Multiple Affective Commitments and Salient Outcomes: The Improbable Case of Information Technology Knowledge Workers

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Abstract: Knowledge workers in the information technology industry typically enjoy global labour mobility and are considered critical to economic growth in developing countries. Organizational commitment amongst these knowledge workers is widely considered to be both improbable and unobtainable. The purpose of this study was to examine the multiple commitments of information technology knowledge workers and to examine the potential outcomes of these multiple commitment. A total of 282 usable questionnaires from knowledge workers employed in senior information technology occupations in both the public and private sector were analysed using a variety of statistical techniques. Particular care was taken to ensure that strict criteria guided the statistical analyses. Affective commitment across three commitment foci (i.e., the organization, immediate manager, and co-workers) were measured using South African commitment scales derived from the scale items proposed by Meyer and Allen (1993). Established scales were used to measure three outcomes (i.e., turnover intentions, boosting behaviour, and helping behaviour). To assess the contribution of commitment foci in explaining the proposed outcomes, block hierarchical multiple regression analysis was used with a set of control variables entered in the first step. The results of the regression analyses showed a clear pattern illustrating the importance of identifying, measuring and managing commitment foci proximal to matching salient outcomes. Affective commitment to the organisation was a significant predictor of the organizationally salient outcomes of turnover intentions and boosting behaviours. Affective commitment to the immediate manager was also significantly and negatively related to turnover intentions and affective commitment to co-workers was the only significant predictor of helping behaviours. Overall, the results are both surprising and encouraging. Surprising given the evidence of higher than expected levels of commitment amongst information systems knowledge workers, and encouraging given the amount of variance explained in salient organizational outcomes such as helping co-workers, lower turnover intentions and an increased propensity to promote the organization to others. The results challenge managers to review their assumptions about the organizational commitments of information technology knowledge workers. The results also suggest the importance of future research to uncover commitment mechanisms that will inform the development and implementation of management practices and policies that enhance commitment amongst information technology knowledge workers.

Keywords: affective commitment, knowledge workers, turnover intentions, helping behaviour, boosting behaviour

1. Introduction

This is an auspicious time to examine employee commitments and assess the appropriateness of the commitment construct amongst those most affected by contemporary changes to the nature of work and the nature of the employment relationship. The expectation that an employment relationship will last from the cradle to the grave may no longer be reasonable but even social analysts admit that organizational commitment "has not disappeared entirely" (Reich 2000:87). Within organizations, the frequently witnessed commitment demonstrated by employees to their employing organizations during a crisis and their determination to "go the extra mile" for their organization regardless of possible reward bears testimony to the abiding power of commitment. Commitment has persisted despite changes to the fundamental social exchange mechanism that used to underpin it. That is, employees still respond with commitment to organizations even though their employing organizations no longer feel compelled to show commitment towards them and regularly justify acts, such as retrenchment, that evidence a lack of commitment to employees when motivated by profit maximisation rather than organizational survival. Kinnear and Sutherland (2001) found that South African knowledge workers in science, technology and financial services were willing to remain with their employing organization if provided with autonomy, appropriate technology, monetary rewards, recognition, and opportunities for professional development. All these are predictors of organizational commitment and indicate the sustained importance of commitment even if the researchers did not directly measure the construct of affective commitment as a mediator of the relationship between these predictors and intention to remain with the organization.

This paper examines the nature of contemporary affective commitments and the outcomes of these commitments amongst information technology knowledge workers; employees that operate in both a turbulent business environment and a highly competitive industry that faces all the vicissitudes and challenges of managing change and remaining future agile.

Progress in information technologies may have been the catalyst for a fundamental transformation in human life, relationships, and work (Reich 2000) but the effective use of human knowledge has become the central challenge for organizations. Knowledge and the ability to apply it (competence) have emerged as an important competitive resource, as important as capital or property. South African organizations face the urgent challenge of attaining competitive advantage through the effective utilisation and retention of "skilled employees who contribute the basis of their success" (Pfeffer 1994:22).

2. Affective commitment

Most previous commitment research concerns employee commitment to their employing organization and an examination of the predictors and outcomes of this commitment (Meyer and Allen 1997). Attempts to understand commitment by adopting a single, clear conceptual framework is not a simple matter because over three decades of sustained research has spawned a multiplicity of competing conceptual models (Meyer, Stanley, Herscovitch and Topolnytsky 2001), resulting in a confounding lack of consistency in the literature regarding the meaning and measurement of commitment (Morrow and McElroy 1993). The only implicit commonality across definitions of commitment is that commitment is an obliging force or energy that directs behaviour to a specific target or focus of that commitment energy, which then shapes a psychological bond between the source of commitment and the specific target of that commitment. Given this commonality, the different conceptualisations differ only in the emphasis they give to different aspects of the commitment process, its dimensionality, its origins, and its consequences. Of all the components of multidimensional models of commitment, the affective commitment component has consistently been shown to predict organizationally salient outcomes.

Affective commitment is conceptualized as the employee's "positive feelings of identification with, attachment, and involvement in, the work organization" (Meyer and Allen 1984: 375). Affective commitment develops if the employee is able to meet their expectations and fulfil their needs within the organization (the employee wants to stay in the organization).

Recent research recognises that organizations are not monolithic entities and that employee commitment may be directed to multiple foci, both within (manager, co-workers) and outside (clients, profession) the organization. Employees may also experience conflicts between commitments (Reichers 1985) or strong interdependencies may exist between commitments to different entities (Wallace 1995). For example, an employee with a strong commitment to their manager may feel constrained to stay with the organization to maintain this relationship (Lawler 1992), their primary focus of commitment being nested within the organization and thereby affecting their overall level of commitment to the organization.

Given the additional complications in theory and measurement posed by a multiple commitment perspective, it is important to assess whether a multiple commitment approach adds significantly to the conventional perspective. Reichers (1985) drew on literature from reference group theory, role theory, and macro conceptions of organizations as political entities to develop his case for multiple foci within organizational commitment. He maintained that his approach represented a natural evolution of the commitment construct, from a general concept concerned with organizational goals and values, to a more specific formulation that specifies whose goals and values serve as the foci for multiple commitments. Becker's (1992) research demonstrates the importance of matching the focus of an independent variable with the focus of the dependent variable. For example, researchers interested in helping behaviour directed toward a co-worker should focus on commitment to the co-worker rather than on commitment to the manager or organization (but c.f. Hunt and Morgan 1994). Empirical research amongst service workers has been inconclusive (Becker, Randall and Riegel 1995); no such work has been conducted on information systems knowledge workers.

This paper reports on research that investigated the explanatory power of three foci of affective commitment: affective commitment to the organization as an entity; affective commitment to an immediate manager; and affective commitment to immediate co-workers.

3. Turnover intentions, boosting behaviour and helping behaviour

3.1 Turnover intentions

A turnover intention (intent to quit the organization) is the conscious and deliberate decision to leave the organization (Tett and Meyer 1993). It is considered the last point in a sequence of withdrawal behaviours that is preceded by searching for another job (Mobley, Horner and Hollingsworth 1978) and have been shown to have a significant positive relationship with actual turnover so that it is regarded as a good predictor of actual turnover, which is much more difficult to assess (Carsten and Spector 1987). Actual turnover is much more difficult to assess than turnover intention and may have multiple explanations unrelated to the organizational context (e.g. change in personal circumstances that require a new career). Griffith, Hom and Gaertner's (2001) meta-analysis confirmed that affective commitment to the organization has consistently negative relationships with intent to quit and actual turnover measures. The negative relationship between affective commitment to the organization and turnover intentions (i.e., intent to quit the organization) has also been found amongst knowledge workers (Igbaria and Guimaraes 1999).

3.2 Helping behaviours and boosting behaviours

Retaining knowledge workers is not an important concern for every organization (Meyer, Smith and Allen 1993). Managers and researchers are concerned with other outcomes such as performance on the job and "going the extra mile". In fact, there is an argument supporting labour mobility to "bring fresh blood in all the time". Positive behaviours, creativity and commitment during a period of employment are more important to them than the length of the employment relationship, even Meyer and Allen (1991) acknowledged this. These forms of behaviour are rarely captured in job descriptions and represent extra-role or organizational citizenship behaviours – with the employee behaving like a "good citizen" within the organization (Moorman 1991). Citizenship behaviours are individual behaviours that "discretionary, not directly or explicitly recognized by the formal reward system and (that) in the aggregate promotes the effective functioning of the organization" (Organ 1988: 4). Employees with high levels of organizational citizenship give more than they are required to give by their job description, if it exists, without the expectation of rewards (Deluga 1994). Despite (or perhaps because of) its importance, there is no consensus regarding the dimensionality of the organizational citizenship behaviour and a plethora of competing models have been developed (Podsakoff 2000). Two distinct forms of citizenship behaviour are considered in this paper:

3.2.1 Helping behaviour

Helping is the most commonly identified dimension of OCB and refers to discretionary behaviours that help prevent "work-related problems with others" (Podsakoff, MacKenzie, Paine and Bacharach 1990: 115). This understanding of helping behaviour is based on Organ's (1994) work and is typically labelled as courtesy.

3.2.2 Boosting behaviour

Boosting, sometimes labelled "loyal boosterism" (Graham 1991) or "spreading goodwill" (George and Jones 1997), is a dimension of OCB used in this study to refer to act of promoting the organization to outsiders and protecting it against external criticism. Walz and Niehoff (1998) failed to confirm the discriminant validity of their widely used scale and Graham's (1991) measure was therefore used in this study.

4. Control variables

Significant relationships between demographic variables (i.e., gender, race, age, education, marital status), employee work characteristics (i.e., hours worked per week, tenure, job level) and different components of commitment have long been reported in commitment research (Mathieu and Zajac 1990). Race has rarely been considered in relation to commitment but the national context of this study might suggest its consideration. South Africa has a history of enforced, race-based discrimination and separation that differentially affected the life-chances, socialization, expectations and outlook of South Africans, depending on their race. Despite the above, demographic variables will not be considered as antecedents of any outcome because they cannot account for how variation in the outcomes are produced (Mathieu and Hamel 1989).

5. Propositions

Proposition 1: Affective commitment to the organization is a significant predictor of turnover intentions from the organization

Proposition 2: Affective commitment to the immediate manager is inversely related to turnover intentions from the organization

Proposition 3: Affective commitment to co-workers is inversely related to turnover intentions from the organization

Proposition 4: Affective commitment to co-workers is a significant predictor of helping behaviour

Proposition 5: Affective commitment to the organization is a significant predictor of boosting behaviour

6. Method

6.1 Research design

This investigation adopted a cross-sectional, descriptive research design. Within this design a self-report survey questionnaire was used to gather information from participants.

6.2 Participants

The sample frame was information system knowledge workers working in a specialist capacity within a professional organization located within a major metropolitan area in South Africa. A total of 282 informational system knowledge workers responded to the survey questionnaire, representing a 50% response rate. Amongst respondents, 65% were male; 70% held a post-school qualification; 60% reported that they were in senior organizational positions; 59% reported their race as white with 30% reporting their race as black (including all black African, coloured and Indian respondents) and 11% stating that they prefer not to answer a race question; 58% were married and the average age was 36 (SD= 9.6). The participants stated that they worked an average of 43 hours per week (SD= 9.8), had an average tenure of 7.7 years (SD = 7.4), had spend 10.5 years (SD = 7.7) in the information systems industry and spend 4.9 years (SD = 4.9) in their previous job.

6.3 Measures

All scale items were based on previously used scales. Participants were asked to respond to each item on a five-point Likert response scale. Each of the three affective commitment foci were measured by four items adapted from Meyer and Allen's six item affective commitment scales (1993), the two items that were not used did not apply to all three foci of affective commitment and seemed to conflate with turnover intention. Turnover intention was measured using a three item scales adapted from Price (2001); Boosting behaviour was measured using three items from Graham (1991) and helping behaviour was measured using three items from Smith, Organ and Near (1983). Eight control variables were measured (i.e., gender, age, hours worked per week, tenure, job level, race, marital status and education).

6.4 Ethical clearance

Permission was obtained from each organization in writing and the study's ethics protocol was approved by a university ethics review board.

7. Results

7.1 Factor analysis

To asses the factor validity of the scales and to determine to dimensionality of the commitment foci and outcomes, factor analysis was conducted. The principal axis factor method and varimax normalised rotation was used because it is best suited to uncovering simple structure.

Table 1: Factor analysis of affective commitment items

Items	Factor 1	Factor 2	Factor 3
AC Org. 1	0.865	-0.025	0.202
AC Org. 2	0.834	0.154	0.176
AC Org. 3	0.836	0.089	0.206
AC Org. 4	0.846	0.122	0.204
AC Man. 1	0.115	0.132	0.750
AC Man. 2	0.243	0.098	0.874
AC Man. 3	0.204	0.179	0.786
AC Man. 4	0.233	0.143	0.783
AC CW 1	0.066	0.741	0.113
AC CW 2	0.069	0.880	0.134
AC CW 3	0.034	0.881	0.071
AC CW 4	0.153	0.787	0.219
Eigen value	4.910	2.310	1.500
Explained Var	3.063	2.845	2.797
Prp.Total	0.255	0.237	0.233

Note. N = 272, AC = affective commitment; Man = immediate manager; Org = organization; Var = variance; Prp = proportion

Table 2: Factor analysis of outcome items

Items	Factor 1	Factor 2	Factor 3
Helping Behaviour 1	0.074	0.687	0.051
Helping Behaviour 2	0.035	0.940	0.077
Helping Behaviour 3	0.038	0.818	0.096
Boosting Behaviour 1	0.165	0.113	0.717
Boosting Behaviour 2	0.167	0.068	0.928
Boosting Behaviour 3	0.224	0.056	0.799
Turnover Intentions 1	-0.876	-0.027	-0.210
Turnover Intentions 2	-0.905	-0.095	-0.221
Turnover Intentions 3	-0.915	-0.064	-0.176
Eigenvalues	3.550	1.900	1.301
Explained Var	2.537	2.059	2.156
Prp.Total	0.282	0.229	0.240

Note. N = 268; Var = variance; Prp = proportion

7.2 Reliability analysis

Internal consistency reliability was measured using Cronbach's coefficient alpha. All the scales had Cronbach alpha coefficient greater than .8, which is regarded as good (Nunnally and Bernstein 1994). The alpha coefficients are shown on the diagonal of Table 3.

7.3 Correlation analysis

The means, standard deviations and zero-order correlations for the continuous variables measured in this study is shown in Table 3. The high mean value for commitment to the organization is notable (mean of 3 on a five-point scale). As expected, the above correlation analysis shows that all three affective foci are negatively related to turnover intention (though the correlation coefficient of affective commitment to co-workers with turnover intention is not statistically significant). Helping behaviour is strongly correlated with affective commitment to co-workers (r = .441, p < .001) but is also significantly correlated with affective commitment to the immediate manager (r = .161, p < .01), which was not expected. It is interesting to note that boosting behaviour is significantly negatively correlated with turnover intentions (r = -.405, p < .001). The three foci of affective commitment are all significantly positively correlated with one another but these correlations are not sufficiently high to suggest the possibility of multicollinearity (Nunnally and Bernstein 1994). The strongest correlation between commitment foci is between commitment to the organization and commitment to the immediate manager (r = .417, p < .001).

Table 3: Correlation analysis

Variable	M	SD	1	2	3	4	5	6
Helping	4.135	0.495	(.85)					
Boosting	3.895	0.994	0.165*	(.88)				
Turnover	2.643	1.175	-0.130	-0.405**	(.95)			
AC Org.	3.006	0.996	0.089	0.387**	-0.616**	(.93)		
AC Man	2.866	0.944	0.161*	0.118	-0.312**	0.417**	(.90)	
AC CW	3.352	0.865	0.441**	0.115	-0.106	0.173*	0.303**	(.90)

N=264; Cronbach alpha on the diagonal; * = $p < .01$, * *= $p < .001$; SD = standard deviation; M = mean; Helping = helping behaviour, Boosting = boosting behaviour, Turnover = turnover intention; AC = affective commitment; Org = organization; Man = immediate manager

7.4 Multiple regression analysis

To examine whether affective commitment to different foci helps explain significant variance in important organizational outcomes over and above the variance explained by demographic and work related variables, hierarchical regression analysis was performed. Regression models were calculated for the three outcome variables of boosting behaviour, turnover intentions and helping behaviours. The final regression models are shown in Tables 4 to 6.

Table 4 shows that only affective commitment to co-workers is a significant predictor of helping behaviour in the final regression model (beta = .413, $p < .0001$). The overall regression model is significant and explains 18% of the variance in helping behaviours ($R^2 = .18$, $p < .0001$). None of the control variables are significant predictors of helping behaviours and the addition of the commitment variables to the regression equation added 16% of explained variance ($\Delta R^2 = .16$, $p < .0001$).

Table 5 shows that only affective commitment to the organization is a significant predictor of boosting behaviour in the final regression model (beta = .385, $p < .0001$). The overall regression model is significant and explains 19% of the variance in boosting behaviour ($R^2 = .19$, $p < .0001$).

Table 6 shows that only affective commitment to the organization is a significant predictor of turnover intention (beta = -.593, $p < .0001$). The overall regression is significant and explains 43% of the variance in turnover intentions ($R^2 = .43$, $p < .0001$). In Step 1 of the regression model, tenure was a significant predictor of turnover intention at the .05 level (beta = -.026, $p = .012$) but once the commitment variables were added to the regression equation tenure was no longer a significant predictor of turnover intentions. The Step 1 model was also significant with the control variables explaining 6% of the variance in turnover intentions ($R^2 = .06$, $p < .01$). Once the commitment variables were entered into the regression equation a further 33% of the variance in turnover intentions was explained ($\Delta R^2 = .33$, $p < .0001$).

Table 4: Hierarchical regression model - helping behaviour (final model)

Variables	Beta	SE Beta	B	SE B	t(209)	p-level
Step 1:						
Gender	0.047	0.066	0.043	0.060	0.716	0.475
Age	-0.026	0.087	-0.001	0.004	-0.304	0.762
Hours	0.073	0.064	0.003	0.003	1.139	0.256
Tenure	0.091	0.077	0.005	0.004	1.191	0.235
Job level	0.050	0.068	0.022	0.029	0.740	0.460
Race	-0.025	0.073	-0.023	0.065	-0.350	0.727
Marital status	-0.012	0.071	-0.010	0.062	-0.163	0.870
Education	0.022	0.068	0.028	0.087	0.318	0.751
Step 2:						
AC Org	0.006	0.072	0.003	0.031	0.088	0.930
AC Man	0.010	0.071	0.004	0.032	0.135	0.893
AC CW	0.413	0.068	0.200	0.033	6.082	0.000

Note. N=221 R= .42 R²= .18, Adjusted R² = .14, F (11,209) =4.1625 p<.00001, SE of estimate: .395; At Step 1: $R^2 = .016$, $p = .886$; At Step 2 $R^2 = .18$, $p < .0001$; $\Delta R^2 = .16$, $p < .0001$

Table 5: Hierarchical regression model – boosting behaviour (final model)

Variables	Beta	SE Beta	B	SE B	t(209)	p-level
Step 1:						
Gender	-0.090	0.066	-0.191	0.139	-1.374	0.171
Age	0.062	0.086	0.006	0.009	0.723	0.470
Hours	0.025	0.064	0.003	0.007	0.390	0.697
Tenure	-0.014	0.076	-0.002	0.010	-0.181	0.857
Job level	0.138	0.068	0.139	0.068	2.047	0.042
Race	-0.067	0.072	-0.141	0.152	-0.927	0.355
Marital status	-0.057	0.071	-0.117	0.145	-0.806	0.421
Education	-0.045	0.068	-0.135	0.202	-0.670	0.504
Step 2:						
AC Org	0.385	0.072	0.383	0.071	5.369	0.000
AC Man	-0.025	0.071	-0.026	0.074	-0.348	0.728
AC CW	0.031	0.067	0.035	0.076	0.458	0.648

Note. N= 221; R= .44, R²= .19, Adjusted R² = .15, F (11,209) = 4.468, p<.0001,
SE of estimate: .917; At Step 1: R^2 = .062, p < .088; At Step 2: R^2 = .19, p < .0001; ΔR^2 = .13, p < .0001

Table 6: Hierarchical regression model - turnover intention (final model)

Variables	Beta	SE Beta	B	SE B	t(209)	p-level
Step 1:						
Gender	-0.021	0.055	-0.054	0.141	-0.384	0.701
Age	-0.147	0.073	-0.018	0.009	-2.030	0.044
Hours	-0.006	0.054	-0.001	0.007	-0.103	0.918
Tenure	-0.026	0.064	-0.004	0.010	-0.410	0.682
Job level	0.021	0.057	0.026	0.069	0.373	0.710
Race	0.024	0.061	0.060	0.154	0.392	0.695
Marital status	-0.022	0.060	-0.054	0.147	-0.364	0.716
Education	0.047	0.057	0.170	0.205	0.830	0.408
Step 2:						
AC Org	-0.593	0.060	-0.709	0.072	-9.803	0.000
AC Man	-0.062	0.060	-0.078	0.075	-1.036	0.301
AC CW	0.019	0.057	0.026	0.077	0.339	0.735

Note. N=221; R= .65, R²= .43, Adjusted R² = .40, F (11,209) =14.052, p < .0001,
SE of estimate: .929; At Step 1: R^2 = .09, p < .009; At Step 2: R^2 = .24, p < .0001; ΔR^2 = .33, p < .0001

A full set of regression diagnostics was conducted. No problems were detected (e.g. tolerance levels were all well above .4 and there were therefore no multicollinearity problems, indicating stability within the regression model).

8. Discussion

The specific contribution of this study, which confirmed all five of its research propositions regarding the outcomes of multiple foci of commitment, include (a) the establishment of reliable, distinct measures of affective commitment to three foci, and (b) the finding that multiple foci of affective commitment help explain significant variance in proximal organizational outcomes.

The distinct nature of the three affective commitments is explained by (a) the refinement of the affective commitment scales used in this study and (b) the distinct nature of the psychological bond that develops between organization and employee, employee and their co-workers, and employee and their manager.

The practically important set of findings in this study was that affective organizational commitment amongst knowledge workers explained a significant and substantial portion of the variance in both knowledge workers' turnover intentions and boosting behaviours and that their commitment to their fellow knowledge workers explained a significant and substantial portion of the variance in their helping behaviours directed towards their fellow knowledge workers.

The strong relationship between affective organizational commitment and turnover intention was an important and surprising finding in this study, not because of the novelty of uncovering this well-

established relationship but the context of its existence, amongst information system knowledge workers. The implication of this finding is that the retention of knowledge workers can be effectively managed through the management of commitment. The turnover of knowledge workers is not beyond the influence of carefully chosen, appropriate people management policies and practices that impact on commitment. The specification of this bundle of policies and practices for increasing the commitment of information technology knowledge workers requires further research. These policies and practices may also not be easy or inexpensive to develop and implement but given the high cost of unplanned knowledge worker turnover for organizations an analysis of the cost-benefit of specific interventions will probably be worthy of further investigation. The high mean level of affective organizational commitment is also particularly interesting given prevailing management rhetoric about the lack of commitment amongst knowledge workers and the mobility of information system knowledge workers during periods of favourable economic conditions.

Previous meta-analyses have shown an encouraging relationship between citizenship behaviours and commitment (Mathieu and Zajac 1990, Meyer et al. 2002; Riketta 2002). The strength of the relationship between affective commitment to co-workers and helping behaviours found in this study may even be stronger in organizations where team work and peer evaluation are part of the work process. Future studies should consider these context factors when considering the relationship between indicators of citizenship behaviour, such as boosting behaviours, and commitment. The strong relationship between affective commitment to the organization and boosting behaviours is as expected and is not surprising. It was expected that those who feel committed to an organization, who are proud of their organization, and who derive personal meaning from being a member of their organization are also more likely to boost that organization to others.

The statistically and substantively significant relationship between co-worker commitment and the form of citizenship behaviour known as helping behaviour is also important because it indicates the systemic benefits of organizational initiatives to foster relationships amongst employees even if these initiatives do not affect turnover intentions or in-role work performance. A further consideration is that helping behaviours may serve to create a positive culture of collegiality that helps build organizational resilience to crisis and change.

The overall pattern of commitment effects on outcomes, as discussed above, supports the proximity thesis (i.e. level effects) of these relationships. That is, organizational level outcomes turnover intentions and boosting behaviour were best explained by organization level commitment and the co-worker level outcome of helping behaviour was best explained by commitment to co-workers. These results are consistent with Lewin's (1943) field theory and Herscovitch and Meyer's (2001) assertion regarding the importance of matched levels of analysis on the commitment-behaviour relationship. That is, the salience of a particular commitment focus is directly related to the level of behaviour to be estimated.

That affective organizational commitment is a significant predictor of both boosting behaviours and lower turnover intentions is consistent with the proximity thesis. For example, an employee who does not feel committed to the organization as an entity will intend to leave the organization and will end the employment relationship with the organization as an entity (or redefine this relationship in some similar manner) but low levels of affective commitment to a particular manager or set of co-workers need not relate to turnover intention as the employee may have scope within the same organization to change co-workers or managers. However, a strong commitment to a particular manager that is not willing or likely to leave the organization may increase commitment to the organization as the organization may be personified in the person of the manager.

The veracity of the "proximity thesis" is an important practical finding of this study as it provides managers with an additional diagnostic tool to help determine the focus of interventions. For example, the results of this study indicate that to increase levels of cooperation and helping behaviour between employees, commitment to co-workers should be the focus of interventions rather than commitment to the organization as an entity. This may seem obvious but these findings should be treated cautiously as the relationship may not be invariant and the causal order of the relationship may be questioned (e.g. helping co-workers may lead to greater affective commitment to co-workers). Nevertheless, the strong and expected pattern of relationships between different sources of perceived support and different foci of affective commitment (as suggested by theory) indicates that managers who wish to increase outcomes associated with particular foci of commitment should devise mechanisms that

leverage employee support at the appropriate level. By extension, an organization seeking to attract top talent should benefit by fostering affective commitment to the organization that may result in image enhancement through increased levels of boosting behaviour from employees. In the relatively small South African labour market for knowledge workers, this may set up a self-reinforcing process in which boosting behaviour attracts organizational support that results in affective commitment to the organization that will encourage more boosting behaviour.

Hom, Caranika-Walker, Prussia and Griffeth (1992) noted that turnover is a behaviour that activates cognitive deliberations about the viability of the employee's continued membership of the organization. In deciding about leaving the organization the employee will deliberate about their current relationship with the organization, commitment to the organizational entity. Consequently, relationships with co-workers and managers will be less powerful in predicting these outcomes but more powerful in predicting other salient outcomes. For example, in this study the strongest relationship with helping others at work was affective commitment to others at work. That is, in the relationships that were examined in this study, the level captured by the commitment construct did match the level captured by the outcome variable, increasing the strength of the relationship (Herscovitch and Meyer 2001).

Further research is required to examine the citizenship behaviours related to affective commitment to managers. It has been suggested that this may include a form of work performance (Becker and Kernan 2003) because managers facilitate the acceptance of performance norms (Siders, George and Dharwadkar 2001). Managers have a direct responsibility for managing the performance of most employees (Robbins 2003) but for knowledge workers, given the ambiguity inherent in knowledge work, this responsibility may include only specific forms of performance that have yet to be specified.

The effective management of knowledge workers is an important concern for the organizations that employ them. It has also become a focus of sustained academic attention. The pessimism regarding commitment amongst knowledge workers may have been the product of too hasty an assessment. The results of this study provide preliminary evidence that knowledge workers are committed to their employing organizations albeit in a more nuanced manner that generally acknowledged. The traditional mechanisms of securing commitment from employees using pay and offers of job security are certainly not appropriate for managing contemporary knowledge workers. Uncovering the mechanisms that underpin the contemporary social exchange relationship between knowledge workers and their employing organizations requires further explication and investigation.

In sum, this paper challenges prevalent management assumptions regarding the commitments of information technology knowledge workers. The results of this study also have direct practical application in suggesting the need to develop and implement policies and practices that target the improvement of specific forms of affective commitment. The results certainly indicate that commitment remains a relevant construct in the management of knowledge workers and that commitment strategies that improve specific forms of commitment should result in salient outcomes such as the improved retention and enhanced citizenship behaviours of a scarce human resource, the information technology knowledge worker. Overall, the findings of this study suggest the fruitfulness of developing a more complicated understanding of the relationship between commitment and salient organizational outcomes and allows for the refinement of practical strategies in the management of knowledge workers.

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