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The role of organizational culture in the relationship between leadership and organizational commitment: an empirical study in a Greek organization

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The aim of this paper is to explore the nature of relationships between organizational culture and leadership behaviours in affecting employees' commitment to their work organization. Building on organizational commitment literature, this study used a survey methodology. Empirical evidence was obtained from 300 employees working in a large Greek service company. The analyses indicated that the culture orientations examined served as mediators in the relationship between leader behaviour and followers' affective and normative commitment to the organization. The findings also indicated that continuance commitment is a two-dimensional construct; the 'personal sacrifices' dimension was found to be related to organizational culture and transactional contingent reward. This research paper has key messages for practitioners contributing to the fields of commitment, organizational culture, leadership and human resource management.

Keywords: Greece; leadership; organizational commitment; organizational culture

Introduction

A review of extant studies in organization studies reveals that organizational commitment is a concept that has attracted considerable attention. The interest of researchers and practitioners in the construct of organizational commitment can be understood in relation to its links with desirable work outcomes as well as employees' overall quality of working life. Specifically, organizational commitment has consistently been shown to be related to performance effectiveness, a number of critical in-role behaviours as well as other constructive behaviours towards the organization (Mathieu and Zajac 1990; Meyer, Stanley, Herscovitch and Topolnytsky 2002; Hislop 2002). According to the employee–organization exchange perspective, which is posited on the act of reciprocation, organizational members provide certain 'inputs' to their work organization (e.g., skills, effort) and expect in return from the organization to use their skills and enable them to achieve their personal goals (Mottaz 1988). In this respect, equitable treatment of the employee by his/her organization (either in terms of social or economic exchange/reward) engenders employee's commitment.

There are different ways in which commitment has been operationally defined. According to Meyer and Allen (1991, p. 67), the various perspectives share the view that commitment is a psychological state which 'characterizes the employee's relationship with the organization and has implications for the decision to continue membership in the organization'. Meyer and Allen deviate from the single component conceptualization of

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commitment, and argue for the existence of three commitment components (Allen and Meyer 1990). Affective commitment refers to employees' emotional attachment to the organization ('reciprocation by desire'). Normative commitment refers to their feelings of obligation to remain with the organization ('reciprocation by obligation'). Continuance commitment is based on Becker's side-bet theory and denotes the perceived costs associated with leaving the organization; anything that increases employees' perceptions of costs (e.g., investments, giving up privileges) is regarded as antecedent of continuance commitment (Meyer, Allen and Smith 1993). Recent studies have suggested that the operationalization of continuance commitment deserves further research attention, proposing the existence of two subscales of continuance commitment (namely, low perceived alternatives and high personal sacrifice associated with leaving the organization) (e.g., Carson and Carson 2002).

Although there is extensive literature on the determinants of affective commitment, there have been relatively few empirical investigations examining the antecedents of normative and continuance commitment. Lately, normative commitment is gaining attention, as a result of the proliferation of cross-cultural research, since normative commitment has often been seen as being influenced by the individual's socialization experiences mainly prior to entry into the organization (e.g., Meyer and Allen 1997; Wasti 2003).

Even though culture has been considered to exert influence on employees' attitudes towards their work organizations, most research has focused on the effects of collectivistic-individualistic national cultures on organizational culture and, consequently, on organizational commitment. Even though the individualism/collectivism dichotomy has enjoyed great recognition, recent studies have questioned its plausibility (Walumbwa and Lawler 2003). Moreover, the latest meta-analytic study on organizational commitment (i.e., Meyer et al. 2002) indicated a relative neglect of the examination of the association between leadership behaviour (other than transformational leadership) and commitment.

The aim of the present study is to explore the underlying processes and mechanisms by which organizational leaders exert their influence on followers' commitment. Moreover, this study aims to extend existing research on organizational commitment, by conducting research outside a North American work context. Building on leadership literature (in particular Avolio, Bass and Jung's [1999] framework for transformational leadership and transactional contingent reward) as well as on organizational culture literature (Cooke and Rousseau's [1988] framework of constructive culture patterns), we argue for the mediating role of organizational culture to the relationship between leadership behaviour and followers' affective and normative commitment.

Leadership and commitment

Leadership has been regarded as an important component in the commitment process. In general, leader behaviour (e.g., leader consideration, supportiveness, receptiveness of employees' needs, leader-member exchange) has been examined as an antecedent variable in regard to affective and normative commitment (Mathieu and Zajac 1990; Allen and Meyer 1990; Iverson and Buttigieg 1999; Lok, Westwood and Crawford 2005). One of the most empirically supported models of leadership is that of Avolio et al.'s (1999), which distinguishes between transactional and transformational leadership. While transactional leadership can be reasonably satisfying and effective, transformational leadership has been argued to add substantially to the impact of transactional leadership and, thus, predict performance and employees' satisfaction beyond what can be accounted for by the transactional scales ('augmentation hypothesis') (Bass 1985). As Bass (1985) postulates, leaders are capable of being both transformational and transactional. In this sense, both

styles are regarded as integrated by recognizing that both may be linked to the achievement of desired goals and objectives; their primary difference resides in the process by which the leader motivates subordinates and the types of goals set. Bass (1985) has depicted transactional leadership as being based on material/economic exchange and transformational leadership as being based on social exchange.

According to this model, transformational leadership consists of four components: charisma, inspirational motivation, intellectual stimulation and individualized consideration. Extant empirical studies have provided support – in terms of validation – for the components entailed in transformational leadership (e.g. Avolio et al. 1999). Through their charisma, transformational leaders engender respect and inspiration to their followers, while their relationship is based on personal understanding rather than on formal rules and organizational regulations (Bass 1985). Through inspirational motivation, they increase understanding of shared goals while they communicate to them high expectations regarding the organization's vision. Through intellectual stimulation leaders encourage creativity and change in the followers, while, through personalized consideration, the leaders are supportive to their followers' needs and aspirations, recognize their capabilities and thus build a sense of confidence in the followers; in doing so, they influence through 'self-engagement'. In general, transformational leaders emphasize intrinsic rewards, such as self-expression and self-efficacy while they also pinpoint the importance of cooperation in performing collective tasks. In addition, they encourage followers to think creatively about their jobs and seek new ways in approaching problems as well as their duties (Bass 1985); as a consequence, followers gain a better understanding of what needs to be done so as effective functioning of the organization is ensured. Moreover, transformational leaders foster appreciation of group accomplishments building collective efficacy. Overall, through social exchange, these leaders are considered to motivate their followers to transcend their own self-interests for the sake of their work group; as a consequence, followers become more involved in their work and are, thus, more likely to experience increased levels of commitment to their organization.

While a relationship between transformational leadership and *affective* organizational commitment has been empirically established (e.g. Bycio, Hackett and Allen 1995; Bono and Judge 2003; Walumbwa, Wang, Lawler and Shi 2004; Wang and Walumbwa 2007), the relationship between transformational leadership and employees' *normative* commitment has only been theoretically supported; transformational leaders have been thought to experience a sense of moral obligation to the organization as an end value, which they promote to their followers (Kuhnert and Lewis 1987). Given the fact that normative commitment has been depicted as 'internalized normative pressures to act in a way which meets organizational goals and interests' (Wiener 1982, p. 421), we can speculate that transformational leaders, who inspire their followers to transcend their own self interests and align them with the interests of the organization induce high levels of normative commitment to employees.

On the other hand, the relationship between the *transactional* leader and his/her follower takes the form of 'economic exchanges' which are based on transactions. According to Konovsky and Pugh (1984), economic exchanges is of a short-term nature in the sense that they cater for followers' immediate self-interests as well as relying on transactional contracts which are short-term agreements typically characterized by the expectation of short-term fairness and the limited involvement of each party in the activities of the other (as opposed to relational contracts which involve exchange of socio-emotional elements and which are often long term). Subordinates' effort is exchanged for provisions of rewards; the latter may have the form of recognition from work accomplished, bonuses or merit

increases. The *transactional* leader clarifies the role and task requirements for the subordinate as well as the performance criteria and the rewards that the latter can expect if s/he reaches the desired outcomes (Bass 1985); in this sense, transactional leadership is based on a series of 'unspoken' bargains between leaders and followers. Leader's response to the subordinates' immediate self-interests is exemplified mainly by contingent reward behaviour, according to which leaders assign a secure agreement on what needs to be done and what rewards followers can expect, should they fulfil this agreement. This sense of direction the leader provides to the subordinates can be seen as a source of motivation for them to do their job well and be committed to their work organization. Contingent reward is the most effective component of transactional leadership¹ (as compared to management-by-exception which has a punitive character) in terms of achieving positive personal and organizational outcomes, such as satisfaction and performance (e.g., Bass and Avolio 1990; Bycio et al. 1995). To our knowledge, there is only one study (i.e., Bycio et al. 1995) which has examined the relationship between contingent reward (examined separately from the subscale: management-by-exception) and affective or normative commitment and found a positive association.

As far as the relationship between *continuance* commitment and leadership behaviour is concerned, there is only Meyer et al.'s (2002) study which suggested a significant negative relationship between transformational leadership and continuance commitment; while the existence of this relationship had not been theorized, such a relationship probably lies on the assumption that the inspirational aspects of transformational leadership do not enhance the less emotion (or obligation)-based facet of commitment (i.e., continuance commitment), which reflects the number of existing alternative employment options or accumulated benefits that would be lost by leaving. However, the present study postulates that continuance commitment needs to be approached not only as an estimation of perceived costs which are 'tangible' (e.g., financial benefits) but also as 'intangible' or 'affective' costs (e.g., supportive supervisors, considerate co-workers, good working environment); such conceptualization of continuance commitment appears to be consistent with recent empirical findings (e.g., Wasti 2003). Accordingly, we hypothesize that both transactional and transformational leadership behaviours are positively related to continuance commitment since task requirement's clarification and fair treatment by the supervisor (i.e., transactional leadership) as well as experienced support, respect and encouragement of creativity can be seen by the follower as an 'accumulated interest' which the latter may want to retain:

Hypothesis 1: Transformational leadership is positively related to employees' affective, normative and continuance commitment.

Hypothesis 2: Transactional contingent reward is positively related to employees' affective, continuance and normative commitment.

Organizational culture and commitment

In the organizational culture literature, a connection between culture and commitment has often been theoretically proposed. For instance, commitment has been defined as employees' acceptance of organizational goals (e.g., Porter, Steers, Mowday and Boulian 1974); the idea of employees' sharing values, goals and assumptions, as exemplified by the organizational culture concept, has been seen as indicative of their being committed to them (Virtanen 2000).

There is a small number of empirical studies which have examined the relationship between organizational culture and commitment. Using a single-component conceptualization of commitment, two empirical studies have found an association between organizational commitment and culture strength and organizational culture norms (such as respect for people, team orientation, completion of work tasks) (McKinnon, Harrison, Chow and Wu 2003; Taylor, Levy, Boyacigiller and Beechler 2008). Using Hofstede's (1980) typology of cultural dimensions in American and Israeli samples, other studies revealed a link between culture and organizational commitment (Clugston, Howell and Dorfman 2000; Cohen 2007). Finally, other empirical studies have supported the existence of a link between constructive cultural orientations and two commitment components, affective and normative (e.g., Garr 1998; Rousseau 1990; Vandenberghe and Peiro 1999; Finegan 2000; Abbott, White and Charles 2005).

In their examination of various instruments of organizational culture, Xenikou and Furnham (1996) concluded that Cooke and Rousseau's (1988) measure of organizational culture is the most valid and reliable one. According to Cooke and Rousseau's (1988) conceptualization of organizational culture, we can distinguish between constructive and destructive culture orientations. Organizations with constructive cultures have group norms that promote achievement, participation in decision-making, teamwork, social support, constructive interpersonal relations, and self-actualization. In these organizations, employees are encouraged to interact with fellow-workers and approach tasks in ways that will help them meet their higher-order satisfaction needs. In line with Cooke and Rousseau's model, there are four constructive cultural patterns. Humanistic organizations operate in a person-oriented way and organizational members are expected to be supportive to each other and help each other to grow. The humanistic orientation involves employee participation in decision-making and expects its members to be open to influence in their dealings with one another; in humanistic organizations, emphasis is put on teamwork, employees' self-actualization and empowerment, while organizational performance is achieved through active involvement and growth of organizational members. In organizations which are characterized by affiliative culture patterns, priority is given to cooperation and the development of constructive interpersonal relationships; as a consequence, members are expected to deal with each other in a friendly way and express concern for the satisfaction of their work group. An organization with an affiliative orientation encourages members to be open with each other and demonstrate human relations skills, while enhancing organizational performance through the promotion of good cooperation and team loyalty. In organizations which embody an achievement culture orientation, priority is put on the pursuit of a standard of excellence and members are expected to set and accomplish their own goals. Finally, organizations which espouse a self-actualization orientation are characterized by creativity as well as an emphasis on both task accomplishment and individual growth at the same time. Employees are motivated to gain enjoyment from their work and develop themselves, while thinking in unique and independent ways. These four orientations are associated with each other and they all form a higher-order factor, namely the constructive cultural orientation which encourages organizational members to interact with each other and approach their job in ways that will enable them to meet their higher-order satisfaction needs (Cooke and Rousseau 1988).

Since a person's sense of self-worth is enhanced through his/her membership in social entities in which s/he enjoys his/her membership (Ellemers, Kortekaas and Ouwerkerk 1999), it seems reasonable to suggest that an employee shows commitment to his/her work organization (a construct which is similar to organizational identification) when this organization embraces 'positive' group norms, such as social support, teamwork, self-

actualization and goal achievement. In other words, job satisfying organizations, which are perceived as having 'constructive' cultural orientations are more likely to induce high emotional and normative ties to their employees. These shared assumptions place emphasis on members' feelings of power, autonomy, self-determination and affiliation, and can be seen as associated with human basic needs. Since organizational socialization (during which internalization of organizational values takes place) has been theorized to act as an antecedent to normative commitment (Meyer and Allen 1997), there seems to be a link between organizational values and normative commitment. In the case of continuance commitment, it also seems reasonable to suggest that employees who attribute to their organization a constructive orientation are also likely to perceive that the risks of leaving the organization are high (i.e., high continuance commitment).

Hypothesis 3: Constructive organizational culture orientations (namely: humanistic, affiliative, achievement and self-actualizing cultures) are positively associated with all three components of organizational commitment.

Organizational culture as a mediator between leadership and commitment to the organization

In as early as 1957, Selznick argued that since leadership is embedded in the organization, leadership theory is dependent on organization theory (Selznick 1957). There is a long-standing debate regarding which comes first, leadership or organizational culture. Nowadays, it is generally accepted that an organization's culture develops, to a great extent, from its leadership while, at the same time, organizational culture has also an impact on the development of its leadership (Bass and Avolio 1993; Schein 1992). Sarros, Gray and Desten's (2002) empirical study of Australian executives regarding the relationship between leadership and organizational culture, indicated that transformational leadership and transactional contingent reward were more salient predictors of culture than culture was of leadership.

According to Schein's theoretical framework, leaders determine the type of culture in organizations by shaping as well as maintaining culture. A constant interplay between organizational culture and leadership has both been theorized and empirically supported (e.g., Bass and Avolio 1993; Xenikou and Simosi 2006). According to Bass and Avolio (1993), leaders create mechanisms either for cultural development and change or for reinforcement of existing norms, expectations and behavioural patterns. This is suggestive of the fact that different leadership patterns affect differently the way that followers perceive their organization's cultural orientations. To our knowledge, the only study having examined the form of interaction between leadership, organizational culture and commitment is Lok et al.'s (2005), which found the mediating role of both innovative and supportive subcultures to the influence of consideration leadership (i.e., attentive to followers' needs and to maintenance of relationships) on employees' commitment.

In the context of the present study, it is argued that transformational leaders, through the inspiration, creativity, the sense of confidence and the high expectations they engender to their followers regarding the organization's vision, promulgate 'positive' group norms, such as social support, teamwork, self-actualization and goal achievement; as a consequence, followers are more likely to experience increased levels of commitment to their organization. In the meantime, it is argued that transactional leaders, through the sense of direction (i.e., clarification of role and task requirements) as well as security and justice they provide to their followers (i.e., fulfilment of 'effort-reward' agreement),

enable the latter to achieve their personal goals; in this sense, transactional leaders are likely to promulgate achievement cultural orientations, by providing motivation to employees to do their job well and be committed to the organization. Moreover, through their focus on existing policies and regulations, transactional leaders do not develop or enhance followers' creativity or empowerment and thus are not expected to promulgate self-actualizing norms. Finally, due to the concentration on 'economic exchanges' and neglect of 'social exchanges', transactional leaders are not expected to proclaim humanistic or affiliative cultural norms:

Hypothesis 4: Humanistic, affiliative, achievement and self-actualizing culture orientations serve as mediators between transformational leadership and all three forms of organizational commitment.

Hypothesis 5: Achievement culture orientation serves as mediator between transactional contingent reward and all three forms of organizational commitment.

Method

Participants

For the purpose of the present study, questionnaires were distributed to 415 employees working in 32 business units of a Greek service organization. Three-hundred employees returned the questionnaires (response rate of 72%). Their ages ranged from 20 to over 50 years old. Fifty-five per cent were female and 45% were male. In regard to their position in the organizational hierarchy, 55% did not hold a management position, 45% were managers. Regarding length of service, 76% were working for more than four years, while 24% of the sample had been working for the organization between six months and four years; no employees worked for the organization for less than six months since the particular organization used to recruit new hires after a nation-wide competition and no such competition had taken place in the six months prior to the present study. The percentage of employees who did not respond to the survey did not differ in terms of gender, age, length of service in the company or hierarchical position.

Procedure

The questionnaires were distributed and collected using inter-office mail. A return envelope was provided to ensure that respondents could not be identified. Included in each questionnaire was a cover letter explaining the importance of research as well as the confidentiality and anonymity of the responses. In an attempt to minimize response bias, the order in which the scales included in this study were completed was counterbalanced. The questionnaires constituted Greek translations of the measures used. In order to enhance reliability, the method of translation and back-translation was used.

Measures

Affective, continuance and *normative* commitment were assessed using Meyer, Allen and Smith's (1993) scale, which includes six items for affective, seven for continuance and six for normative commitment. Scale anchors ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). We conducted a factor analysis (using oblique rotation) for all subscales of organizational commitment and excluded all items with loadings less than .40; oblique

rotation method was used since the constructs examined have been both theorized and empirically found to be correlated, (even though distinguishable components of commitment) (Meyer et al. 2002), as it is often the case in attitudinal constructs. The analysis indicated the existence of two factors for continuance commitment: personal sacrifices and perceived alternatives. In Table 1, we present the factor analysis for continuance commitment. We also excluded a continuance commitment item which demonstrated high loading on the other factor than the one for which it was conceptually developed (CC6 in Table 1). Thus, the Cronbach alpha estimates and all statistics were calculated on the basis of the remaining items: six for affective commitment ($\alpha = .85$); 4 for normative commitment ($\alpha = .80$); three for personal sacrifice ($\alpha = .74$); two for perceived alternatives ($\alpha = .71$).

Transformational leadership and *contingent reward* behaviour were assessed with the Multifactor Leadership Questionnaire (Form 5X) (MLQ; Avolio et al. 1999). Participants were asked to describe their immediate supervisor's leadership on 24 items using a five-point Likert scale (5 = almost all the time; 1 = not at all). The subscale of contingent reward contained four items, whilst transformational leadership was measured with three transformational scales: charisma/inspirational (12 items), intellectual stimulation (four items), and individual consideration (four items). The Cronbach estimates were .91 for charisma, .90 for intellectual stimulation, .91 for individualized consideration, and .88 for contingent reward. In this study, we made no distinction among these four dimensions, since they have consistently been found to be highly correlated and constitute the higher-order construct of transformational leadership (Avolio et al. 1999).

Table 1. Factor solution for continuance ommitment.

Items	<i>Factor 1</i> <i>Personal sacrifices</i>	<i>Factor 2</i> <i>Perceived alternatives</i>
CC1: It would be very hard for me to leave my organization right now, even if I wanted to	.79	.27
CC2: Too much in my life would be disrupted if I decided I wanted to leave my organization now	.84	.37
CC3: Right now, staying with my organization is a matter of necessity as much as desire	.78	.19
CC4: I feel I have too few options to consider leaving this organization	.30	.83
CC5: One of the few negative consequences of leaving this organization would be the scarcity of available alternatives	.00	.83
CC6: One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice: another company may not match the overall benefits I have	.36	.69
CC7: I have too much time invested in my organization company to change.	.26	.31
Eigen values	2.6	1.3
% of item variance explained	37.87	19.15

Note: Rotation method: Varimax with Kaiser normalization.

Table 2. Means, standard deviations and Cronbach's alpha coefficients of the variables.

<i>Variables</i>	<i>M</i>	<i>SD</i>	<i>Alpha</i>
Affective Commitment	33.10	7.63	.85
Normative Commitment	16.16	6.27	.80
Continuance Commitment: personal sacrifice	16.48	4.27	.74
Continuance Commitment: perceived alternatives	9.17	3.58	.71
Transformational Leadership	68.54	16.59	.94
Contingent Reward	13.18	4.21	.88
Humanistic Culture	28.69	8.22	.93
Affiliative Culture	32.10	8.62	.94
Achievement Culture	29.56	6.72	.87
Self-actualizing Culture	29.97	6.29	.85

Note: $N = 300$.

The four *constructive culture orientations*, namely humanistic, affiliative, achievement and self-actualization, were measured by using four subscales of the Organizational Culture Inventory² (OCI) which was developed by Cooke and Lafferty (1989). Each orientation was measured with 10 items. Each rating was made on a scale from (1) 'not at all' to (5) 'to a very great extent'. Co-efficient alpha for the present study was .93 for the scale measuring humanistic orientation, .94 for affiliative orientation, .87 for achievement orientation and .85 for self-actualizing orientation. The OCI has been shown to be a reliable and valid measure of organizational culture (Cooke and Rousseau 1988; Cooke and Szumal 1993; Xenikou and Furnham 1996).

Analysis and results

Descriptive statistics, Cronbach's alphas, and correlations among all relevant variables are presented in Tables 2 and 3. The coefficients of internal reliability reached acceptable levels for all the variables included in the present analyses. Correlations between the variables examined were also calculated.

In order to account for the possibility of existence of multicollinearity, two steps were taken. First, all variables were centred before calculating the regression statistics (Aiken and West 1991). Second, a Harman's one-factor test was performed (Harman 1967; Podsakoff and Organ 1986), according to which all the variables were entered into a principal components factor analysis with varimax rotation. According to the results of our analysis, neither a single factor emerged from the factor analysis nor one general factor accounted for most of the variance, thus suggesting that common method variance was not deemed present.

Originally, we attempted to rule out any possible effect of employees' tenure on organizational commitment, since tenure has been considered to be a good proxy measure for 'side-bets' and the accumulation of investments (i.e., continuance commitment) (see Meyer et al. 2002). Our findings indicated that this is not the case, since its correlation with continuance commitment was weak ($r = .13$, $p < .05$) and lower in magnitude to that of affective commitment ($r = .26$, $p < .01$).

Transformational leadership and transactional contingent reward were found to be significantly and positively correlated with affective (.15, $p < .05$ and .25, $p < .001$ respectively) and normative commitment (.20, $p < .01$ and .30, $p < .001$ respectively), while the only relationship found between leadership behaviour patterns and continuance commitment was that between transactional contingent reward behaviour and the subscale

Table 3. Correlation coefficients of the variables.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Affective Commitment (1) Normative Commitment (2) Continuance commitment: Personal sacrifice (3) Continuance commitment:	—	.49***	—	—	—	—	—	—	—	—
Perceived alternatives (4)	-.14*	.03 +	.26***	—	—	—	—	—	—	—
Transformational Leadership (5)	.15*	.20**	.13 +	.05 +	—	—	—	—	—	—
Contingent Reward (6)	.25***	.30***	.19**	-.004 +	.84***	—	—	—	—	—
Humanistic Culture (7)	.30***	.35***	.25*	-.003 +	.57***	.55***	—	—	—	—
Affiliative Culture (8)	.26***	.28***	.15*	.04 +	.56***	.52***	.88***	—	—	—
Achievement Culture (9)	.28***	.32***	.16**	.03 +	.63***	.51***	.82***	.77***	—	—
Self-actualizing Culture (10)	.24***	.25***	.11 +	.06 +	.59***	.52***	.80***	.78***	.79***	—

Notes: N = 300; *p ≤ .05; **p ≤ .01; ***p ≤ .001.

of personal sacrifice (.19, $p < .01$). The analysis also indicated that the constructive culture patterns were significantly and positively associated to both affective and normative commitment, while low correlations were observed between culture patterns (except self-actualization) and the subscale of personal sacrifice. Finally, both leadership behavioural patterns were found to be positively associated with all four constructive cultural orientations. These findings support Hypothesis 3 and partly Hypotheses 1 and 2.

A series of hierarchical regression analyses were conducted to examine the effects of leadership and culture on affective and normative commitment (see Tables 4 and 5). Hypothesis 4 predicted that the four cultural patterns mediate the relationship between transformational leadership and organizational commitment, while Hypothesis 5 predicted that only achievement cultural orientation mediates the relationship between transactional contingent reward and organizational commitment.

Table 4. Results of regression analyses for transformational leadership and culture orientations on affective and normative commitment.

	<i>Affective commit- ment</i>	<i>Normative commit- ment</i>	<i>Humanistic culture</i>	<i>Affiliative culture</i>	<i>Achieve- ment culture</i>	<i>Self- actualizing culture</i>
Models and variables						
Model 1						
Transformational leadership	.15*	.20**				
R^2	.02	.04				
Model 2						
Transformational leadership			.57***	.56***	.63***	.59***
Model 3						
Humanistic culture orientation	.29**	.31***				
Transformational leadership	-.02	.04				
R^2	.08	.11				
ΔR^2	.06**	.01**				
Affiliative culture orientation	.24**	.28**				
Transformational leadership	.01	.05				
R^2	.06	.09				
ΔR^2	.04**	.01**				
Achievement culture orientation	.31***	.40***				
Transformational leadership	-.06	-.05				
R^2	.08	.14				
ΔR^2	.06**	.02**				
Self-actualizing culture orientation	.23*	.24**				
Transformational leadership	.003	.07				
R^2	.05	.08				
ΔR^2	.03**	.03**				

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

Table 5. Results of regression analyses for transactional contingent reward and culture orientations on affective, continuance and normative commitment.

Model 1					
Transactional Contingent Reward					
R^2	.25***	.30***	.19**		
	.06	.14	.03		
Model 2					
Transactional Contingent Reward					
				.51***	.52***
				.55***	.52***
Model 3					
Achievement Culture Orientation					
Transactional Contingent Reward	.23**	.26**	.11 +		
R^2	.13	.16*	.13 +		
ΔR^2	.10	.14	.04		
	.04**	.02**			
Humanistic Culture Orientation	.25***	.22**	.10 +		
Transactional Contingent Reward	.11	.19*	.14 +		
R^2	.11	.13	.04		
ΔR^2	.05**	.02**			
Affiliative Culture Orientation	.19*	.17*	.10 +		
Transactional Contingent Reward	.15	.22**	.16 +		
R^2	.09	.11	.03		
ΔR^2	.03**	.03**			
Self-actualizing Culture Orientation	.17*	.15 +			
Transactional Contingent Reward	.16*	.22**			
R^2	.08	.11			
ΔR^2	.02*	.04**			

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

According to Baron and Kenny (1986), analysis of mediation requires three conditions to be met. The first condition needs to illustrate that the independent variable influences the dependent variable. The second condition requires that the independent variable influences the mediator, while the third condition necessitates that the mediator (cultural patterns) influences the dependent variable (commitment components), while the independent variable (leadership behaviour) is controlled.

The analysis indicated that the first condition for mediation was met (Model 1 in Tables 4 and 5); having regressed each commitment component on transformational (Table 4) and transactional (Table 5) leadership, it was found that both transformational leadership and transactional contingent reward positively and significantly accounted for variation in the two commitment components (i.e., affective and normative commitment); the analyses indicated that the size of contingent reward contribution is higher for both commitment components as compared with that of transformational leadership. In regard to continuance commitment, only contingent reward was statistically significant in contributing to personal sacrifices part of the continuance commitment. Overall, the results suggested a moderate relationship between leadership behaviour and affective and normative commitment.

Hierarchical regression analysis also indicated that the second condition for mediation (i.e., the independent variable influences the mediator) was fulfilled (Model 2 in Tables 4 and 5). Transformational leadership significantly contributed to each of the four culture orientations (Model 2 in Table 4). While transactional contingent reward was found to significantly contribute to Achievement cultural orientation, the analysis also indicated that contingent reward had an equally significant contribution to Humanistic, Affiliative and Self-actualizing orientations, a finding which was not anticipated (Model 2 in Table 5). As expected, the results suggested the existence of a strong positive relationship between leadership behaviour and constructive cultural patterns. It is also noteworthy that each leadership style contribution to each of the four constructive cultural orientations is of similar size.

Finally, the third condition for mediation assessed whether cultural patterns mediate the relationship between leadership behaviour and organizational commitment. To this end, each of the cultural patterns were added as a predictor to the regression of leadership behaviour on organizational commitment. In general, the third condition for mediation was fulfilled (Model 3 in Tables 4 and 5). As Table 4 shows, the significant relationship between transformational leadership and both affective and normative commitment became non-significant when each of the four constructive culture orientations were included as mediators in the hierarchical regression model, finding which indicates the fact that each constructive orientation fully mediates the transformational leadership – affective/normative commitment relationship. The change in variance explained (ΔR^2) when cultural orientations were entered in the hierarchical regression analysis, after transformational leadership in predicting organizational commitment ranged from .06 to .03 ($p < .01$) (for affective commitment) and .03 to .01 ($p < .01$) (for normative commitment).

With regard to the effect of contingent reward on organizational commitment (Model 3 in Table 5), the analysis indicated that, after controlling for Achievement orientation, the direct relationship between transactional contingent reward and affective commitment was no longer significant which suggests the existence of full mediation. In the case of normative commitment, the analysis illustrated that Achievement orientation only partially mediated the relationship between contingent reward and normative commitment; the significant relationship between contingent reward and normative commitment was reliably reduced when controlling for Achievement orientation ($\beta = .30$,

$p < .001$ being reduced to $\beta = .26$, $p < .01$ (Sobel test: z -value = 4.57, $p < .001$), while the change in the multiple squared correlation coefficient remained significant at $p < .01$. Finally, no mediation effect of culture content was found to characterize the relationship between leadership and continuance commitment (personal sacrifices subscale). The change in variance explained (ΔR^2) when Achievement orientation was entered in the hierarchical regression analysis, after transactional contingent reward in predicting organizational commitment ranged from .04 ($p < .01$) (for affective commitment) to .02 ($p < .01$) (for normative commitment). Overall, the analyses provided partial support to Hypotheses 4 and 5.

The analysis also revealed the existence of the following mediation effects, which were not anticipated according to our hypotheses. First, Humanistic and Affiliative orientations were found to fully mediate the relationship between transactional contingent reward and *affective* commitment, while Self-actualizing orientation was found to partially mediate this relationship (Sobel test: $z = 3.57$, $p < .001$) (see Table 5). Finally, Affiliative orientation was found to partially mediate the relationship between transactional contingent reward and *normative* commitment (Sobel test: $z = 4.04$, $p < .001$).³

Discussion

Overall, the findings of the present study were consistent with the exchange framework: both social and economic exchanges provided by organizational leaders have an effect on employees' emotional attachment as well as their feeling of obligation to remain in the organization. As hypothesized, both transformational leadership and contingent reward were found to be significantly and positively related to affective and normative commitment. This finding appears to be at odds with extant studies which have found that transformational leadership is most strongly associated with commitment (e.g., Bycio et al. 1995; Lowe, Kroeck and Sivasubramaniam 1996), as well as with Bass' (1985) 'augmentation hypothesis' according to which transformational leadership goes beyond inducement exchanges for desired performance and thus results in followers' higher levels of effort. A possible interpretation of our finding could be that, in more recent years, the economic exchange framework, as well as the importance of transactional contracts originated by it, have become more salient due to the existence of less stable employability patterns. It could also be the case that clarifications of employees' responsibilities, performance criteria and expectations of transactional leaders create a climate of fairness which promotes affective and normative commitment; role and goal clarity have already been found to be associated with employees' commitment (e.g., Meyer and Allen 1997; Swailes 2002). In general, the findings revealed the importance of transactional contracts (as exemplified by transactional leaders), which are based on principles of economic exchange, not only for the development of continuance commitment as advocated so far (e.g., Rousseau and Wade-Benzoni 1995), but also for the initiation of affective and normative commitment.

In the meantime, the present study has demonstrated smaller correlations between transformational leadership and employees' commitment, as compared to previous studies (e.g. Bycio et al. 1995). Due to the scarcity of relevant research, this empirical question needs to be further investigated. However, this finding may be related to the fact that transformational leadership may be perceived differently – and less favourably – by different employees. For instance, it has been found that individual consideration may be viewed as a sign of favouritism toward certain employees (Bass and Steidlmeier 1999). Similarly, the transformational leader can sometimes be seen as manipulating employees

to exert extra effort in order to pursue the leader's personal interests (House and Howell 1992). On the other hand, leaders demonstrating contingent reward behaviour are likely to inspire feelings of honesty, faith and trust to their followers which is manifested in all aspects of their relationship with each other (Aronson 2001). Since, to our knowledge, no other study has investigated employees' perceptions of transformational and transactional leaders in Greek organizations, it would be worth examining in a future study whether this finding is related to the national (Greek) cultural context.

In addition, the analysis indicated that transformational leadership and contingent reward were strongly related ($.84, p < .001$). This finding is consistent with extant empirical research which has consistently found high intercorrelations (i.e., exceeding .7) between transformational and transactional leadership (e.g. Avolio et al. 1999; Yammarino and Dubinsky 1994; Pillai, Schriesheim and Williams 1999). This finding is consistent with Bass and Avolio's (1993) theorizing that best leaders are both transactional and transformational and supports the standpoint that the transformational–transactional leadership paradigm is comprised of complementary rather than polar constructs. The extent to which transformational and transactional leadership are correlated are of theoretical interest, since Burns (1978) originally viewed them as representing opposite ends of the same continuum.

Contrary to our hypotheses as well as previous empirical research (e.g., Bycio et al. 1995; Meyer et al. 2002), transformational leadership did not explain how continuance commitment develops. Only the subscale of personal sacrifices was linked to transactional contingent reward which may suggest that just 'economic exchanges' are appreciated by followers and result in the enhancement of a calculative form of commitment. Significant, even though small, associations were also found between the subscale of personal sacrifices on the one hand and humanistic, affiliative and achievement cultural patterns on the other hand, a finding which may be indicative of the fact that employees perceive that the 'costs' of leaving such an organization are high in organizations demonstrating such cultural patterns. Moreover, the latter finding suggests that the concept of personal sacrifices and perceived costs of leaving, as operationalized in the case of continuance commitment, should not be confined to the calculation of 'economic' costs and benefits; rather, it should include 'affective' costs as well (e.g., losing a work environment which entails good interpersonal relationships). Given that the present study is one of the few in the field which advocates the existence of two dimensions of continuance commitment (e.g., Ko, Price and Mueller 1997; Carson and Carson 2002), the concept of continuance commitment needs to be further researched, in order to understand how and why continuance commitment develops.

The results of our analyses also indicated the existence of a moderate but significant association between the content of organizational culture and employees' commitment. This finding suggests that the more employees perceive their work organization as espousing group norms that promote social support and constructive interpersonal relations, goal achievement and self-actualization, the more they are likely to remain in the organization and feel a moral reciprocation towards it; these values have been theorized to match the pan-cultural values of benevolence universalism and self-direction which meet fundamental human needs (Schwartz and Bardi 2001; Abbott et al. 2005).

Moreover, the findings suggested that the variables examined in this study were associated – almost invariably – with both affective and normative commitment. The importance of this finding is two-fold. First, it further substantiates the argument that feelings of obligation to remain with an organization develop not only from familial and societal norms (prior to organizational entry) or at the early stages of organizational

socialization (see Meyer and Allen 1997); such feelings can also be enhanced by positive work experiences which are accumulated throughout an employee's tenure to the particular organization. Secondly, the similarity of the findings of the present study for affective and normative commitment is consistent with the results of previous empirical research (e.g., Meyer et al. 1993; Finegan 2000) which has advocated that the same work experiences which contribute to strong affective commitment may also induce a sense of obligation to reciprocate toward their work organization. The significant relationship between affective and normative commitment (.49, $p < .001$) implies that the experience of desire to remain in a particular work organization is meaningfully linked to feelings of obligation to do so. A possible interpretation of this finding may be that the internalization of moral obligations affect the formation of employees' desire to maintain membership in the organization or that, such moral obligation is developed as a consequence of employee's attempt to justify his/her preference to remain in the organization. In any case, it becomes apparent that more attention needs to be paid to the investigation of the processes underlying the development and maintenance of employees' affective and normative commitment.

Finally, the present study hypothesized that the content of the culture of the organization mediates the link between leadership behaviour and followers' affective and normative commitment to the particular organization. The empirical evidence of the study generally supported this claim. Each of the four constructive culture orientations were found to fully mediate the relationship between transformational leadership and both affective and normative commitment. What our findings suggest is that leaders who inspire in their followers creativity, initiative and alignment of personal principles with those of the organization, promote organizational contexts which espouse 'positive' work values, and, as a consequence, have employees who are emotionally attached to their organization and experience a moral obligation to reciprocate to it.

Last, but not least, the findings also revealed the importance of transactional leadership, as the implementation of fair economic exchanges do not only promulgate an achievement culture, but also affiliative and humanistic cultural patterns. Even though more research needs to be conducted to elicit this link, a possible interpretation of the findings could be as follows. In the case of transactional leadership, the simple 'consent on ends' (i.e., agreement on rights and responsibilities) which serves the interests of all parties concerned (Kanungo 2001), as well as the positive reinforcing interaction between employees and their (transactional) leaders engenders to followers a feeling of working in a humanistic and affiliative environment; this feeling may motivate them to be committed to the organization.

Limitations and implications of the present study

Certain methodological limitations of the study should be noted. First, since this is a cross-sectional study, no causality can be drawn. The use of a longitudinal design would allow for the investigation of the direction of the association of the concepts examined. Moreover, as data on both predictor and criterion variables were gathered from the same respondents at the same time and using the same collection method, common method variance could be a problem; the use of multiple measures for the variables could alleviate some of these concerns. Finally, the data were gathered from a single organization (even though from various branches of the particular organization), and thus, the conclusions of the study are, to a great extent, bounded to the particular organization which constituted the context of this research. Further research is needed in order to examine whether these results will generalize across organizations and participant populations. For instance, it would be meaningful a replication of the study to be performed in different contexts, such

as different business sectors and/ or different countries. In this sense, the limitations of the study need to be seen as alternative avenues for future research.

To the extent that organizational commitment (and especially affective and normative commitment) have an impact on a series of in-role as well as organizational citizenship behaviours which are of importance to organizations, the present study suggests that HRM should benefit from noting the links between the way in which employees view organizational norms, perceive their leader's behaviour and feel committed to the organization. The findings of the present study are also of great importance from an organizational development perspective, since they suggest that the actual content of organizational culture is vital for the development of emotional and normative ties, while the findings are also essential to the development of leadership training programs from human resources professionals. In addition, the results suggest that leaders need to reflect on the mechanisms through which their behaviour foster employees' commitment and, as a consequence, channel their influence to the development and maintenance of organizational values which parallel those of employees' self-worth and meet the latter's higher-order needs.

Notes

1. The primary factors of the Bass and Avolio's (1993) transactional model are: contingent reward, management-by-exception (leader's intervention only when things are done) and laissez-faire (absence of leadership).
2. The Organizational Culture Inventory is copyrighted 1989 by Human Synergistics International of Plymouth, Michigan, USA and used by permission.
3. The Sobel test conducted for the partial mediation of helpful orientation in the relationship between transactional contingent reward and normative commitment indicated a non-significant z-value ($z = 5.13$ $p > .05$).

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