0.14	0.52				

4 Perspective Taking	72	37.2	4.3	0.46	0.19	0.14	0.75			
5 Role Conflict	72	44.4	11.1	-0.03	0.08	-0.02	-0.04	0.84		
6 Social Desirability	72	3.6	1.4	-0.10	-0.09	-0.12	0.04	-0.31	0.50	
Toxin Handler										
7 Behaviour	72	100.0	12.9	0.72	0.43	0.44	0.50	0.09	-0.10	0.86

All values greater than |.23| are significant at $p < .05$.

Standardized Cronbachs Alpha for each measure on the diagonal

Table 3: Results of Regression Analysis: Dependent Variable – Toxin Handler Behaviour

Independent Variable	Unstd Regression		
	Coefficient	s.e.	p-value
Intercept	1.67	13.41	0.90
Empathic Concern	1.21	0.25	0.00
Other-Felt Responsibility	0.59	0.20	0.00
Self-Felt Responsibility	0.57	0.45	0.20
Perspective Taking	0.64	0.26	0.02
Role Conflict	0.11	0.09	0.24
Social Desirability	0.06	0.75	0.93
Adj. R-Squared		0.588	

We also found a significant association between other-felt responsibility but not for self-felt responsibility. The mean score for self-felt responsibility was high and much higher than for other felt-responsibility. Overall, the participants in our survey did have a strong sense of responsibility for their own jobs but not for the jobs of others. However, higher levels of toxin handler behaviour were significantly associated with a strong sense of responsibility for the jobs of others. The difference between these two related measures may provide an important identifier for toxin handlers. We also did not find a significant association between toxin handler behaviour and role conflict. There does not appear to be a relationship between toxin handler behaviour and a sense of role conflict.

Factor Analysis

To examine our data for underlying factors, we used the unweighted least squares factor analysis in the NCSS 6.0 software program. Tables 4 and 5 provide the results of our analyses. We first conducted an unrotated factor solution that produced two factors with most of the questions loading onto the first factor. Our questions, however, were designed to reflect three separate dimensions and we conducted a varimax factor analysis to examine whether these dimensions would emerge in a rotated solution. The results in Table 4 show that this analysis produced three latent factors, using an eigenvalue cutoff of 1.

**Table 4: Eigenvalue Report:
Factor Analysis – Varimax Rotation**

Eigenvalues	Individual Cumulative		
	No. Eigenvalue	Percent	Percent
1	4.4	49.6	49.6
2	2.1	23.4	73.0
3	2.1	23.9	96.9
4	0.7	8.4	105.3

The three factors in this rotated factor analysis accounted for 97% of the variation in our data. Table 5 below provides the factor loadings and the questions.

The results of the above analysis show three latent factors but the results do not perfectly match our initial design. The first factor contains questions that indicate a willingness to step into difficult situations and help resolve problems. While this provides some support for our 'social amelioration' factor, the factor contains questions originally designed and expected to load on the third factor 'social confidence'. The inclusion of TH10 into the first factor is a curious result as it has a clear statement about obligation. The second factor contains three questions that fit the 'social obligation' design but it contains only three of the original six designed questions for this factor. The problem with this question may be that it is a reversed question and the reversal design does not work. The third factor emerging out of this analysis contains three questions that appear to reflect a confidence in a person's ability to carry the burdens of handling toxins. Note that the sign on Item TH13 ("It is a weight on my shoulders...") is reversed from the other two questions in this factor. This indicates that these actions are not a burden for toxin handlers. Changing the wording to "It is not a weight on my shoulders..." might reverse the sign on the factor loading and make it consistent with the other two questions.

One of the limitations with this preliminary factor analysis is that our sample size is currently not large enough to make stronger conclusions about the underlying latent factor structure. The generally recommended minimum ratio for item variables to participants is 6:1 and our sample size falls below that ratio. We conducted further analyses to examine the stability of our factor structure. The results indicated that the factor structure may not be stable as the factor loadings change depending on the method and specifications used. To resolve this problem we need collect additional data from other sources. As we indicated earlier, we are scheduled to collect additional data in the months following the submission of this paper.

Discussion/Conclusions

The analyses presented in this article offer a preview of our empirical investigation of Frost's (1999; 2003) Toxin Handler concept. It improves upon the pilot study and provides the next step in establishing a reliable and valid measure of toxin handler behaviour.

Table 5: Factor Loadings after Varimax Rotation

Codes	Designed			Factor	Question
	F1	F2	F3		
TH1	0.73	0.18	-0.17	A	I volunteer to help others when they face problems at work.
TH21	0.67	0.15	-0.22	A	When other people at work want to let it out, they tend to come to me because I listen.
TH4	0.65	-0.20	-0.31	A	I step forward to suggest solutions to reduce stress in my workplace
TH2	0.60	0.10	-0.42	A	Rather than stand by, I take helpful action when I see others in my workplace in distress
TH7	0.57	0.16	0.08	A	When necessary, I will “work behind the scenes” to prevent more pain in my workplace
TH20	0.56	0.14	-0.23	A	If other people at work need to vent off frustrations, I spend time silently listening to them.
TH3	0.51	0.10	0.01	A	I feel that I “play peacemaker” among management, coworkers and clients.
TH16	0.50	0.30	-0.36	C	I feel I have the ability to “be there” for someone when it is needed.
TH15	0.49	0.03	-0.46	C	I think I should publicly stand up for others at work even when it is risky.
TH6	0.48	-0.05	0.08	A	I often reframe difficult messages from management when discussing them with others.
TH17	0.44	0.17	-0.22	C	I do not think it is important to take the time to listen to other people’s emotional problems. (R)
TH18	0.43	0.33	-0.33	C	I suppose that others often to come to me for help and emotional support at work.
TH10	0.41	0.29	0.00	B	I do not feel obligated to help a co-worker who asks for personal assistance. (R)
TH8	-0.04	0.86	0.05	B	I have a hard time saying “no” to others at work when they call on me to help
TH9	0.11	0.75	0.21	B	I have a hard time saying “no” to people who want to confide in me.
TH12	0.29	0.48	-0.03	B	I would feel guilty if I did not volunteer to help someone in distress.
TH19	0.34	-0.04	-0.65	C	I do not think I have the strength to carry the pains of other people at work. (R)
TH14	0.00	-0.14	-0.64	C	I believe I have the ability to carry the confidences of others. It is a weight on my shoulders to have people come to me for help and support.
TH13	-0.32	-0.05	0.40	B	
TH5	-0.08	-0.05	-0.29	A	I do not prejudge other people’s actions or motives at work.
TH11	0.36	0.17	-0.27	B	I often have to deal with the personal matters of other people when they seek my help.

The results do provide some initial support for our measure. The strong associations between the Toxin Handler behaviour measure and the empathy and other felt responsibility measures provide support for construct validity. In upcoming research, we plan to include additional measures to test both convergent and divergent validity. One of our planned additional convergent validity test measures is the ‘social awareness’ factor from the Emotional Competency Inventory (Boyatzis, Goleman, & Rhee 2000) to examine the connection between Toxin Handlers and Emotional Intelligence (Frost 2003; Goleman 1995). Frost (2003) speculates that effective Toxin Handlers are very attuned to their organizational surroundings. The social awareness dimension of the Emotional Competency Inventory includes the dimensions of organizational awareness, the ability to read a group's emotional currents and power relationships;

and service orientation, the ability to anticipate, recognize and meet the needs of others (Boyatzis, Goleman, & Rhee 2000).

As a divergent validity test, we are also including the ‘depersonalization’ scale from Maslach & Jackson’s (1981) burnout measure. This scale measures an unfeeling and impersonal response toward others and should be negatively correlated with toxin handler behaviour.

An interesting result in our analyses is the items clustered in the third factor. These questions potentially suggest that people who have a high level of toxin handler behaviours may not be aware of the accumulating stress from engaging in these actions. Frost (2003) suggests that Toxin Handlers eventually become emotionally and physically ill from the effects of handling the pains of others. In future surveys we will include the emotional exhaustion scale from Maslach & Jackson’s (1981) burnout measure. This should give us a chance to explore the potential association between toxin handler behaviour and emotional exhaustion in greater depth.

We started this article by noting that, even though pain and toxicity is a far too common occurrence in organizational life, people in organizations and the organizations themselves continue to function. Peter Frost (1999; 2003) has contributed an important insight into organizational life by identifying important people within companies—toxin handlers. These people, and the compassion they bring into their firms, may be an important reason why organizations manage to function in the face of difficult times. It is critical for organizations to recognize the importance of the extra-role work performed by these informal leaders. As these people may be prone to emotional and physical ills, it is also important for organizations to recognize them and assist them in their roles as toxin handlers.

Our research adds to this important insight in two ways. First, we believe that the behaviours used by toxin handlers are behaviours that may be used by everyone in an organization. Thus an organization may survive when many people are able to process pain and deal with toxicity to some degree. The degree to which people use these behaviours may vary depending on many factors. Second, we are contributing to this emerging line of research by providing an empirical line of investigation and the development of a psychometric instrument for the identification of toxin handlers and toxin handler behaviour. We believe that our research will assist the identification of toxin handlers. This will, in turn, help organizations recognize and assist them in this important role.

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SELF-RATINGS AND APPRAISAL REACTIONS: IS WHAT YOU PERCEIVE BASED ON WHAT YOU EXPECT?

The current study examined the benefits of incorporating self-ratings into the appraisal process. Results suggested that (a) the inclusion of self-ratings enhanced employee reactions relative to a no self-rating group, and (b) the positive benefits of self-ratings were dependent upon employees' expectations that their ratings would be utilized by their managers.

Multirater or 360-degree appraisal systems have grown in use to become a popular means of assessing employee performance in organizations (Cheung, 1999; Fletcher, 1999). Multirater systems involve the evaluation of an employee's performance from a variety of different sources such as the self, peers, supervisors, subordinates, and customers. Fletcher suggests that one implication of the increased use of multirater systems is an increase in the frequency of self-appraisals. This makes sense given that the one component of multirater systems that is always available across organizations is the self-rating component.

Research regarding self-appraisals has found that self-ratings typically do not correlate highly with either supervisor or peer ratings, and thus have generally been perceived as lenient (Fletcher, 1999; Harris & Schaubroeck, 1988). Despite their apparent leniency in many situations, however, self-appraisals have been advocated due to a number of potential advantages associated with them. For example, proponents of self-appraisals argue that no one is more aware of a ratee's performance on the job than the ratee. Thus, employees are better equipped to rate their own performance because they are more knowledgeable about their own performance than are their supervisors (Riggio & Cole, 1992). It is also believed that self-appraisals may reduce subordinate ambiguity regarding performance standards and managerial expectations (Farh, Werbel, & Bedeian, 1988). In addition, self-appraisals have been found to increase ratee participation in the appraisal interview (Farh et al., 1988), which may make ratees more committed to performance goals and more accepting of criticism (Riggio & Cole, 1992).

In addition to the above, correlational findings suggest that incorporating self-appraisals, or at least allowing a subordinate to voice his/her feelings as part of the appraisal, has been found to promote greater supervisor and subordinate perceptions of fairness, accuracy, acceptance, and satisfaction with the appraisal process, as well as increasing subordinates' motivation to improve performance (Cawley, Keeping, & Levy, 1998; Dipboye & de Pontbriand, 1981; Farh et al., 1988; Landy, Barnes, & Murphy, 1978). Experimental findings have also indicated that the incorporation of self-appraisals and their subsequent discussion in an appraisal interview can improve participants' reactions in an evaluation context (DeGregorio & Fisher, 1988). Self-appraisals have also been found to increase communication between supervisors and subordinates as well as increase employees' sense of control, both of which are important aspects of perceived procedural justice and fairness (Farh et al., 1988; Folger & Greenberg, 1985). Thus, it appears that overall, self-appraisals have been widely endorsed for the variety of advantages associated with their use (Korsgaard, 1996).

Although the above noted benefits of self-appraisals have been regarded as intuitively plausible, there have been few experimental investigations of these effects (Campbell & Lee, 1988) and even fewer field investigations (Cawley, et al., 1998). In fact, in a meta-analysis examining participation in performance appraisal, Cawley et al. uncovered only one published field study investigating self-ratings as a form of participation. Given the “paucity of field experiments investigating self-ratings” (Cawley et al., 1998, p.626), many of the potential benefits of self-appraisals can only be regarded as speculative (Roberson, Torkel, Korsgaard, Klein, Diddams, & Cayer, 1993). That is, because most of the research involving self-appraisals lacks the comparison of a self-rating group to a control group who does not self-rate, it is difficult to draw any causal conclusions regarding the effect of self-ratings. Thus, one of the primary purposes of the present study is to investigate some of the perceived advantages of self-appraisals by directly comparing the reactions of employees who are asked to self-appraise with employees who are not. A second purpose of the current study is to better understand the factors that may lead to positive reactions among employees who have self-appraised. On this issue we consider the possible role of employee expectations regarding the use of their self-ratings, as well as the role of voice.

To establish a context within which to view the current paper we will first review the extant literature on performance appraisal reactions and self-ratings. Next, we will discuss relevant research findings on the role of expectations and voice. Finally, we present the results from an investigation of employees from a large international organization and discuss the implications of our findings both in terms of possible directions for future research and designing effective performance feedback sessions.

Performance Appraisal Reactions

Performance appraisal is an issue of importance to both researchers and practitioners, representing a critical human resource function upon which many organizational decisions are based. As suggested by Cawley, et al. (1998), past research on performance appraisal has primarily focused on rating errors and rating accuracy, while appraisal reactions have been relatively neglected. However, many researchers have suggested that employee reactions play a vital role in the ultimate success of an appraisal system (e.g., Cardy & Dobbins, 1994; Murphy & Cleveland, 1995) and may predict appraisal success more effectively than the traditional psychometric measures (Bernardin & Beatty, 1984).

Based on a recent review of the different conceptualizations and operationalizations of appraisal reactions (Keeping and Levy, 2000), the following reactions were adopted for use in the present study: satisfaction with the appraisal session, satisfaction with the appraisal system, the perceived utility of the appraisal, the perceived accuracy of the appraisal, procedural justice (i.e., perceived satisfaction with procedures), and distributive justice (i.e., perceived satisfaction with outcomes). These reactions were identified by the authors as among the most prevalent in the field. Thus, it seemed appropriate to assess them in the current study, given that the focus is on assessing how self-appraisals might affect participants’ reactions.

Self-Appraisals of Performance

As mentioned previously, there is a lack of experimental research examining the effects of self-ratings (Campbell & Lee, 1988). Moreover, the few extant experimental studies regarding self-ratings provide little clarification of the effects of self-ratings. For example, in a field study, Roberson et al. (1993) predicted that participants in an experimental condition who were asked to self-appraise would react significantly more favorably to their appraisals than would those in a control condition who were not asked to self-appraise. However, results comparing these two groups indicated that, contrary to expectations as well as to previous correlational findings, the

self-appraisal group reacted more negatively to their appraisals than the control group.

To our knowledge, the study by Roberson et al. (1993) represents the only field investigation that compared the reactions of a group of employees who were asked to self-appraise with a group who were not asked to self-appraise. Given the multitude of correlational studies supporting the favorability of self-ratings, we feel it is premature to conclude that including formal self-ratings in an appraisal results in employees expressing less favorable appraisal attitudes than a more traditional top-down system. Thus, we examined the differences in appraisal reactions between employees who were asked by their managers to self-appraise and employees who received performance ratings from their managers, with no self-rating component. In contrast to Roberson et al., we compared employees in an organization where it was at the discretion of individual managers whether or not to include self-ratings in the appraisal. Thus, we compared two naturally existing groups of employees rather than experimentally assigning participants to a self-appraisal or no self-appraisal rating condition. Similar to the original prediction of Roberson et al., and consistent with previous correlational research regarding self-appraisals, we hypothesize the following:

H1: Employees who are asked by their managers to self-appraise will have more favorable reactions than employees who are not asked to self-appraise.

Spontaneous self-appraisal. In an attempt to understand and explain their counter-intuitive findings, Roberson et al. (1993) further analyzed their data and found that there was no significant difference in the extent to which employees in each group “systematically reviewed their job responsibilities, past performance, strengths, weaknesses, and job problems before the appraisal session” (p. 135). In other words, even when not asked to do so, employees engaged in self-evaluation. Consistent with this finding, some researchers (e.g., Atwater, 1998) have suggested that employees engage in spontaneous self-appraisals even when not asked to do so formally. However, no research has specifically examined this issue. Although the findings of Roberson et al. are suggestive, their study did not directly assess the extent to which informal self-appraisals occur in lieu of formal self-appraisals. One purpose of the present study is to fill this gap. Based on Roberson et al. the following hypothesis is suggested:

H2: When not asked by their supervisors to formally self-appraise, employees will engage in informal self-appraisal.

In another experimental study examining self-ratings, DeGregorio and Fisher (1988), in a laboratory setting, compared five different conditions involving various levels of participation by participants who completed an in-basket task. Two of these conditions involved self-ratings as the means of participation. In the joint feedback condition participants self-rated and these self-ratings were subsequently discussed in a feedback session. In the private self-appraisal condition, participants self-rated but these ratings were not discussed in the feedback session. Results indicated that participants reacted favorably to all participation conditions, with the exception of the private self-appraisal condition where the ratings were not discussed.

Integrating the results of the Roberson et al. (1993) and DeGregorio and Fisher (1988) studies with the general literature on self-appraisals, one is left with a rather confusing picture of the effects of self-ratings on employee reactions. First, Roberson et al. did not find support for the positive effects of self-ratings and actually found reactions to be more positive when employees were not asked to self-rate compared to when they were formally asked to do so. Second, DeGregorio and Fisher did find support for the positive effects of self-ratings, but only when those self-ratings were discussed in a feedback session. However, when self-ratings were collected, but not discussed, the pattern of results was similar to Roberson et al., such that reactions were less favorable than in a condition where self-ratings were not collected.

Interestingly, when trying to elucidate their findings, both Roberson et al. (1993) and Degregorio and Fisher (1988) suggested that perhaps the act of asking employees for self-ratings sets up the expectation that these self-ratings will be considered in the appraisal. They further speculated that it was possible that, in their studies, these expectations were not met, resulting in unfavorable reactions. Similar to this explanation, we feel that the key to reconciling and expanding upon the extant self-appraisal literature is employee expectations, a topic to which we turn next.

Self-Appraisal Expectations

Within the self-ratings literature, as well as the overall performance appraisal reactions literature, attention has been primarily focused on the assessment of reactions, and then trying to interpret these reactions by making inferences regarding the antecedents of the reactions. This is similar to the past approach taken by many justice researchers, as noted by Cropanzano and Prehar (2001). Recently, however, some researchers in the justice field are taking a more proactive approach to the assessment of justice. For example, Shapiro and her colleagues (e.g., Shapiro & Kirkman, 2001) have begun to explore the role of expectations on justice perceptions. They suggest that in order to adequately understand individuals' reactions to an event, one must first delineate the expectations of those individuals regarding the event. In a preliminary study in this area, Shapiro and Kirkman found that individuals who reported that they had expected an organizational change event to have a positive effect actually expressed positive reactions subsequent to the event. Similarly, those who expected the same change to be negative tended to experience it negatively. The authors explained this phenomenon in terms of a self-fulfilling prophesy, such that those who expect injustice in a particular situation, tend to perceive injustice, and those who expect justice, tend to perceive justice.

The present study attempts to extend this line of reasoning to the area of performance appraisal reactions in the specific context of self-ratings. We contend that employees' expectations regarding the extent to which they believe their managers will consider their self-ratings when making their evaluations will significantly affect their reactions toward the appraisal. More specifically, in line with the work of Shapiro and her colleagues, we expect that the reactions employees express subsequent to their appraisals should correspond to the expectations they have regarding the use of their self-ratings. Based on this, the following hypothesis is offered:

H3: For those employees who are asked to self-appraise, there will be a positive relationship between the expectation that one's manager will consider one's self-ratings and appraisal reactions.

We feel that measuring employee expectations is an important step in the study of self-ratings. That is, although we predict that asking employees to engage in self-ratings as part of the appraisal process will lead to positive appraisal reactions, we expect that there will still be variability in employees' responses. Self-rating expectations are a means of explaining some of this variability and thus, refining our understanding of the effects of self-ratings. However, in order to better understand the effects of self-ratings, it is important to also consider *why* expectations should influence appraisal reactions. We suggest that expectations are an important predictor of reactions because they influence the extent to which employees feel that their voice will be heard by their managers, thus providing them with the perception of control in their appraisal.

Expectations and voice. Research in the organizational justice literature has shown that organizational voice can lead to perceptions of procedural justice (Folger & Greenberg, 1985) as well as positive reactions such as satisfaction and perceptions of fairness (e.g., Cawley et al., 1998; Kanfer, Sawyer, Earley, & Lind, 1987; Tyler, 1987). Two alternative interpretations of the

effect of voice are the value-expressive explanation and the instrumental explanation (Korsgaard & Roberson, 1995; Lind & Tyler, 1988; Tyler, 1987; Tyler, Rasinski, & Spodick, 1985). The value-expressive explanation suggests that employees perceive the chance for self-expression as procedurally just, regardless of the final decision (Tyler et al., 1985). According to this explanation, attitudes are affected because the opportunity to voice one's opinions is a desired end in itself (Korsgaard & Roberson, 1995) or as stipulated in Tyler and Lind's (1992) Relational Model, people value voice for voice sake because it validates their self-worth and their feelings of belonging to a valued group. The instrumental explanation, on the other hand, suggests that voice is valued because it increases the potential amount of control one has over decisions and, in the long run, will result in more favorable outcomes. In this approach, attitudes toward a decision are affected by voice because employees perceive that they have had an opportunity to indirectly influence the decision (Tyler, 1987).

Within the context of performance evaluation, it is suggested that self-ratings provide a mechanism for instrumental voice. As suggested by Atwater (1998), being asked to provide self-ratings should give employees a greater sense of perceived control over the appraisal process. In turn, this increased voice should result in positive appraisal reactions. Thus, we suggest that the mechanism through which expectations should operate is instrumental voice. It is suggested that those employees who expect their ratings to be considered, will feel as though they possess instrumental voice in their appraisal, and will subsequently be satisfied with their appraisal. In contrast, those employees who do not expect their self-ratings to be used, should not experience instrumental voice, and should thus react more negatively to their appraisal. In contrast to instrumental voice, value-expressive voice lacks the element of perceived influence. Thus, based on the following we hypothesize:

H4: For those who are asked to self-appraise, instrumental voice, but not value-expressive voice, will mediate the relationship between expectations regarding the use of self-ratings and appraisal reactions.

Method

Participants

The sample consisted of approximately 350 employees from the head office of a large international organization. Surveys were returned by 207 employees, resulting in a 59% response rate. Only cases where the employee had received a performance review and participated in an appraisal discussion were included in analyses. In addition, 25 employees indicated that they were "uncertain" as to whether or not they were asked by their manager to conduct a self-appraisal and were thus excluded from analyses, resulting in a final sample of 154 employees. This sample consisted of 30% males and 70% females from a variety of positions ranging from corporate lawyer to shipper/receiver. The mean organizational tenure for the sample was 4.6 years. Eighty-seven percent of respondents were Caucasian, while 5% were African American, 2% were Asian, and 2% were Hispanic. Employees were well distributed in terms of age with approximately one third representing each of the age ranges of under 30, 30-39, and 40 and over.

Procedure

The current investigation was part of a larger study examining performance appraisal reactions. Questionnaires were distributed to employees with an attached letter from the researchers requesting their voluntary participation. The 94-item surveys were completed anonymously and returned to the researchers via self-addressed, stamped envelopes. Employees were asked to reflect upon their most recent performance review when responding to items. Appraisals had taken place approximately two months prior to questionnaire distribution. Information from the appraisals was used for personnel decisions, such as merit increases and

promotions.

Measures

Formal self-appraisal. Whether or not employees were asked to self-rate was assessed with the following item: Were you encouraged by your manager to rate your own performance as part of the overall review process? Participants had their choice of answering “no”, “uncertain”, or “yes”. As indicated above, 25 individuals responded “uncertain” and were eliminated from analyses.

Spontaneous self-appraisal. For those who indicated “no” to the formal self-appraisal item, whether and the extent to which employees spontaneously engaged in self-appraisal was assessed with the following item: Even if you were not encouraged to formally rate your own performance, to what extent did you informally evaluate your own performance? Employees responded on a 5-point scale with 1 representing “Not at all” and 5 representing “To a great extent”.

Expectations regarding use of self-rating. For those who indicated “yes” to the formal self-appraisal item, expectations regarding the use of their self-appraisal were assessed with the following item: To what extent did you expect your self-ratings of performance to be considered by your manager in evaluating your performance? Employees responded on a 5-point scale with 1 representing “Very little extent” and 5 representing “A great extent”.

Instrumental voice. Instrumental voice was assessed with the five-item scale developed by Korsgaard and Roberson (1995). A sample item is: I felt I could have influenced the review discussion. Responses were made on a 5-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree”.

Value-expressive voice. Value-expressive voice was assessed with the eight-item scale, also developed by Korsgaard and Roberson (1995). A sample item is: During your performance review discussion, to what extent did you discuss what you felt your strengths and weaknesses are? Responses were made on a 5-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree”.

Satisfaction with the appraisal session. Employees’ satisfaction with the performance appraisal discussion was assessed using the three-item measure developed by Giles and Mossholder (1990). A sample item is: I felt quite satisfied with my last review discussion. Responses were indicated on a 6-point Likert scale with 1 representing “Strongly Disagree” and 6 representing “Strongly Agree”.

Satisfaction with the appraisal system. Satisfaction with the appraisal system was measured using the three-item scale developed by Giles and Mossholder (1990). A sample item is: In general, I feel the company has an excellent performance review system. Responses were indicated using the same 6-point scale described above for session satisfaction.

Perceived utility of the appraisal. The perceived utility of the appraisal was assessed with Greller’s (1978) four-item measure. A sample item is: the performance review helped me learn how I can do my job better. Employees indicated their responses on a 4-point scale ranging from 1, “I do not feel this way, not at all” to 4, “I feel this way, completely”.

Perceived accuracy of the appraisal. The extent to which employees perceived the appraisal as accurate was measured with Stone, Gueutal, and McIntosh’s (1984) nine-item measure of feedback accuracy. A sample item is: The feedback was an accurate evaluation of my performance. Employees indicated their responses on a 7-point Likert scale ranging from

“Strongly Disagree” to “Strongly Agree”.

Procedural justice. Procedural justice was measured with the four-item scale developed by Keeping & Levy (2000) for a performance appraisal context. A sample item is: The procedures used to evaluate my performance were fair. Responses were made on a 7-point scale ranging from “Strongly Disagree” to “Strongly Agree”.

Distributive justice. Distributive justice was assessed with the four-item measure developed by Korsgaard and Roberson (1995). A sample item is: The performance review fairly represented my past year’s performance. Responses were indicated on a 5-point scale ranging from “Strongly Disagree” to “Strongly Agree.”

Results

Table 1 presents means, standard deviations, and intercorrelations for the various measures. Note that results associated with expectations could only be computed for those who were asked by their managers to self-appraise.

H1 stated that those who were asked to self-appraise would respond more favorably to the appraisal than those who were not asked to do so. This hypothesis was tested with a series of t-tests between those who were asked to self-appraise and those who were not, for each of the reaction measures (see Table 2). As Table 2 displays, H1 was supported, as formal self-raters had significantly higher means for all appraisal reaction measures, compared to those who were not invited to self-appraise. Therefore, contrary to the findings of Roberson et al. (1993), but consistent with our predictions as well as previous correlational research, asking employees to self-appraise did result in more favorable reactions compared to an appraisal where self-ratings were not requested.

H2 predicted that those who were not asked by their managers to self-appraise as part of the formal process would engage in spontaneous self-appraisals. This hypothesis was explored by examining responses to the spontaneous self-appraisal question (i.e., Even if you were not encouraged to formally rate your own performance, to what extent did you informally evaluate your own performance?). Results indicated that of those who were not asked to self-appraise (N=77), 70 employees answered this question. Of those 70 employees, 84.3% (N=59) spontaneously self-appraised, with only 15.7% (N=11) of employees indicating that they did not (i.e., responding “not at all” to the spontaneous self-appraisal question). Moreover, 21.4% of these spontaneous self-appraisers indicated that they had self-appraised “To a great extent”. This appears to strongly support the notion that a majority of individuals spontaneously self-appraise even when not asked to do so formally.

H3 predicted that for those who were asked to self-appraise, there would be a positive relationship between the expectation that one’s self-appraisal would be considered and appraisal reactions. As illustrated in the column associated with expectations (labeled 1 in Table 1), this hypothesis was fully supported, with significant correlations occurring for all six appraisal reactions. It appears then, that expectations regarding the use of one’s self-appraisal play a role in reactions to the appraisal.

H4 predicted that instrumental voice, but not value-expressive voice, would mediate the relationship between formal self-appraisal expectations and appraisal reactions. In order to test this hypothesis, separate sets of mediator analyses were conducted using instrumental voice and value-expressive voice, for each of the appraisal reactions, following the guidelines of Baron and Kenny (1986). Thus, for each reaction measure, a series of three regressions was conducted: (a) regressing voice on expectations, (b) regressing the reaction variable on expectations, and (c)

regressing the reaction variable on both expectations and voice. In the present case, to establish partial mediation, the regression weight for expectations predicting the reaction variable must get smaller when voice is also part of the equation. To support full mediation, the relationship between expectations and the reaction variable should become zero with voice in the equation. We first present the results for instrumental voice, then follow with those for value-expressive voice.

The first equation, regressing instrumental voice on expectations, resulted in a significant effect ($p < .01$), thus satisfying the first condition of mediation. Table 3 presents the results of the analyses for the second and third equations for each reaction measure. More specifically, it presents the standardized regression weights for each reaction measure with expectations as the single predictor (Step 1) and with both expectations and instrumental voice in the model (Step 2). As indicated in Table 3, H4 was supported, with respect to results for instrumental voice, as the relationship between self-appraisal expectations and the reaction measures were nonsignificant and decreased significantly once instrumental voice was entered into the equation. In addition, as indicated by the R^2 values, the amount of variance accounted for was substantially higher when instrumental voice was entered into the model. Thus, instrumental voice appears to represent at least one mechanism through which expectations regarding the use of one's self-ratings affect appraisal reactions.

A look at Table 1 indicates that the correlation between expectations and value-expressive voice was non-significant ($r = .15$). Therefore, the first condition of mediation, that value-expressive voice and expectations be significantly related, was not established. Given this result, it was unnecessary to conduct the remaining analyses associated with the mediating role of value-expressive voice. Together, the results regarding instrumental voice and value-expressive voice support H4, such that instrumental voice, but not value-expressive voice, mediated the relationship between self-appraisal expectations and reactions.

Additional Analyses

Given the cross-sectional nature of our data, it is possible that employees' perceptions of expectations and instrumental voice could have been influenced by the performance rating they received from their manager. To control for this possibility, we re-ran the mediator analyses for instrumental voice and included employees' actual performance ratings as a control variable. Performance for all employees was measured using a graphic scale that ranged from 1, "Below Expectations" to 5, "Exceeds Expectations". The first equation, regressing instrumental voice on expectations, while controlling for performance rating, resulted in a significant effect ($p < .01$), thus satisfying the first condition of mediation. The results for the second and third equations are presented in Table 4. As indicated in this table, including employees' actual performance ratings as a control variable had very little effect on the pattern of mediation results. Thus, although performance rating explained significant variance in appraisal reactions, it did not seem to account for the mediation results obtained.

Finally, in order to further explicate the role of expectations, we conducted exploratory analyses to examine whether the employees who spontaneously self-rated (who by definition should not have expectations that these self-ratings will be considered) reacted differently than those who were asked to self-rate but had no expectation that these self-ratings would be considered. To this end, employees were divided into two groups: (a) those who formally self-appraised and did not expect their manager to consider their self-ratings: this group consisted of those employees who responded "very little extent" when asked the extent to which they expected their manager to consider their self-ratings ($N = 18$), and (b) those who informally self-appraised: this group was the spontaneous self-appraisal group described for H2 ($N = 59$). A series of t-tests were conducted to investigate any differences between the two groups. Results indicated that these two groups were not significantly different on any of the appraisal reaction variables. These

results suggest that incorporating self-ratings into an appraisal system results in more positive reactions, but perhaps only to the extent that those who self-appraise actually believe that their self-ratings will be considered.

Discussion

In the current study we attempted to expand the domain of knowledge regarding self-appraisals in several respects. First, as a conceptual replication and extension of Roberson et al. (1993), we examined the difference between those who were asked by their managers to self-appraise and those who were not. Contrary to their findings, we found that those who were asked to self-appraise have more favorable appraisal reactions than those who are not asked to self-appraise as part of the appraisal process. Second, the study provides definitive evidence that when not asked to formally self-appraise, a strong majority of employees (84.3%) nonetheless tend to engage in spontaneous self-appraisal, as suggested by others (Atwater, 1998; Levy, 1993).

As mentioned previously, in attempting to explain their findings, Roberson et al. suggested that perhaps the negative reactions on the part of the employees asked to self-appraise were due to unmet expectations associated with being asked to formally self-appraise. Lending some support to this explanation, the current study found that the lower the expectation that one's self-ratings would be considered by one's manager, the less favorable the appraisal reactions. Furthermore, additional analyses indicated that employees who are asked to self-appraise but do not expect their self-ratings to be considered, do not respond more positively to their appraisal than those who self-appraise informally. This represents the first examination, to our knowledge, of the role of expectations in self-appraisals and suggests that the positive effects of incorporating self-appraisals may be attenuated if employees do not believe that managers are genuinely interested in their self-appraisals.

Finally, the present study further delineated the role of expectations by trying to explain why self-appraisal expectations might be associated with appraisal reactions. Our results suggest that one mechanism through which self-appraisal expectations affect appraisal reactions is instrumental voice. More specifically, our data suggest that promoting the expectation that self-ratings will actually be used in a self-appraisal context helps to foster the belief that one may indirectly have some element of control over one's outcomes, which subsequently leads to positive appraisal reactions. This is consistent with Atwater (1998) who states that being asked to provide self-assessments should give employees a greater sense of control over the appraisal process. This finding is also consistent with recent work by Van den Bos and Lind (2002), who argue that "people have a fundamental need to feel certain about their world" (p.5) and that feelings of control help us manage uncertainty.

Future Research and Implications

One goal of this paper was to help reconcile the self-appraisal literature by comparing employees who were asked to self-appraise as part of the appraisal process to those who were not. Although our findings support the conventional wisdom on self-ratings, as well as correlational findings, they do contradict the one other field study in this area. Thus, future research should continue to examine this issue to ensure that our results, or those of Roberson et al. (1993), are not due to idiosyncratic characteristics of the organization studied. For example, given the importance of expectations demonstrated in our study, it is possible that in the Roberson et al. study, the majority of employees did not expect their managers to consider their ratings, resulting in less than favorable reactions.

Interestingly, consistent with Roberson et al., we did find that most of the employees who were not asked to self-appraise did so anyway. Thus, our data suggest that formally incorporating

self-appraisals into the appraisal process offers benefits that go beyond those offered by informal self-appraisal, at least in terms of employees reactions. This indicates that researchers should perhaps focus less on delineating the differences between those who do and do not self-appraise and focus more on the differences between those who formally self-appraise and those who self-appraise informally. In addition, knowing that employees spontaneously self-appraise may help us to understand appraisal reactions in non self-appraisal contexts.

Although we feel the present study has contributed to the self-appraisal literature, it represents only an initial step in understanding the importance of self-rating expectations on appraisal reactions. Future research should continue to explore the role of expectations for self-ratings specifically, as well as for performance appraisal more generally. In addition, researchers should investigate potential factors contributing to employees' perceptions that management will consider and use self-appraisals.

In terms of practical implications, we hope the results of the present study can be used to help guide the implementation of self-appraisals in organizations. For example, it seems logical that one way to increase appraisal reactions in organizations is to formally incorporate self-ratings into the system. If employees are self-appraising anyway, the organization might as well derive the benefits associated with actually asking for these self-appraisals. One apparent qualification to this, however, is that the benefits associated with self-appraisals appear to be limited to those individuals who expect their managers to consider their self-ratings – this appears to be a boundary condition for the positive effects of self-appraisal. This suggests that organizations cannot expect reactions to increase through the implementation of self-appraisals unless managers are able to foster the belief that these self-ratings will be used. In other words, self-appraisals without any firm commitment on the part of organizations and/or managers to use them in some meaningful way are not likely to have any positive effects.

Although not specifically examined in the current study, we suggest that incorporating formal self-appraisals without employees expecting them to be used, may have negative effects on employee attitudes. Further, future research should experimentally examine the impact of the violation of this expectation. In other words, how might employees react when they expect their self-appraisals to be used and valued and then perceive that this expectation has been violated? We believe self-appraisals to be useful and to have great potential to improve the attitudes of employees and organizational outcomes, but self-appraisals also may have negative potential if they are misused or misunderstood.

In sum, we feel the current study has the potential to contribute to the extant literature on self-appraisal for several reasons. First, it represents the first attempt to empirically investigate the notion of spontaneous self-appraisal. Second, it provides a conceptual replication of the findings of Roberson et al. (1993), which were inconsistent with past correlational research regarding self-appraisals. Finally, it represents the first investigation of the role expectations regarding the use of one's self-appraisal may play in appraisal reactions. In addition to the research implications, we hope that the results of this study contribute to the practical use of self-appraisals in organizations by highlighting the importance of managing employees' expectations.

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Table 1**Means, Standard Deviations, Reliabilities, and Correlations between Variables**

Variables	<u>M</u>	<u>SD</u>	α	1	2	3	4	5	6
1. Expectations (Formal group only)	3.05	1.38	---	----					
2. Instrumental Voice	3.08	.92	.73	.36** (77)	----				
3. Value-expressive Voice	3.11	1.10	.93	.15 (76)	.47** (154)	----			
4. Satisfaction Session	4.08	1.62	.95	.24* (77)	.58** (154)	.42** (153)	----		
5. Satisfaction System	3.33	1.44	.90	.22* (77)	.38** (154)	.25** (153)	.68** (153)	----	
6. Utility	2.14	.84	.90	.29* (77)	.36** (154)	.42** (153)	.72** (153)	.65** (153)	----
7. Accuracy	4.74	1.68	.97	.24* (77)	.53** (155)	.24** (154)	.81** (154)	.65** (154)	.56** (154)
8. Procedural Justice	4.96	1.68	.96	.26* (77)	.46** (155)	.22** (154)	.76** (154)	.67** (154)	.58** (154)
9. Distributive Justice	3.34	1.30	.95	.22* (76)	.52** (153)	.27** (152)	.82** (152)	.69** (152)	.58** (153)

Note: * $p < .05$ ** $p < .001$

N-size for each correlation appears in parentheses

Table 2**T-tests between Self-Appraisal and No Self-Appraisal Groups**

Measures	No Self-Appraisal (N=77)		Self-Appraisal (N=77)		D
	M	SD	M	SD	
Satisfaction Session	3.55	(1.62)	4.57	(1.45)	15
Satisfaction System	3.07	(1.43)	3.55	(1.39)	15
Utility	1.93	(.78)	2.32	(.84)	15
Accuracy	4.33	(1.68)	5.13	(1.58)	15
Procedural Justice	4.66	(1.79)	5.25	(1.50)	15
Distributive Justice	3.00	(1.34)	3.66	(1.18)	15

Note: * $p < .05$; ** $< .01$

Table 3**Test of the Mediating Role of Instrumental Voice**

	Session Satisfaction	System Satisfaction	Utility	Accuracy	Procedural Justice
<u>Step 1</u>					
Expectation	.24*	.22*	.29*	.24*	.26*
R ²	.06*	.05*	.08*	.06*	.07*
<u>Step 2</u>					
Expectation	.01	.10	.17	.02	.07
Instrumental Voice	.64**	.33**	.33**	.62**	.54**
R ²	.41**	.14**	.19**	.39**	.33**
Evidence for Mediation	YES	YES	YES	YES	YES

Note: Values reported represent standardized coefficients (i.e., beta weights).

* p< .05; ** p<.01

Table 4**Test of the Mediating Role of Instrumental Voice Controlling for Performance Rating**

	Session Satisfaction	System Satisfaction	Utility	Accuracy	Procedural Justice
<u>Step 1</u>					
Performance Rating	.36**	.36**	.08	.56**	.44**
Expectation	.24*	.26*	.29*	.24*	.27*
R ²	.19*	.20*	.09*	.38*	.27**
<u>Step 2</u>					
Performance Rating	.26**	.32**	.02	.47**	.35**
Expectation	.03	.16	.17	.05	.10
Instrumental Voice	.59**	.27*	.34**	.54**	.49**
R ²	.49**	.26**	.19**	.62**	.47**
Evidence for Mediation	YES	YES	YES	YES	YES

Note: Values reported represent standardized coefficients (i.e., beta weights).

* p< .05; ** p<.01

POLYCHRONIC COMMUNICATION: EXPLORING AN EMERGING PHENOMENON²

The emerging concept of polychronic communication is discussed. Literature from management, psychology, human-computer interaction, and computer supported cooperative work is brought together to gain a fuller understanding of this organizational phenomenon. Extensions to the current polychronic communication model are proposed and the implications for researchers and practitioners are suggested.

Introduction

In the past, a manager could easily initiate and maintain a one-on-one conversation by inviting an employee to enter the office and ‘take a seat’, closing the door to minimize interruption. Now, however, this process is much more difficult. Every time a manager invites someone into his or her office for a quick ‘chat’, do they close the door, turn down the cell phone, adjust the pager, program the telephone to forward all calls directly to voicemail, activate the screen saver on the desktop computer, and set the Instant Messaging³ status to “Busy”? Very rarely would all these steps occur for a simple conversation. The proliferation of new communication technologies means that there are many more ways individuals can reach out to and communicate with others in the organization. On the other hand, this also means that there are more opportunities for others in the organization to communicate with them. Accordingly, it is difficult for managers and employees to close themselves off from additional external communications. The result is an increase in a phenomenon called polychronic communication.

Polychronic communication or, “the managing of multiple conversations at once within a give time period”, was first discussed by Turner and Tinsley (2002, p. 4). To illustrate the concept, imagine an employee sending an instant message to a coworker while conversing on the telephone with a client (see Figure 1a). As well, a manager in a face-to-face boardroom meeting who receives an email on their Blackberry⁴ is engaging in polychronic communication (see Figure 1b). Both conversations may be related to a similar topic (the call center employee on the telephone with a client sends an instant message to a coworker to quickly find the answer to the client’s problem) or may be about unrelated topics (a manager sitting in the boardroom meeting receives an email from their assistant regarding the scheduling of activities later in the day).

As polychronic communication is an emerging research area, it might “benefit from exposure to potential theoretical foundations” (Webster and Watson 2002, p. xiv). Thus, this

2 The author would like to thank Jane Webster, David Zweig, the anonymous reviewers, and numerous classmates for their comments on earlier versions and presentations of this paper.

3 Instant Messaging is a short, text-based messaging system that pops up on the user’s computer screen. Several such applications exist including Yahoo Instant Messenger, Windows Messenger, or ICQ.

4 A Blackberry is a handheld, portable device with thumb-manipulated keyboard that allows the user access to email from a remote location.

Figure 1a: Example of Polychronic Communication

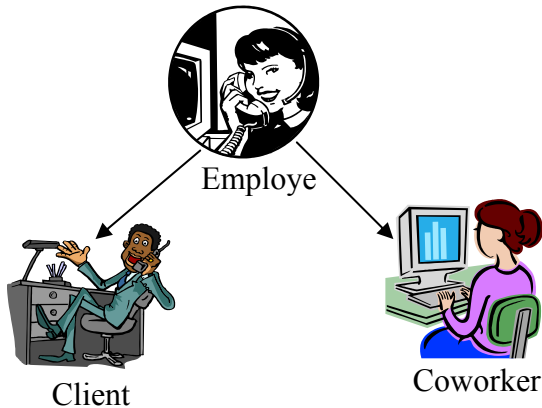


Figure 1b: Example of Polychronic Communication



paper will examine the concept of polychronic communication, exploring its definition, antecedents, outcomes, and possible moderating variables. The contribution of this paper is three-fold. First, this paper is responding to multiple calls to bring the concept of time into organizational research (Ancona, Goodman, Lawrence and Tushman 2001; Ancona, Okhuysen, and Perlow 2001) as well as calls to further investigate the interruptive nature of technology (Davis 2002; Zweig and Webster 2002). Second, this paper significantly extends the model of polychronic communication proposed by Turner and Tinsley (2002). Third, this article combines the theory-based explanations available in management and psychology research with the practical and real-world examples reported in the computer supported cooperative work (CSCW) and human-computer interaction (HCI) literatures to gain a fuller understanding of polychronic communication.

To accomplish this, the paper will be organized as follows. In the next sections, i) the psychology literature on monochronicity and polychronicity, ii) examples of polychronic communication in the HCI/CSCW literature, and iii) emerging management research on polychronic communication will be reviewed. Then, several extensions to the current model of polychronic communication will be proposed and supported using existing empirical research as well as evidence from practice. Finally, areas of future research will be outlined and implications for practice will be discussed.

Literature Review: Polychronicity

The term polychronicity was first introduced by anthropologist E.T. Hall (1959). Hall suggested that different cultures exhibit two opposing orientations to time, monochronic or polychronic, which indicate how many things an individual gets involved in at one time (Bluedorn 1998). Bluedorn, Kaufman, and Lane (1992) discussed the implications of polychronic and monochronic time orientations for organizational practices. The importance of mono- and polychronic tendencies to management research was confirmed in 1999 when the *Journal of Managerial Psychology* produced a special issue devoted to the topic (volume 14, issues 3/4, Bluedorn 1999).

Although Hall's original work examined polychronicity as a cultural variable the concept has since been empirically examined as an organizational (e.g. Benabou 1999; Onken 1999), group (Bluedorn and others 1999; Waller, Giambatista, and Zellmer-Bruhn 1999), and individual-level variable (Kaufman, Lane, and Lindquist 1991; Slocombe and Bluedorn 1999). At the

individual level, polychronicity is defined as a combination of belief (e.g., “I believe that working polychronically is better than working monochronically”) and preferences (e.g., “When given the choice, I would prefer to work polychronically”) and is commonly measured by a ten-item scale termed the inventory of polychronic values (Bluedorn and others 1999). An individual who scores high on this scale prefers to complete multiple tasks at the same time and believes that completing multiple tasks in this manner is the best way to work. Polychronic and monochronic can be visualized as opposite ends of a continuum (Slocombe and Bluedorn 1999) with individuals falling at various points along the scale. Alternatively, researchers have used the Theory of Reasoned Action (TRA) as the basis for dividing individual-level polychronicity into three components: belief (e.g., “I believe working polychronically is better than working monochronically”), attitude (e.g., “I like working polychronically”), and behavior (e.g., “I work on multiple tasks at the same time”) (Slocombe 1999; Slocombe and Bluedorn 1999). The behavioral component of polychronicity can either be interspersing two tasks over a period of time or completing two tasks in a truly simultaneous manner (Bluedorn, Kaufman, and Lane 1992).

Empirical research has related individual-level polychronicity to a number of important variables. In past research, polychronicity has been negatively correlated with schedules, deadlines, punctuality, routine, separation of work and non-work activities (Benabou 1999), role overload (Kaufman, Lane, and Lindquist 1991), and time management activities (Conte, Rizzuto, and Steiner 1999) and positively related to achievement striving and impatience (Conte, Rizzuto, and Steiner 1999). In addition, the match between individual-level polychronicity and organizational/group-level polychronicity has been explored (Cotte and Ratneshwar 1999; Slocombe and Bluedorn 1999; Waller, Giambatista, and Zellmer-Bruhn 1999).

Literature Review: HCI/CSCW

While the above literature in psychology and management did not specifically examine polychronic behavior in the use of communication technologies, evidence for this phenomenon does exist. In the HCI (human-computer interaction) and CSCW (computer supported cooperative work) fields, the examination of instant messaging technologies has revealed several examples of the multiple conversations taking place simultaneously (see Table 1). The examples reveal discussions, reports from participants, and empirical observations of this behavior. In the quotes below, the behavior is alternately referred to as multitasking, simultaneous conversations, parallel communication, polychronicity, concurrent conversations, and simultaneous communication. Since articles even within the same field refer to the behavior in different ways, it is very difficult to determine if all examples of polychronic communication from the HCI and CSCW literatures have been found. Future research in this area and others would benefit from having one well-defined and theoretically based expression to describe this type of conversational multitasking.

Table 1: Examples from HCI and CSCW literatures

Article	Quote	Empirical/Discussion
Kaplan, Carroll, & MacGregor (1991)	“Human conversational activity is not a matter of working linearly through the sequence of utterances which comprise a conversation; rather, humans participate in multiple conversations simultaneously, and digress and switch among them in seemingly arbitrary fashion.” Pg 73	Discussion
Nardi, Whittaker, & Bradner (2000)	“Negotiating availability may involve use of multiple media in parallel. Instant messaging is often monitored <i>while other communications are taking place</i> such as phone calls or face to face conversations.” Pg 83	Empirical – observed use of instant messaging
Kakihara & Sorensen (2001)	“However, considering the recent diffusion of ICTs [information and communication technologies] into a wide range of our social lives, polychronicity rather than monochronicity of human interaction seems to rapidly increase...” Pg 35	Discussion
Cameron (2002)	“Interviews with IM users revealed that multiple media are often used to transmit <i>multiple</i> messages concurrently.” Pg 35	Empirical – interviewed instant messaging users
Grinter & Palen (2002)	“Participants also reported engaging in concurrent IM conversations. Some participants reported that they would often be involved in a central group conversation while concurrently engaging in multiple, side one-on-one conversations, often with some of the same people involved in the group conversation.” Pg 26	Empirical – interviewed teenage users of instant messaging
Isaacs, Kamm, Schiano, Walendowski, & Whittaker (2002)	“Each user moved out of the message window an average of 3.7 times per conversation (which we call <i>multitasking</i>).” Pg 720	Empirical – analysis of logged Instant Messaging conversations
Isaacs, Walendowski, Whittaker, Schiano, & Kamm (2002)	“in 85.7% of the conversations at least one person multitasked... It appears that the bulk of multitasking occurred because participants were doing unrelated activity while also chatting with a partner.” Pg 14	Empirical – studied logs of instant messaging use

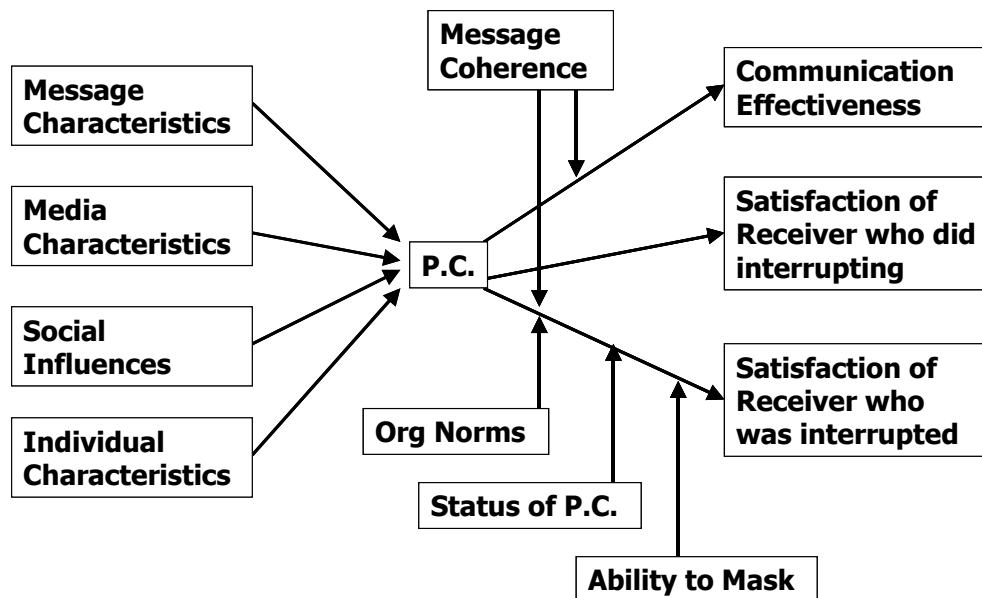
Literature Review: Polychronic Communication

Polychronic communication is a theoretically based term that describes the behaviors described in Table 1. Turner and Tinsley (2002) are the first (and thus far only) researchers to use the phrase *polychronic communication*. While these authors recognized that communication is just one of the many tasks that can be performed polychronically, they believed that communication processes are so complex that they warrant study as a separate polychronic

construct.

Drawing on computer-mediated communication (CMC) and time orientation (i.e. polychronic/monochronic) literatures, a model of the antecedents and consequences of polychronic communication was developed (see Figure 2). Turner and Tinsley suggest that certain characteristics of the message will influence the polychronicity of communication. For example, when the message is more equivocal or ambiguous, the communication will be less polychronic. Characteristics of the communication media should also influence polychronic communication. One such proposition states that communication using either a synchronous (e.g. face-to-face) or asynchronous (e.g. email) medium will be more easily interrupted by a synchronous medium (e.g. face-to-face). Turner and Tinsley further propose that social influences may play an important part in polychronic communication such that employees with supervisors who or in organizations which value polychronic communication are more likely to exhibit this behavior. Individual characteristics of the employee may also have an effect on the degree of polychronic communication.

Figure 2: Model of Polychronic Communication
(adapted from Turner and Tinsley, 2002)



Several consequences of polychronic communication are also proposed. Turner and Tinsley suggest that when the topic of both conversations is similar (in the call center employee example in Figure 1a), the communication will be more effective. In addition, communicating polychronically is likely to increase the satisfaction of the conversation partner who did the interrupting (the assistant in Figure 1b who was able to contact the manager even though the manager was in a meeting). Unfortunately, the satisfaction of the conversation partners who were interrupted may actually decrease (e.g. those in the boardroom meeting with the manager). The amount of this decrease depends on the norms of the organization, the ability of the polychronic communicator to mask the second communication (e.g. the manager answering the email unnoticed while someone else at the meeting is talking), and the status of the individual communicating polychronically (e.g. if the manager is the highest ranked employee in the group, others may not mind).

This phenomenon of managing multiple conversations at one time has been recognized in

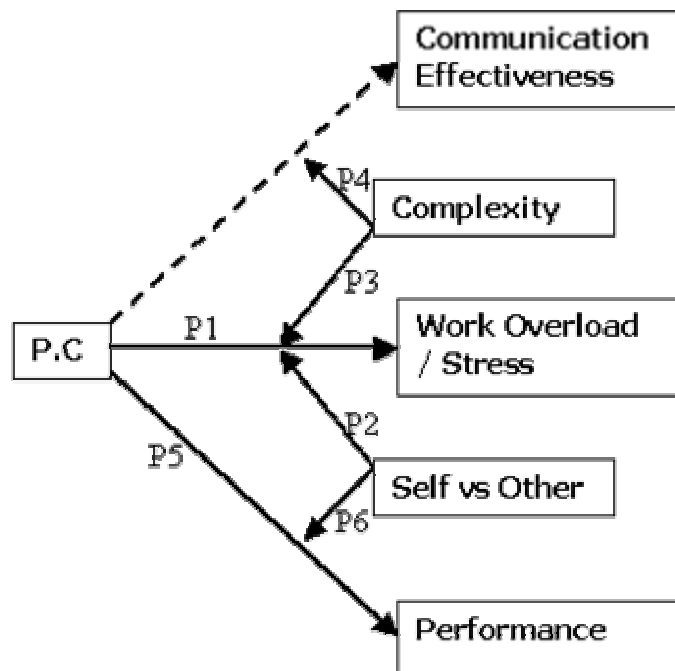
both the HCI/CSCW and management literatures. However, there is a major gap in this area as neither side currently presents a complete view of polychronic communication (see Appendix A). While the HCI/CSCW research provides many real-world examples, no strong theoretical or consistent basis is used for examining this behavior. Alternately, the management literature uses time orientation and computer-mediated communication research to provide a theoretical foundation while multiple real-world examples and empirical studies are not yet available. Research streams on each side of this gap could benefit from the other.

In addition to bridging this gap, further exploration of polychronic communication is needed. In particular, several consequences and moderators not covered in Turner and Tinsley's model are examined in the following section.

Extension of Polychronic Communication Model

Building on the work of Turner and Tinsley, two moderators and two consequences of polychronic communication are proposed. In addition to the consequences presented in Figure 2, polychronic communication may impact work overload/stress and overall performance. It is further proposed that the complexity of the conversations and whether the polychronic communication was self or other initiated will moderate several relationships in the model. These extensions to Turner and Tinsley's model are illustrated in Figure 3.

Figure 3: Model Extensions
(solid lines indicate extensions of Turner and Tinsley 2002)



Consequence: Impact on Work Overload and Stress⁵

Human-computer interaction researchers have noted that “[t]echnology has allowed more and more information and people to reach us than ever before” (Hudson and others 2002, p. 97). As a result, “individuals feel overwhelmed” (p. 97). Thus, it may be hypothesized that polychronic communication (as a result of more people being able to reach us) leads to an increase of work overload and stress. Support for this hypothesis is evident in a qualitative study by Cotte and Ratneshwar where one polychronic worker noted, “I don’t know if I would take [the tasks] on all at once but I might ... that’s why I have stomach problems, because I’m so worried about getting things done” (1999, p. 195). This positive relationship between working polychronically and overload is further supported by a study of police radio dispatchers. Dispatchers who simultaneously completed more than one task reported higher levels of work overload (Kirmeyer 1988). Thus, an increase in polychronic communication may lead to increased feelings of stress and work overload.

Other findings, however, demonstrate that polychronicity actually decreases work overload and stress. Kaufman and colleagues (1991) suggested that individuals may use polychronic behavior as a means of reducing work overload by simultaneously satisfying diverse demands. A significant negative relationship between polychronic time orientation and overload was found in their study.⁶ In a survey of university faculty members, job-induced stress was positively correlated with monochronic, rather than polychronic, behavior (Frei, Racicot, and Travagline 1999). Still other researchers found that polychronicity was not significantly related to either work overload (Benabou 1999) or stress (Conte, Rizzuto, and Steiner 1999). It is apparent that the existing research linking polychronicity to work overload and stress is equivocal, alternately suggesting a positive, negative, or non-existent relationship. While evidence would suggest that there is some type of relationship between these two variables (see Proposition 1 below), ambiguity of the direction of the relationship would suggest the existence of moderating variables.

Proposition 1: There is a significant relationship between polychronic communication and work overload/stress.

Moderator: Self/other initiated

The existing model does not address the fact that the polychronic communication can be either self- or other-initiated. For example, an individual already in a conversation can initiate a second conversation (the call center employee in Figure 1a or an employee checking email while on a conference call), or have a second conversation thrust upon them (the manager in the boardroom meeting in Figure 1b). Persing (1999) examined this concept in terms of personal agency or the ability to determine your own actions. Those who behave polychronically do not always do so of their own accord (self-initiated) but rather have the behavior thrust upon them or mandated by others (other-initiated). In conversations with engineers in an intellectually intensive environment, strong resistance to mandated polychronicity was noted (Persing 1999).

Whether the communication is self or other-initiated may moderate the relationship between polychronic communication and work overload/stress. Support for this proposition is

⁵ Grise and Gallupe (2000) suggest that it is difficult to measure overload directly and so researchers often identify overload by its effects. For this reason, overload and stress are discussed together.

⁶ Kaufman and colleagues (1991) actually related polychronicity to role overload, which is a conflict that is created when different roles have competing demands on an individual’s time. Since one job in an organization may include many roles, role overload is discussed in terms of general work overload.

found in the polychronicity, demand-control model, and perceived control over time literatures.

In polychronic research, Cotte and Ratneshwar suggest that polychronic behavior that *happens to* an individual is a source of stress (Cotte and Ratneshwar 1999, p. 198). Karasek's demand-control model suggests that stress and illness result from the interaction of high job demands and low decision latitude (1979; 1990). Further work determined that it was not decision latitude, but more specifically job control that was important in reducing stress (Dollard and others 2000; Kushnir and Melamed 1991; Wall and others 1996). Perceived control over time, or "a sense of mastery over how one allocates one's time" (Macan 1994, p. 382) has also been related to stress and overload. Control over time is negatively related to job-induced tensions, somatic tensions (Macan 1994), stress (Nonis and others 1998), and role overload (Macan and others 1990).

Considering other-initiated polychronic communication to be a form of low job control and low control over time, the moderating influence of this variable can be hypothesized. When the second conversation is self-initiated, managing multiple conversations may reduce overload and stress. When the second conversation is other-initiated or mandated, polychronic communication may increase feelings of work overload and stress.

Proposition 2: The relationship between polychronic communication and work overload/stress is moderated such that if the second conversation is self-initiated the relationship is negative and if the second conversation is other-initiated the relationship is positive.

Moderator: Conversation Complexity

Another moderator that is not included in Turner and Tinsley's original model is conversation complexity.⁷ It is expected that conversation complexity may moderate the relationship between polychronic communication and overload (mentioned above) as well as the relationship between polychronic communication and communication effectiveness (proposed by Turner and Tinsley).

Even when the complexity of the conversations is extremely low, there is evidence that problems can occur. In a study of teenage use of Instant Messaging, teens who were gossiping about a friend (A) to another friend (B) while also conversing with A had mistakenly sent a message to A about A (Grinter and Palen 2002). Thus even with cognitively simple conversations, there may be significant repercussions.

What happens when the task or conversation is more complex? Cognitive research suggests that "people have a very limited working memory" (Tindall-Ford, Chandler, and Sweller 1997, p. 257). Because of this limit, high information loads combined with high task complexity leads to information overload (Grise and Gallupe 2000). It is plausible that polychronic communication, which is a form of high information load, may be related to work overload when the conversations are complex.

Proposition 3: The relationship between polychronic communication and work overload/stress is moderated conversational complexity.

⁷ It may be suggested that the concept of conversation complexity is similar to Turner and Tinsley's idea of message ambiguity. The difference is in the level of analysis. Turner and Tinsley examine the difficulty involved in one particular message. This paper examines the difficulty of the conversation itself, which may include multiple messages, as well as the thoughts and ideas that occur during the conversation but never get transferred in an actual message.

Conversation complexity may also moderate the relationship between polychronic communication and communication effectiveness. Cognitive load theory proposes that a heavy cognitive load “interferes with the primary goal of the task at hand” (Sweller and others 1990, p. 176). This is a result of too many cognitive activities “overburdening working memory [and] decreasing the effectiveness of processing” (Kalyuga, Chandler, and Sweller 1999, p. 351). When polychronic conversations are highly complex (i.e. require heavy cognitive load), managing multiple conversations may result in decreased communication effectiveness.

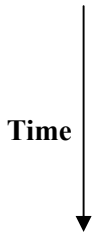
Proposition 4: The relationship between polychronic communication and communication effectiveness is moderated by conversation complexity.

Consequence: Impact on Performance

The effect of polychronic communication on performance must also be considered. There are three arguments concerning this relationship. First, polychronic communication may allow the individual to perform several tasks simultaneously or to react quicker to environmental conditions. The result would be an increase in performance. In support of this argument, Onken (1999) found that an organization’s level of polychronicity was positively related to organizational performance.

Second, working polychronically may only change the scheduling of tasks without changing the speed at which the tasks are performed. For example, a monochronic individual may complete tasks A, B, and C within an allotted amount of time. A polychronic individual may go from one task to another and back again but still take just as long as the monochronic to complete all tasks (see Table 2). Therefore, polychronic communication may have no effect on performance. Polychronicity researchers assert, “polychronicity is about how work is done, not about how much work is done” (Slocombe and Bluedorn 1999, p. 77). Several empirical studies support this argument (Conte, Rizzuto, and Steiner 1999; Frei, Racicot, and Travagline 1999).

Table 2: Completion of Tasks



Monochronic	Polychronic
Task A	Task A
	Task C
Task B	Task A
	Task C
Task C	Task B
	Task C
	Task B

Third, it has been suggested that polychronic behavior may actually decrease performance. One interviewee stated that when using Instant Messaging and the telephone at the same time, it is possible to lose focus of one or both of the conversations (Cameron 2002). Other polychronic workers noted that while they prefer to perform tasks simultaneously, it is not necessarily the best way to work (Cotte and Ratneshwar 1999). In addition, research on task switching and switching times reveals that there are both time costs and error costs associated with rapidly changing activities (Rogers and Monsell 1995). The switching costs required in polychronic communication may lead to deterioration in performance.

Again, the nature of the relationship between polychronic communication and performance is not clear. Several variables may be important moderators of this relationship. For example, whether the polychronic communication is self or other-initiated may impact

performance. In a theoretical discussion, Persing (1999) proposed that the relationship between polychronic work tendencies and creative performance would be moderated by volition. Empirical research has shown that students with a higher perceived control of time reported better performance evaluations (Macan and others 1990). Instant messaging research suggests that even the notification of an incoming message (i.e. other-initiated) can negatively effect task performance (Cutrell, Czerwinski, and Horvitz 2001). Hence, self-initiated polychronic communication will lead to an increase in performance while other-initiated polychronic communication will lead to a decrease in performance.

Proposition 5: There is a significant relationship between polychronic communication and performance.

Proposition 6: The relationship between polychronic communication and performance is moderated such that if the second conversation is self-initiated the relationship is positive and if the second conversation is other-initiated the relationship is negative.

Discussion

As noted in the introduction, the contribution of this article is three-fold. First, it responds to multiple calls to research the concept of time in organizations and the interruptiveness of technology. Second, the existing model of polychronic communication is extended. Two additional consequences and two additional moderators have been added. Third, this article brings together multiple research streams. The theory-based explanations available in management and psychology research are combined with the practical and real-world examples reported in the CSCW and HCI literatures. The result is a deeper understanding of the polychronic communication phenomenon.

Future research

While this article contributes to our understanding of polychronic communication, further work in this research area is needed. Although additional relationships in the polychronic communication model are discussed, no empirical testing of these relationships has taken place. The existence of this phenomenon has been demonstrated in field studies (e.g. Cameron 2002; Grinter and Palen 2002; Nardi, Whittaker, and Bradner 2000) but lab experiments are needed to quantitatively examine the model. For example, lab experiments could determine if an increase in other-initiated polychronic communication leads to an increase in stress. Tests of Turner and Tinsley's original model should also be performed.

Considering the number of variables in the complete polychronic communication model (see Turner and Tinsley 2002 for additional propositions), it may be difficult to decide which relationships to study first. One option is for future research to examine those relationships that have the most impact for practice. Managers and employees should be especially aware of any negative consequences associated with polychronic communication and ways in which to lessen these effects. For instance, demonstrating the effect of polychronic communication on work overload and stress would be extremely important to organizational workers.

In addition, researchers should not be limited by the propositions presented above. Several other interesting areas of study exist such as further exploring the interruptive nature of polychronic communication (Hudson and others 2002; Zweig and Webster 2002), determining whether polychronic communication heightens the perceived status of the individual (Cotte and Ratneshwar 1999), and investigating the differences between polychronic communication and attempted polychronic communication.

Implications for practice

Future research in the area of polychronic communication would have direct implications in two areas of practice. First, understanding, developing, and testing a model of polychronic communication will increase our understanding employee interactions within organizations. Further study of polychronic communication may help managers and employees trying to deal with increased time pressures within their jobs. Determining polychronic communication outcomes and moderators that influence those outcomes may help human resources personnel understand the stress employees currently face as well as how communication practices can aggravate or alleviate that stress.

Second, research in polychronic communication may have many implications for the design and implementation of communication technologies. Programmers and designers may use this research area to build technologies which better facilitate the communication needs of today's employee. In addition, research on polychronic communication may inform how organizations select *which* communication technologies to implement. For example, managers who are aware of the positive and negative consequences of polychronic communication can carefully assess which technologies would best suit the dynamics of their work group.

Conclusion

Polychronic communication is an emerging area of research characterized by many unanswered questions. Although several relationships are hypothesized between polychronic communication, outcome variables (work overload/stress and performance), and moderators (self vs other-initiated and conversation complexity), further empirical tests are urgently needed. The results of these tests would be extremely valuable for organizational employees as they attempt communicate effectively in today's fast-paced work environment.

Appendix A: Matrix of Literatures

EMPIRICAL ARTICLES	Polychronic Communication				Polychronicity				Performance				Stress				Volition			
	C	O	G	I	C	O	G	I	C	O	G	I	C	O	G	I	C	O	G	I
Psychology/Managerial Research																				
Benabou 1999						x		x												
Bluedorn, Kalliath et al. 1999							x													
Conte et al 1999								x			x					x				
Cotte & Ratneshwar 1999					x			x			x					x				x
Frei et al. 1999								x			x					x				
Kaufman, Lane & Lindquist 1991								x												
Onken 1999						x				x										
Slocombe & Bluedorn 1999								x												
Waller et al 1999							x	x												
HCI/CSCW Research																				
Cameron 2002																				
Grinter & Palen 2002				x																
Isaacs, Kamm et al. 2002				x																
Isaacs, Walendowski et al. 2002				x																
Nardi et al. 2000				x																
DISCUSSION ARTICLES																				
Psychology/Managerial Research																				
Bluedorn 1998					x	x														
Bluedorn 1999						x	x													
Bluedorn, Kaurman, & Lane 1992					x	x	x	x												
Persing 1999								x			x									x
Turner & Tinsley, 2002				x		x	x	x												
Slocombe 1999								x												x
HCI/CSCW Research																				
Kakihara & Sorensen 2001				x				x												
Kaplan et al 1991				x																

C – cultural level variable, O – organizational level variable, G – group level variable, I – individual level variable

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**PERCEIVED OBLIGATIONS TO THE ORGANIZATION AND ORGANIZATIONAL
COMMITMENT: A CASE OF CONCEPT REDUNDANCY?**

We tested the underlying factor structure among measures of organizational commitment and perceived employee obligations and examined their relations with several motivational process variables. Five hundred eighty three non-management employees in a Canadian health-care organization provided data for this study. Our results revealed that the two forms of individual-organizational attachment are empirically distinct, and that both forms of attachment related to cognitive-motivational process variables.

A serious and growing problem in the organizational behavior literature is the proliferation of misformed and redundant concepts and measures (Osigweh, 1989). Concept redundancy implies that concepts and their measures are not distinct from other concepts or measures (Morrow, 1983; Morrow, Eastman, & McElroy, 1991). Testing this notion, Morrow et al. (1991) found considerable overlap among the concepts of protestant work ethic, career salience, job involvement, work as a central life interest, and organizational (affective) commitment. Among several concepts relating to extra-role behavior, Van Dyne, Cummings, and Parks (1995) observed “muddied” and overlapping definitions for organizational citizenship behavior, pro-social behavior, principled organizational dissent, and whistle blowing behavior. Organ (1997) examined and acknowledged the conceptual similarity between the concepts of organizational citizenship behavior and contextual performance (see Borman & Motowidlo, 1993). In this study we shift our attention to how organizational researchers have conceptualized employees’ attachment to their work organization.

Organizational researchers who study phenomena such as perceived organizational support (Eisenberger, Huntington, Hutchison, & Sowa, 1986; Shore & Shore, 1995), organizational commitment (Meyer & Allen, 1991; 1997), organizational justice (Greenberg, 1990), and psychological contracts (Argyris, 1962; Levinson, 1962; Rousseau, 1989; 1995) are all attempting at some level to describe and explain how employees form attachments to their organizations, and the behavioral implications of these attachments. In short, it is gradually becoming a “cluttered” field of seemingly overlapping concepts. One way to organize and make sense of this growing number of concepts is to examine and test how each fits within a broader framework, for instance, the psychological contract. A psychological contract is essentially a perceived exchange agreement between an individual employee and his or her organization (Rousseau, 1998). Like explicit, formal agreements, a psychological contract hinges on two interdependent perceptions: (a) employees’ perceptions about their personal role in the organization, what they bring to the organization, and the behavioral obligations of this role; and (b) employees’ perceptions of the organization and its responsibilities and obligations to them. Concepts such as perceived organizational support (see Eisenberger et al., 1986) and perceived justice (Cropanzano & Greenberg, 1997) most likely align with the latter of these two

psychological considerations because the emphasis of both is clearly on perceptions of the organization and how it treats its members (see Shore & Shore, 1995). On the other hand, organizational commitment, because the emphasis is on individuals' perceptions of their connection to the organization, is most likely to align with perceptions of their obligations to the organization. In the present study we examine and test relations between the component of the psychological contract reflecting employees' perceived obligations and organizational commitment.

Two forms of individual-organizational attachment are employee commitment to their organization and the psychological contract (Rousseau & Wade-Benzoni, 1995). Organizational commitment is commonly viewed as a multi-dimensional concept that captures the different reasons why employees form psychological attachments to entities or courses of action (Meyer & Herscovitch, 2001). This perspective recognizes that organizational commitment can take the form of affective commitment, continuance commitment, and/or normative commitment (Meyer & Allen, 1991; 1997). Employees can feel attached to their organization for emotionally-based reasons due to a strong personal identification with and involvement in the organization (affective commitment), they can feel attached because of economically-based reasons (continuance commitment), and/or because they hold strong personal feelings of obligation to the organization (normative commitment). The concept of psychological contract consists of two, interrelated components: (a) one's perceived obligations to the organization, and (b) one's perception of what the organization has promised in return (Rousseau, 1995; 1998). It is the first of these two components, perceived obligations, that, potentially, has the greatest overlap with organizational commitment. Employees' perceived obligations have been found to be primarily transactional or relational in nature (MacNeil, 1985; Rousseau, 1989, 1990). Transactional obligations are often narrow in scope, shorter-term, and economically-based (e.g., only performing duties in the job description; staying with an organization until a better opportunity comes along). These obligations are usually very specific terms and involve little emotional investment on the part of the employee. Conversely, relational obligations are those that are more open-ended and relationship-oriented (e.g., caring about one's co-workers and the organization as a whole; going above-and-beyond the job description if it benefits others; remaining loyal even if a better offer comes along).

A case for overlap among these attachment concepts becomes stronger when one considers that affective commitment, normative commitment, and relational obligations all stem from a social-emotional bond to the people, the work itself, and/or the organization as a whole. On the other hand, the concepts of continuance commitment and transactional obligations hinge more on economic bases. Thus the first purpose of this study was to assess the similarity of these concepts by comparing the factor structure underlying measures of perceived obligations and organizational commitment. We accomplished this by using data collected from a sample of health-care employees. In addition to testing empirical relations among the perceived obligations and organizational commitment measures, we examined how these variables related to several cognitive-motivational variables (behavioral intentions and normative beliefs) that have been shown to mediate important work behaviors such as absenteeism, performance, and turnover. Linking perceived obligations and organizational commitment to motivational process variables accomplished two objectives. First it provided a way of testing for concept similarity by examining relations with external criteria, and secondly, linking individual-organizational attachment variables to individual-level motivational processes breaks new ground in that it suggests how perceived obligations and organizational commitment affect important organizational behaviors.

Assessing Measures: Affective Commitment and Relational Obligations

Meyer and Allen (1991) described affective commitment as the employee's emotional attachment to, identification with, and involvement in the organization. This form of commitment develops as the result of positive work experiences (Meyer & Allen, 1997) and the perception that the organization values and supports its employees (see Rhoades, Eisenberger & Armeli, 2001). It is well documented in the research literature that employees who report higher rather than lower levels of affective commitment are more likely to stay with the organization, perform job tasks at higher levels, attend work more frequently, and engage in greater extra-role or citizenship behaviors (see Meyer, Stanley, Herscovitch, & Topolnysky, 2002). It has been suggested that affectively committed employees behave in this manner because they have internalized a general orientation ("mind set") towards pro-organization behavior (Meyer & Herscovitch, 2001; Morrison, 1994). This tendency to act in a general, pro-organization manner would require, or be consistent with, perceptions of a flexible, open-ended and longer-term relational obligation to the organization (Rousseau and Wade-Benzoni, 1995). To the extent that affective commitment and perceived relational obligations are both grounded in the perception that the organization supports, treats, and values its employees in a caring and benevolent manner (Rhoades et al., 2001; Rousseau, 1998), we expect that the behavioral indicators of these two concepts will be empirically indistinct.

Hypothesis 1: Measures of affective commitment and perceived relational obligations will be empirically indistinct.

Assessing Measures: Continuance Commitment and Transactional Obligations

With continuance or cost-based commitment, an employee's feeling of personal attachment stems from the belief that leaving the relationship would incur heavy personal sacrifices, and/or that alternative employment options are limited or nonexistent (Meyer & Allen, 1997). Under these conditions, employees stay with the organization because they "have to;" they feel stuck! Meyer and Allen propose that when continuance commitment is high, employees will not necessarily feel a strong desire to contribute to the organization. If anything, the primary motivation under these conditions will be for employees to continue employment, and consequently, work behavior will likely meet, but not exceed, minimally acceptable standards as specified in the formal job description or employment contract. The meta-analytic results support the view that continuance commitment-behavior relations are much more restricted than that observed for affective commitment (Meyer et al., 2002). Transactional obligations, because they tend to be short-term, narrowly defined, economically-based, with low personal involvement, should mirror the level of continuance commitment (cf. Rousseau & Wade-Benzoni, 1995). To the extent that both continuance commitment and perceptions of transactional obligations develop from rational, cost-benefit assessments of the employment situation, we expect that the behavioral indicators of these two concepts will be empirically indistinct.

Hypothesis 2: Measures of continuance commitment and transactional obligations will be empirically indistinct.

Assessing Measures: Normative Commitment and Relational Obligations

The third component in the commitment model, normative commitment, is based on an employee's feeling of personal obligation to stay with an organization or to remain committed to a course of action (Meyer & Allen, 1997; Meyer & Herscovitch, 2001). Despite factor analytic research that has supported the distinctiveness of affective and normative commitment (e.g., Allen & Meyer, 1996), correlations between these components tend to be high. In addition, affective commitment and normative commitment share the same pattern of correlations with a number of key outcome variables, although these correlations tend to be stronger for affective commitment (Meyer et al., 2002). Meyer and Allen (1997) have speculated that the parallel findings often found in research with affective and normative commitment may indicate that "some types of positive experiences influence feelings of emotional attachment and feelings of obligation at the same time" (p. 63). Perhaps for these reasons, the majority of commitment research examining the three-component model has focused on affective and continuance commitment.

Because of the implied exchange of obligations, normative commitment is viewed as being most closely linked to psychological contracts. Meyer and colleagues (Meyer & Allen, 1997; Meyer & Herscovitch, 2001), for example, speculated that it was this notion of obligations that made normative commitment relevant to psychological contracts, particularly perceived relational obligations. Recent research by Irving and Bobocel (2001) found that relational obligations accounted for a significant amount of variance in normative commitment, even after controlling for affective commitment. These findings suggest that relational obligations may be an important predictor in the development of normative commitment. However, before we can conclude that this is the case, it is important to establish whether measures of relational obligations are empirically distinct or indistinct from measures of normative commitment.

Hypothesis 3: Measures of normative commitment and relational obligations will be empirically indistinct

Assessing Relations to Motivational Process Variables

Another way of assessing the degree of similarity or overlap between the three components of organizational commitment and employee's perceived obligations was to assess their relations to other concepts within the broader nomological network. Of particular interest here is to observe how the attachment concepts relate, if at all, to several motivational process variables with known links to actual on-the-job behaviors such as absenteeism, job performance, and turnover. The rationale and description of a general process model now follows.

Organizational researchers are interested in studying organizational commitment and the component of psychological contracts reflecting employees' perceived obligations because each is believed to play a role in determining work behaviors, such as attendance, job performance, citizenship behavior/contextual performance, and turnover. Although many empirical studies report bivariate correlations between one or more components of commitment and a variety of different behavioral outcomes (for reviews, see Meyer & Allen, 1997; Meyer et al., 2002), very little research attention has been focused on explaining how an attitudinal disposition, like organizational commitment, affects behavior. The same is true for perceived obligations. While there is growing empirical evidence that measures of psychological contract correlate with work outcomes such as citizenship behavior (e.g., Robinson & Morrison, 1995), turnover (e.g., Turnley & Feldman, 1999) and job performance (see Irving & Gellatly, 2001), few studies have examined how perceived obligations impact behavior. It is much more common to discuss the behavioral

implications of psychological contract within the context of unmet expectations, contract violations, or perceptions of breach in the employment relationship (see Rousseau & Tijoriwala, 1998). Thus, linking organizational commitment and employees' perceived obligations to motivational process variables fills a gap in the literature, and provides us a way to evaluate the similarity or distinctiveness of the two attachment concepts.

The vast majority of studies that have examined motivational processes have focused on how situational events or factors (e.g., assigned performance goals, feedback and reward systems, social stimuli) affect the cognitive mechanisms (e.g., intentions or personal goals, perceived reward contingencies, perceived norms) that drive behavior (for a comprehensive review of the micro-level motivation theories, see Mitchell, Thompson, & George-Falvy, 2000). More recently, research in work motivation has started to move beyond situational determinants and look at how dispositional variables such as personality traits impact the cognitive-motivational "machinery" that regulates and controls human action (see Barrick, Mount, & Strauss, 1993; Gellatly, 1996). In this study we attempt to push further and test whether the nature of one's attachments to his or her organization impact criterion-relevant intentions and normative perceptions that play a role in directing and energizing behavior.

Our focus is on turnover intentions and normative perceptions in several criterion domains (absenteeism, organizational citizenship behavior/contextual performance, and task performance). There is some precedent for this direction in the broader organizational behavior literature. A consistent finding, across situations, is that the relationship between affective commitment and turnover is mediated by a cognitive process variable, turnover goals or intentions (see Tett & Meyer, 1993), and we also see that violations of the psychological contract are associated with turnover intentions (e.g., Turnley & Feldman, 1999). The links to normative perceptions are less clear. Nicholson and Johns (1985) identified the psychological contract as playing a key role in shaping the nature of the absence culture, and, in theory, the nature of the psychological contract, and how this impacts an alignment of personal and organizational goals, should affect normative perceptions that drive absenteeism behavior (e.g., Gellatly & Luchak, 1998; Harrison & Shaffer, 1994; Martocchio, 1994). What is not known is the relative role of transactional versus relational obligations in shaping absence norms, nor do we know if measures of organizational commitment are linked to normative perceptions. Finally, it is not clear whether these links to absence norms extend to the perceived norms that govern other criterion behaviors, such as OCB (Organ & Paine, 1999) or contextual performance (Borman & Motowidlo, 1993), and task performance (Feldman, 1984; Hackman, 1992).

Thus, to the extent that measures of affective commitment, normative commitment, and relational obligations all reflect socio-emotional attachments to the organization, we expect that all three measures will correlate negatively with turnover intentions, and positively with attendance norms and performance norms. Conversely, the common rational-economic bases for continuance commitment and transactional obligations, and a few studies showing weak negative relations with performance criteria (see Meyer et al., 2002; Irving & Gellatly, 2001), suggest that both of these variables will correlate with the motivational process variables the same way (negative). However, the following hypotheses should be considered exploratory given the lack of empirical precedent.

Hypothesis 4: Measures of affective commitment, normative commitment, and relational obligations will correlate negatively with turnover intentions, and positively with measures of attendance norms, contextual-performance norms, and task-performance

norms.

Hypothesis 5: Measures of continuance commitment and transactional obligations will correlate negatively with turnover intentions, and with the measures of the three criterion norms.

Method

Employee Survey and Participants

Almost 3,000 permanent full-time and part-time, non-management employees (N=2,972) of a Canadian-based health-care organization served as the sample population. This particular organization was comprised of a chronic-care facility and two comparable acute-care facilities. While the emphasis of a chronic-care facility is different from that of an acute-care facility (longer- versus shorter-term stays by patients), the occupational mix within the two types of facilities was similar, involving a range of non-management occupations such as registered nurses, nursing aids, housekeepers, kitchen helpers, maintenance workers, and administrative staff. Approximately 90% of the sample population were unionized, and consequently, support for this project from local union leaders was critical. Surveys were distributed internally to members of the sample population, and returned directly to the researchers via Canada Post. All employees were informed that their participation in this study was voluntary and that their individual responses would remain confidential. In total, 607 surveys (20.4%) were returned and served as the respondent sample. Missing data on the study measures reduced the final respondent sample to 583.

Measures

Demographic and Job-Context Characteristics. Each respondent was asked to provide some general information about themselves and the job environment in which they worked. We were given permission to assess each respondent's age, sex, and how long they had worked at the organization (tenure), and inquire if they were full or part-time and if they worked in a chronic-care or acute-care facility. The average age of respondents was 46 years. Approximately 86% of respondents were female and had been employed at this organization for an average of 11 years. A little over half of survey respondents (56%) were classified as full-time employees, and roughly 80% of the respondent sample reported working in an acute-care facility. The above-mentioned demographic and job-context characteristics approximated the proportions observed in the overall organization.

Employees' Perceived Obligations. We assessed this component of the psychological contract by asking respondents to indicate the extent to which they made a number of personal obligations to their employer. Responses were made using a 5-point scale (1=minimally or not at all; 5=very large extent). Six items, reflecting transactional obligations, were averaged to form an overall scale ($\alpha = .72$). Two transactional sub-scales of three items each, Narrow ($\alpha = .74$) and Short-term ($\alpha = .68$), were computed by averaging responses to their respective items (see Rousseau, 2000). Six items, reflecting relational obligations, were averaged to form an overall scale ($\alpha = .75$). Two relational sub-scales, Loyalty ($\alpha = .72$) and Security ($\alpha = .72$), were computed by averaging responses to their respective items.

Organizational Commitment. We assessed the three forms of organizational

commitment, affective commitment, continuance commitment, and normative commitment, using a condensed form of the scales described by Meyer and Allen (1991; 1997). Each form of commitment was assessed using the three items with the highest loadings on their respective commitment factor (see Meyer, Allen, & Smith, 1993). For each item, respondents were asked to indicate the extent of their personal agreement using a 6-point scale (1=strongly disagree; 6=strongly agree). Item responses were then averaged to form scales for affective commitment ($\alpha = .89$), continuance commitment ($\alpha=.77$), and normative commitment ($\alpha=.80$). Our three-item scales were found to be slightly more reliable than the average, sample-weighted reliability estimates for 6- and 8-item scales across studies and organizational settings (Meyer et al., 2002).

Motivational Process Variables. Several motivational process variables were assessed including respondents' turnover intentions and several normative perceptions across three criterion domains. Respondents' intentions to leave the organization were assessed using the following three items previously used by Colarelli (1984). Respondents indicated the extent of their personal agreement with these three items on a 6-point scale (1=strongly disagree; 6=strongly agree) ($\alpha=.72$). We assessed perceived norms by asking respondents to reflect on their observations of others in their work areas and report behavior that was typical, average, or normal. To facilitate this process, we used the relative percentile method (RPM; Goffin, Gellatly, Paunonen, Jackson, & Meyer, 1996). The RPM requires raters to compare the target's behavior (in this case, the behavior of their immediate coworkers) to a reference group (in this case, the organizational "average"). The RPM consists of a 101-point scale (ranging from 0 to 100). The 15th, 50th, and 85th points on the scale were anchored, respectively, with the terms "Below Average," "Average for this Organization," and "Above Average." Respondents were then instructed to mark the point along this scale that best reflected their observations. In total, respondents made seven RPM ratings: (a) persisting with enthusiasm and extra effort on the job; (b) volunteering to do tasks that are not formally part of the job; (c) helping and cooperating with others (without being asked); (d) following organizational rules and procedures; and (e) endorsing, supporting, and defending organizational objectives; (f) performing one's formal duties as outlined in the job description; and (g) attendance. The first five RPM ratings (a-e) corresponded to Borman and Motowidlo's (1993) five dimensions of contextual performance. These five ratings were averaged to form a measure of the perceived contextual-performance norm ($\alpha=.85$). The sixth and seventh RPM ratings provided measures of the perceived task (technical) performance norm, and the perceived attendance norm. Although we were unable to compute the reliability of the two latter measures, it has been documented that .60 is an upper bound estimate of single-item performance ratings (King, Hunter & Schmidt, 1980).

Results

Descriptive Statistics

Means, standard deviations, and zero-order correlations among the study variables are displayed in Table 1. The pattern of observed relationships are now reviewed.

Insert Table 1 about here

Demographic and Job Context. Several significant relationships among the demographic and job context variables were noted. A positive correlation between sex and job

status (FT/PT) indicated that respondents with part-time job status tended to be female rather than male, which confirms the pattern in the sample population. Positive relations among facility type, age and sex indicate that older and more experienced employees tended to be located in acute-care rather than chronic care facilities. Negative correlations between facility type and both transactional (narrow) and relational obligations (loyalty and security) and normative commitment, suggested that respondents who worked in the acute-care facilities perceived fewer personal obligations and lower normative commitment than did employees who worked the chronic-care facility. Older respondents reported higher levels of affective and normative commitment, lower turnover intentions, and felt greater relational obligations (loyalty and security) to the organization than did younger employees. A similar pattern was observed for organizational tenure. Employees with longer work histories (tenure) reported higher levels of affective and continuance commitment, lower turnover intentions, and greater relational obligations (loyalty and security) than did respondents who were newer to the organization.

Employees' Perceived Obligations. Positive relations between the two transactional obligation measures and between the two relational obligation measures were expected. Negative relations were found between transactional obligations (short-term) and both relational obligations (loyalty and security). Except for a positive relationship between transactional obligation (narrow) and continuance commitment, both transactional obligation measures were correlated negatively with all of the commitment measures. This pattern of correlation suggests that respondents who report higher levels of continuance commitment hold a narrow view of their obligations to the job, and, overall, respondents who perceive greater transactional obligations tend to report lower levels of organizational commitment. Moreover, respondents who perceive narrow or short-term obligations report higher levels of turnover intentions and perceive lower contextual performance norms. A very different pattern of correlation emerges when we look at relational obligations. Respondents who perceived greater relational obligations (loyalty) reported higher levels of affective and normative commitment, reported lower turnover intentions, and perceived higher attendance, contextual-performance, and task-performance norms than did respondents who did not feel these obligations. A similar pattern of correlations were observed for relational obligations (security), except that a positive relation was evident with continuance commitment, and the relationship with the task performance norm was not statistically different from zero.

Organizational Commitment. The pattern of observed correlations mirrors known relations among the three commitment components as determined by a recent meta-analytic literature review (Meyer et al., 2002). In our study we see further evidence that affective and continuance commitment are orthogonal concepts, yet positive correlations are evident between normative and affective commitment and between normative and continuance commitment. Affective commitment is negatively related to turnover intention, but positively related to all three perceived norms. Respondents who reported higher levels of affective commitment appear less like to leave the organization, and perceive higher norms for attendance, contextual performance, and task performance than do employees with lower levels of affective commitment. A similar, but weaker, pattern was seen for normative commitment. Respondents reporting higher normative commitment had lower turnover intentions, and perceived higher attendance and contextual performance norms. Continuance commitment was negatively related with turnover intention, but no significant relations with normative perceptions were found. Evidently, having high levels of continuance commitment reduced the likelihood of leaving but had no effect on normative perceptions.

Motivational Process Variables. Among the motivational process variables, we see that turnover intention is negatively related to all three perceived norms. Respondents who perceive a lower norm for attendance, contextual performance, and task performance in their work areas report greater likelihood of leaving in the next 12 months than do respondents who perceive higher behavioral norms. Strong positive relations were evident among all three normative perceptions, with the strongest correlation between the contextual-performance and task-performance norms.

Assessing Measures: Employees' Perceived Obligations and Organizational Commitment

We then subjected our measures of perceived obligations and organizational commitment to a series confirmatory factor analyses using *LISREL* 8.12 (Jöreskog & Sörbom, 1993). The purpose of this analysis was to assess the degree to which these measures defined distinct concepts. The results of this assessment are presented in Tables 2 and 3.

Insert Tables 2 and 3 about here

LISREL provides maximum likelihood estimates of path coefficients and a chi-square test that indicates the extent to which the specified model can reproduce the pattern of observed variances and covariances among the variables under investigation. In addition to the chi-square test, we assessed model fit using three additional indices. The goodness-of-fit index (GFI) is a stand-alone index, ranging from 0-1, that describes the relative amount of observed variances and covariances accounted for by the model. The next three indicators, the normed fit index (NFI), non-normed fit index (NNFI), and the comparative fit index (CFI) (see Bentler, 1990; Bentler & Bonett, 1980), evaluate the incremental fit of a model in relation to a baseline model, which is often the most restricted or null model where all the variables are assumed to be uncorrelated (see Bollen 1989; Marsh, Balla, & McDonald, 1988; McDonald & Marsh, 1990; Tucker & Lewis, 1973). Our final index, parsimony normed fit index (PNFI), considers parsimony of the fit by taking into account degrees of freedom. All else equal, models with higher PNFI values are more desirable. The values of the fit indices usually vary between 0-1. Generally, fit indices with values approaching .95 indicate that there is a good fit between the hypothesized factor model and the observed data (e.g., Hu & Bentler, 1999; Medsker, Williams, & Holahan, 1994).

In total we proposed and tested the relative fit of four hypothetical measurement models in addition to the null or independence model: (Model A) a model whereby all of the commitment and perceived-obligation items were hypothesized to load on the same factor; (Model B) a model that tested if the socio-emotional items (affective commitment, normative commitment, and relational obligations – loyalty and security) loaded on one factor and the rational-economic items (continuance commitment and transactional obligations – narrow and short-term) loaded on another factor; (Model C) a model whereby the commitment items loaded on one of three factors (affective commitment, continuance commitment, and normative commitment), and the perceived-obligation items loaded on one of two factors (transactional obligations or relational obligations); and (Model D) a model where the commitment items loaded on one of three factors (see above) and the perceived-obligation items loaded on one of four factors (transactional obligation – narrow, transactional obligation – short-term, relational obligation – loyalty, relational obligation – security). An examination of the fit indices in Table 2 shows that the overall fit improves as one moves from the most restricted model to the least restricted model. Clearly, seven distinct, but correlated latent factors provide the best and most parsimonious fit to the observed data. The item loadings on the seven factors are displayed in Table 3. In general,

items load reasonable well, and as expected, on their respective factors.

Assessing Relations to Motivational Process Variables

The results of hierarchical regression analyses are presented in Tables 4 and 5. The four criterion measures, in turn, were subjected to the following analyses. In Step 1, we regressed the criterion on five demographic and job-context variables (job status FT/PT, type of facility, sex, age, and tenure). The commitment and perceived-obligation measures were entered into the regression equation on Steps 2 and 3. In the first series of analyses (see Table 4), for each criterion we entered the commitment variables on Step 2 and the perceived obligation variables on Step 3. This procedure was reversed in the second series of analyses as the perceived obligation variables were entered on Step 2 and the commitment variables entered on Step 3 (see Table 5). This procedure allowed us to control for demographic and job-context effects, and test whether unique criterion variance was explained by the variables entered on Step 3 above and beyond the variance predicted by the variables entered on Step 2. Overall our results very clearly show that both organizational commitment and employees' perceived obligations account for unique criterion variance. For all of the criterion measures, perceived obligations explained unique criterion variance when the organizational commitment measures were controlled (Table 4), and vice versa (Table 5).

Among the study variables, significant predictors (betas) of turnover intentions included sex of the respondent (negative), affective commitment (negative), normative commitment (negative), transactional obligations – short-term (positive), and relational obligations – security (negative). Significant predictors of all three normative perceptions included affective commitment (positive) and relational obligations – loyalty (positive). Age was a significant predictor of the perceived attendance norm (negative). Collectively the study variables explained 37.2% of the variance in turnover intentions, 10.8% of the variance in perceived attendance norm, 13.9% of the variance in perceived contextual-performance norm, and 9.4% of the variance in the perceived task-performance norm.

Insert Tables 4 and 5 about here

The results of our study failed to support Hypotheses 1 and 3. Although measures of affective and normative commitment and relational obligations were correlated, the CFA analysis suggested that these measures are distinct. When we examined links to the motivational process variables we generally see correlations in the predicted direction, and evidence that both affective commitment and relational obligations explain unique criterion variance. However, when the criterion was turnover intentions, normative commitment did account for variance not explained by relational obligations. Collectively, our findings suggest that affective commitment, normative commitment, and relational obligations are correlated, but distinct concepts. Hypothesis 2 was not supported either. Our results show that the correlations between continuance commitment and the two forms of transactional obligations were positive and negative, respectively. Moreover, the CFA results show these measures were distinct, and transactional obligations accounted for variance in turnover intentions not explained by continuance commitment. Thus continuance commitment and transactional obligations appear to be distinct as well. The results provide general support for Hypothesis 4 but mixed and inconsistent support for Hypothesis 5.

Discussion

The main purpose of this study was to compare two forms of individual-organizational attachment, employees' perceived obligations and organizational commitment. We conducted a series of internal analyses, comparing the factor structure of the measures that appeared to be similar. We also examined the extent to which these measures related to a series of motivational process variables in the broader nomological network. Our findings clearly show that measures of organizational (affective, continuance, and normative) commitment are correlated with, but empirically distinct from measures of transactional and relational obligations. The results also show that while the measures may be distinct the socio-emotional forms of attachment (affective commitment, normative commitment, and relational obligations) relate to criteria in similar ways. However, the economic forms of attachment tend to relate more independently with external criteria.

Clarifying relations among socio-emotional and economic attachment allows research to explore further relationships. We found, as have others (see Meyer et al., 2002), a relatively strong positive correlation between affective commitment and normative commitment, and that both forms of commitment relate to perceived obligations in the same way. Employees who felt committed because of an emotional bond to the organization (affective or normative commitment) were found to have a longer-term rather than a shorter-term perspective on the employment relationship, and were more likely to perceive obligations that encompassed a broad rather than a narrow range of performance obligations than did respondents who reported lower levels of affective and normative commitment. This finding raises some interesting research questions. Are employees with high levels of affective/normative commitment more resistant to short-term, or episodic psychological contract breaches or violations (see Morrison & Robinson, 1997; Robinson, 1996; Robinson & Morrison, 1995) than those who have low levels of commitment? Do the different forms of commitment distort or alter one's view of his/her organization and the exchange relationship in general? Although we have evidence that perceived organizational obligations (via perceived organizational support) influences affective commitment (Rhoades et al., 2001), it remains to be seen if affective commitment and relational obligations color the way the employee views his or her organization. In this study we see that the nature of employees' organizational commitment and perceived obligations impacts normative perceptions, and, in doing so, behavior. Proponents of social information processing theory (e.g., Salancik & Pfeffer, 1978) would suggest that work attitudes are often constructed on the basis of available and salient social cues. Our study goes one step further and suggests that perception and interpretation of social and environmental cues may reflect attitudinal dispositions. More work is needed to clarify relations between attachment concepts and perception and interpretation of one's environment.

Irving and Bobocel (2001) have suggested that one's understanding of his/her relationship with the organization may be an important antecedent condition for normative (and perhaps affective) commitment. Employees who hold longer-term, relationship-based contracts with their organizations may see the need to reciprocate, in kind, with strong feelings of obligation to the organization as well as with high levels of personal involvement and identification. On the other hand, the causal direction may go the other way. We may find that people who have high levels of affective (and perhaps normative) commitment may be "predisposed" to exhibit a wide-range of pro-organization behaviors (e.g., above-average attendance, high performance, altruistic and conscientious extra-role behaviors), which in turn, facilitates the development of relational rather than transactional psychological contracts (see

Morrison, 1994). Future research that explores the moderating role of commitment on psychological contract violations is needed, as is work that examines the causal links between affective/normative commitment and psychological contracts.

It was expected that respondents with high levels of continuance commitment (i.e., when individual-organizational attachment is grounded in cost-benefit analysis and the perceived availability of alternative employment options) would be more likely to hold shorter-term, narrowly-focused transactional obligations, and less likely to have relational obligations than would respondents who reported low levels of continuance commitment. Instead, we found that continuance commitment correlated positively with elements of transactional *and* relational contracts. We found that respondents reporting high levels of continuance commitment held a narrow view of the job in terms of performance obligations (e.g., only perform duties for which I am compensated; one perform specific duties I agreed to do when hired), but valued a longer-term employment relationship (e.g., no plans to look for a job elsewhere; feel an obligation to remain with this department indefinitely). This finding may help explain why employees who report high levels of continuance commitment, on average, are rated as less productive than those employees who have low levels of continuance commitment or when the level of affective commitment is high (see Meyer & Herscovitch, 2001; Meyer et al., 2002). Organizations who attempt to lock in their employees through non-portable pension plans, generous compensation packages, or provide extensive training in organization-specific skills may, in fact, be fostering continuance commitment and unintentionally encouraging the development of transactional obligations. Future work is needed to examine further the links between continuance commitment and perceived obligations, and the conditions that strengthen these relations.

As with prior work showing links between turnover intention and both organizational commitment (e.g., Tett & Meyer, 1993) and psychological contract (e.g., Turnley & Feldman, 1999), our findings explicitly link perceptions of individual-organizational attachment to micro-level motivational process variables across several criterion domains. When the criterion is task performance, perceived norms have been shown to impact other cognitive mechanisms such as self-efficacy strength, performance valence, and personal goals or behavioral intentions (see Locke & Latham, 1990). Moreover, when the criterion is absenteeism, perceived norms have been linked clearly to attendance motivation and absence culture (Johns, 1997). Establishing that the cognitive-motivational processes that mediate goal-setting activities are influenced by attitudinal dispositions opens up new research directions. We need to also think carefully about the causal relationship between work attitudes and the social context. It is also quite plausible that the nature of our respondents' commitment to their organization and their interpretation of their employment relationship via the psychological contract, including perceptions of fair social exchange, is shaped by social information in the work environment (for a discussion of social information processing theory and the implications of this model for work attitudes, see Salancik and Pfeffer, 1978). More work is clearly needed!

One of the limitations of this study is the fact that all measures were self-report, raising concerns the relationships we observed resulted from common method variance. Lindell and his colleagues (Lindell & Brandt, 2000; Lindell & Whitney, 2001) have argued that researchers may be able to assess the extent to which common method variance is a problem by including at least one scale that is theoretically unrelated to at least one other scale in the questionnaire, so that one may have a priori justification for predicting a zero correlation. A recent meta-analysis (Meyer et al., 2002) of the three-component model of organizational commitment suggests that the correlation between affective and continuance commitment across a large number of studies

approaches zero. In the present study we observed a non-significant correlation between continuance commitment and affective commitment factors ($r=.07$). Thus, we have little reason to believe that common method variance was a serious problem in our study. Other limitations include the use of single-item measures and cross-sectional design. Future work is needed to explore temporal relations among these concepts (cf. Rhoades et al., 2001).

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Table 1

Descriptive Statistics and Zero-Order Correlations

Measures	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16																	
1. Job Status (FT/PT)	1.44	.50	(---)														
2. Type of Facility	1.83	.37	-.010	(---)													
3. Sex	1.88	.32	.219	-.025	(---)												
4. Age	46.43	9.80	-.028	.110	.001	(---)											
5. Tenure	11.18	7.98	-.056	.208	.063	.500	(---)										
6. Transactional Obligations (Narrow)	2.18	.90	.035	-.107	-.062	-.056	-.016	(.74)									
7. Transactional Obligations (Short-term)	1.90	.85	.007	.052	-.013	-.026	-.013	.332	(.68)								
8. Relational Obligations (Loyalty)	3.50	.87	-.001	-.124	-.077	.148	.114	-.034	-.209	(.72)							
9. Relational Obligations (Security)	2.45	1.02	-.004	-.101	-.024	.152	.163	.056	-.205	.403	(.72)						
10. Affective Commitment	4.19	1.07	.032	-.082	.055	.135	.163	-.130	-.247	.433	.383	(.89)					
11. Continuance Commitment	3.66	1.24	-.056	-.069	.046	.093	.213	.155	-.120	.066	.168	.072	(.77)				
12. Normative Commitment	3.64	1.17	-.011	-.228	-.017	.141	-.003	-.114	-.358	.451	.380	.543	.196	(.80)			
13. Turnover Intention	2.48	1.17	-.070	.024	-.126	-.166	-.121	.117	.343	-.257	-.407	-.457	-.152	-.459	(.72)		
14. Attendance Norm	61.59	18.58	-.002	-.024	-.001	-.047	.042	-.069	-.017	.194	.144	.278	.054	.148	-.148	(---)	
15. Contextual Performance Norm	58.99	13.17	.045	.032	-.005	.049	.074	-.113	-.137	.249	.100	.326	-.013	.217	-.247	.596	(.85)
16. Task Performance Norm	68.19	16.65	.034	.067	.019	.014	.059	-.061	-.071	.208	.073	.252	-.005	.087	-.167	.556	.702

Note. Listwise deletion of missing data, *N* = 428; *r* > .0948, *p* < .05 (2-tail test); Scale reliabilities (coefficient alpha) are presented in the diagonal. Job Status (1=Full-time; 2=Part-time); Type of Facility (1=Chronic care; 2=Acute care), Sex (1=Male; 2= Female).

Table 2

Confirmatory Factor Analysis: Measures of Employees' Perceived Obligations and Organizational Commitment

Models	χ^2	<i>df</i>	GFI	NFI	NNFI	CFI	PNFI
Null	4838.56	210	NA	NA	NA	NA	NA
Model A	2557.37	189	.66	.47	.43	.49	.42
Model B	2132.94	188	.70	.56	.53	.58	.50
Model C	944.14	179	.86	.80	.81	.83	.69
Model D	428.96	168	.93	.91	.93	.94	.73

Note. *N*=583. Null: Independence model. Model A: One factor. Model B: Two factors (1. Affective commitment, Normative commitment,

Relational obligations – loyalty and security; 2. Continuance commitment, Transactional obligations – narrow and short-term). Model C: Five factors (1. Affective commitment; 2. Continuance commitment; 3. Normative commitment; 4. Transactional obligations – narrow and short-term; 5. Relational obligations – loyalty and security). Model D: Seven factors (1. Affective commitment; 2. Continuance commitment; 3. Normative commitment; 4. Transactional obligations – narrow; 5. Transactional obligations – short-term; 6. Relational obligations – loyalty; 7 Relational obligations – security). GFI = Goodness of Fit Index; NFI = Normed Fit Index; NNFI = Non-Normed Fit Index; CFI=Comparative Fit Index; PNFI=Parsimony Normed Fit Index; NA = not applicable

Table 3**Standardized Factor Loadings**

Items	TN	TS	RL	RS	CC	AC	NC
I feel an obligation to perform only duties for which I am compensated.	.59						
I feel an obligation to do only what I am paid to do.	.78						
I feel an obligation to only perform specific duties I agreed to when hired.	.73						
I feel an obligation to quit whenever I want.			.84				
I feel an obligation to leave (quit) any time I choose.			.80				
I feel an obligation to work here for a limited time only.			.37				
I feel an obligation to take this department's concerns personally.			.57				
I feel an obligation to protect my department's image.				.63			
I feel an obligation to commit myself personally to this department.				.82			
I feel an obligation to remain with this department indefinitely.					.68		
I feel an obligation to not look for a job elsewhere.					.64		
I feel an obligation to make no plans to work anywhere else.					.68		
I feel that I have too few options to consider leaving this organization.						.66	
Too much of my life would be disrupted if I decided I wanted to leave my organization now.						.83	
It would be very hard for me to leave this organization now, even if I wanted to.						.77	
This organization has a great deal of personal meaning for me.							.79
I feel a strong sense of "belonging" to this organization.							.95
I feel like "part of the family" in this organization.							.86
I owe a great deal to my organization.							.71
I would not leave this organization right now because I feel an obligation to the people in it.							.73
The organization deserves my loyalty.							.79

Note: Parameter estimates from the completely standardized 7-factor solution. TN (Transactional obligations – narrow), TS (Transactional obligations - short-term), RL (Relational obligations – loyalty), RS (Relational obligations – security), CC (Continuance commitment), AC (Affective commitment), and NC (Normative commitment)

Table 4

Hierarchical Regression Analyses: The Effects of Perceived Obligations on Turnover Intention and Perceived Norms

Performance Criteria:	Turnover Intention				Contextual Performance		Task	
			Attendance Norm		Norm		Norm	
	Beta	ΔR^2	Beta	ΔR^2	Beta	ΔR^2	Beta	
<hr/>								
Step 1: Demographic and Job Context Variables		.048		.009		.007		.012
Job Status (FT/PT)	-.039		-.003		.036		.015	
Type of Facility	-.065		.015		.069		.096	
Sex	-.101		-.010		-.012		.017	
Age	-.062		-.126		-.033		-.060	
Tenure	-.004		.038		.041		.030	
Step 2: Organizational Commitment		.244		.078		.110		.061
Affective Commitment	-.206		.249		.257		.239	
Continuance Commitment	-.036		.052			-.044	-.007	
Normative Commitment	-.225		-.025			.047	-.088	
Step 3: Perceived Obligations		.080		.021		.022		.021
Transactional – Narrow	.020		-.094		-.058		-.024	
Transactional – Short Term	.199		.096		-.030		-.018	
Relational – Loyalty	.078		.122		.146		.170	
Relational – Security	-.228		.025		-.076		-.055	

Note. Numbers in bold type are significant ($p < .05$). Beta = Standardized regression coefficients computed at the end of Step 3. Job Status (1=Full-time; 2=Part-time); Type of Facility (1=Chronic-Care; 2=Acute-Care), Sex (1=Male; 2= Female).

..

Table 5

Hierarchical Regression Analyses: The Effects of Organizational Commitment on Turnover Intention and Perceived Norms

Performance Criteria:	Turnover Intention		Attendance Norm		Contextual Performance Norm		Task Norm	
	Beta	ΔR^2	Beta	ΔR^2	Beta	ΔR^2	Beta	
	ΔR^2							
<hr/>								
Step 1: Demographic and Job Context Variables		.048		.009		.007		.012
Job Status (FT/PT)	-.039		-.003		.036		.015	
Type of Facility	-.065		.015		.069		.096	
Sex	-.101		-.010		-.012		.017	
Age	-.062		-.126		-.033		-.060	
Tenure	-.004		.038		.041		.030	
Step 2: Perceived Obligations		.233		.055		.075		.047
Transactional – Narrow	.020		-.094		-.058		-.024	
Transactional – Short Term	.199		.096		-.030		-.018	
Relational – Loyalty	.078		.122		.146		.170	
Relational – Security	-.228		.025		-.076		-.055	
Step 3: Organizational Commitment		.092		.044		.057		.035
Affective Commitment	-.206		.249		.257		.239	
Continuance Commitment	-.036		.052		-.044		-.007	
Normative Commitment	-.225		-.025		.047		-.088	

Note. Numbers in bold type are significant ($p < .05$). Beta = Standardized regression coefficients computed at the end of Step 3. Job Status (1=Full-time; 2=Part-time); Type of Facility (1=Chronic-Care; 2=Acute-Care), Sex (1=Male; 2=Female).

ABSTRACTS / RÉSUMÉS

ASAC 2003
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RESPONSES TO AN INTERPERSONAL OFFENSE AT WORK: THE EFFECTS OF EQUITY SENSITIVITY AND STATUS

Most employees will inevitably be offended at some time by another coworker. The present study considers both individual and situational factors to determine how employees respond to an offense – and whether they forgive, reconcile with, or seek revenge against the offender.

HOSPITAL RESTRUCTURING AND DOWNSIZING PROCESSES AND NURSING STAFF PERCEPTIONS OF HOSPITAL FUNCTIONING

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This research reports results of a study of nursing staff perceptions of hospital functioning under conditions of hospital restructuring and downsizing. Stressors derived from restructuring significantly predicted perceptions of hospital functioning, as did workload and hospital programs for survivors of restructuring. Implications for hospital administration are drawn.

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PREDICTING BURNOUT FROM ESTIMATES OF EMPOWERMENT THREE YEARS EARLIER

A longitudinal design was used to test a model linking the effects of structural (Kanter 1977) and psychological empowerment (Spreitzer, 1995) at one point in time to nurses' reports of burnout three years later. The results found that perceived access to workplace empowerment structures predicted psychological empowerment at Time 1, which in turn predicted burnout at Time 2.

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FAIRNESS HEURISTIC THEORY: A STRUCTURAL EQUATION MODELING ANALYSIS

Prior research on fairness heuristic theory of organizational justice has shown that procedural information is used when distributive information is lacking. This study extends consideration of fairness heuristic by testing an ambiguous distributive outcome. Structural equation modeling is used to measure the directionality of procedural and distributive justice effects.

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SITUATIONAL STRENGTH AS A MODERATOR OF THE RELATIONSHIP BETWEEN PERSONALITY AND BEHAVIOUR

In this research we examined whether behavioural intentions were influenced by the strength of the situation, the personality characteristics of the people involved and the interaction between these factors. A role-playing experiment was conducted that was designed to manipulate situational strength and that measured propensity to withhold effort as the dependent variable. Results included main effects for situational strength and for extraversion and provided support for the hypothesized interaction between situational strength and personality.

ASAC 2003
Halifax, Nova Scotia

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MANAGER COMMUNICATION COMPETENCIES – EMPLOYEE PERSPECTIVES ON HIGH QUALITY RELATIONSHIP DEVELOPMENT

This study describes supervisory communication practices and choices perceived by employees to contribute to good workplace relationships. Eighty employees described critical communication incidents in face-to-face, handheld text and handheld voice situations that shaped the relationship with their managers. The results identify themes with respect to the strategic use of message content and tone, media selection and message timing.

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Halifax, Nova Scotia

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PERCEPTION VS. “REALITY”: A COMPARISON OF OBJECTIVE AND SUBJECTIVE JOB STRESSORS AND STRESS OUTCOMES

Because the job stress literature is criticized for its use of subjective stress measures, we examined both perceived and actual stressors and stress outcomes. Perceived control was associated with decreased perceived stress, after holding actual control and negative affectivity constant. Perceived control also was associated with decreased diastolic blood pressure, after holding actual control constant.

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PERSON-JOB FIT ON THE DIMENSION OF POLYCHRONICITY: AN EXAMINATION OF LINKS WITH POSITIVE AND NEGATIVE AFFECT

This research examined the extent to which person-job fit, with respect to polychronicity, is related to positive and negative affect at work. Participants were employees of Canadian organizations ($N = 746$). Polynomial regression analyses revealed that fit was related to neither positive nor negative affect. Rather, polychronicity demands of the job were related to negative affect.

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SYNDROME DU SURVIVANT CHEZ LES BABY-BUSTERS : UNE ÉTUDE QUALITATIVE

La présente étude analyse les manifestations du syndrome du survivant chez un petit groupe d'employés appartenant à la génération des baby-busters. Suite à une suppression

massive des postes de travail dans leur département, ces jeunes survivants présentent des réactions psychologiques et comportementales passablement divergentes de celles généralement observées. Effectivement, l'insécurité relativement à la problématique de l'emploi, l'insatisfaction quant au choix des sacrifiés, la méfiance envers l'employeur et l'aversion à la prise d'initiatives ou de risques ne sont pas présentes chez tous les sujets interrogés. De plus, la totalité de ceux-ci n'a exprimé ni sentiment de trahison et de colère envers l'employeur, ni sentiment de culpabilité du fait d'avoir été épargnés.

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LA SOCIALISATION ORGANISATIONNELLE : ÉLÉMENTS POUR UNE PERSPECTIVE CONSTRUCTIVISTE

Ce travail consiste dans un premier temps en une synthèse critique des approches théoriques à ce jour dominantes en matière de socialisation organisationnelle, et souligne le caractère léger de la perspective constructiviste qui étaye la plupart d'entre elles. Puis, dans un deuxième temps, une perspective constructiviste plus consistante appuyée sur la théorie des mondes sociaux et arènes d'action de Strauss est proposée et discutée.

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L'IMPORTANCE DES REPRÉSENTATIONS COLLECTIVES EN CONTEXTE DE FUSION-ACQUISITION: UNE NOUVELLE FAÇON DE DÉFINIR LES DÉFIS ASSOCIÉS À L'INTÉGRATION

Définie comme une stratégie de croissance permettant de mettre à profit un surplus de ressources et d'exploiter des opportunités, la diversification n'a pas généré que des performances positives. Au cours des années 1980, un double courant de recherche a émergé, le premier, attribuant au concept de « *relatedness* » une dimension avant tout subjective (Prahalad et Bettis, 1986). Un second courant accordant une importance dominante au processus d'intégration. Notre recherche longitudinale intègre ces deux dimensions puisque, à travers l'analyse d'un cas de diversification reliée, elle identifie le principal défi associé à l'intégration comme étant la réconciliation des schèmes mentaux qu'entretiennent les acteurs des organisations en présence.

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SATISFACTION WITH A MERGER, ITS IMPACT ON ORGANIZATIONAL COMMITMENT AND TURNOVER INTENTIONS: CANADIAN EVIDENCE

This study was conducted to examine the impact employee post-merger satisfaction has on employee organizational commitment and turnover intentions. Employees of a Canadian financial institution (N=73) completed surveys approximately seven months after a merger between two comparably sized banks. Partial Least Squares (PLS) approach to structural equation modeling (SEM) (e.g., Wold, 1982) provided evidence for the relationship between satisfaction with a merger and the affective and normative components of organizational commitment. Support was also found for the hypotheses that proposed that affective and normative commitments are negatively correlated with turnover intentions. The implications of these relationships are offered. Limitations of the study and directions for future research are also included.

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“BEING DIFFERENT” IN THE WORK GROUP: THE FIRST YEAR AND BEYOND

Age, gender, and ethnic dissimilarity effects on employee turnover intention were examined among employees in a British hospital. Interestingly, the positive age dissimilarity/turnover intention link is unrelated to tenure in the work group, but positive ethnic dissimilarity effects exist only among newcomers to the work group. After the first year, ethnic dissimilarity effects on turnover intention appear to dissipate.

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SPIRITUALITY AT WORK IN MANAGEMENT ACADEMY

The aim of this paper is to overview the spirituality at work paradigm, and in particular to canvas some of the potential areas for research and discussion about what spirituality in the workplace is, and means, for management educators.

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REALIZING ONE'S SELF THROUGH ORGANIZATIONAL GOALS: A GROUP-VALUE MODEL OF SELF-SOCIALIZATION, COMMUNITY BENEVOLENCE, AND PERFORMANCE

This research focuses on the motivational effects of conjoining personal and group identities on performance effort. We propose that individuals who endorse and internalize a socially prescribed self-guide will exhibit behaviours expressive of that self-guide that are valued by the group. Group benevolence, a justice perception, will mediate this effect.

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**EFFECTIVENESS OF THREE TYPES OF EXPLANATIONS/ ACCOUNTS IN FOUR
DIFFERENT EMPLOYEE DISCIPLINE SITUATIONS**

In a laboratory study, participants read one of twelve scenarios (based on three types of accounts in four different discipline situations) describing a disciplinary discussion between a manager and an employee. Results indicated no significant difference between the types of account in their effect on perceptions of procedural justice, distributive justice, interactional justice, overall disciplinary fairness, or adequacy of the explanation. Some gender differences were found, suggesting that a contingency approach to disciplinary accounts may be required.

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**THE ASSOCIATION OF PERSONALITY WITH DIFFERENT TYPES OF SOCIAL
BEHAVIOUR IN STRONG AND WEAK SITUATIONS**

This study examined the relationship between personality and different types of social behaviour. Results for 178 employees of three professional organizations found social behaviour associated with the Big Five personality dimensions in weak situations (i.e., OCB and volunteerism) but not in strong situations (i.e., paid labour and household tasks).