DE GRUYTER
OPEN

IRISH JOURNAL OF MANAGEMENT

Irish Journal of **Management**

Psychological contract breach and turnover intention: the moderating effects of social status and local ties

Research Article

Margaret Heffernan[1]* and Eoin Rochford[2]

[1]*Dublin City University, Dublin, Ireland*
[2]*Irish Defence Forces, Ireland*

Abstract: The aim of this study is to examine whether social networks reduce the effects of psychological contract breach on an employee's intention to leave the organisation. This paper focusses on two particular elements of the social network in an organisation: (1) social status and (2) local ties/connectedness. Using a sample of 242 responses from officers in the Irish Defence Forces, the results provide empirical evidence of the impact of psychological contract breach on officer turnover intentions. The results also demonstrate that perceptions of social networks moderate the relationship between psychological contract breach and turnover intentions through social status. Contrary to expectations, strong connectedness with senior officers was also found to be a moderator but not in the direction that was hypothesised. The theoretical and practical implications of these results are discussed.

Keywords: *psychological contract breach; turnover intention; social networks; social status; connectedness; local ties; defence forces*

© De Gruyter Open Sp. z o.o.

INTRODUCTION

The psychological contract, defined as 'individual beliefs, shaped by the organization, regarding terms of an exchange agreement between individuals and their organization' (Rousseau, 1995, p. 9), has been shown to affect a number of key organisational and employee outcomes, including turnover intention. Employee perceptions that the organisation is providing what it promised, referred to as psychological contract fulfilment, have been shown to affect outcomes such as job satisfaction (e.g. Turnley and Feldman, 2000) and organisational citizenship behaviours (e.g. Hui et al., 2004). Conversely, employee perceptions of the extent to which the organisation has *failed* to fulfil its obligations, referred to as psychological contract breach (PCB), has been linked to strong affective responses (O'Leary-Kelly et al., 2014), including increased turnover intentions (Zhao et al., 2007).

Rousseau (2001) suggests that psychological contracts are best thought of as schema or mental models that can vary in complexity and degree of abstraction. This paper builds on the work of Rousseau (2001) by taking this cognitive depiction of psychological contracts to examine how they are influenced by social information and contextual norms (Ho, 2005). In particular, we adopt a social network perspective to investigate the influence of informal networks on the relationship between psychological contract fulfilment and turnover intentions, within an army context.

The issue of retention and turnover of military personnel has received a great deal of empirical attention and is a key concern for the Irish Defence Forces (Defence Forces, 2011). In all organisations, including the Defence Forces, individuals are social beings who seek to establish ties of identity and friendship with others. These ties are used for social support and work accomplishment (Mehra et al., 1998). According to Lo and Levesque (2005), previous psychological contract research has examined individual differences and formal organisational influence, but it fails to 'consider the influence of informal social relationships in shaping employees' fulfilment evaluation, despite the prevalence of such relationships in most organizations' (2005, p. 275). We argue in this paper that the strength of social networks plays a pivotal role in employee responses to PCB.

In social network research, organisations are viewed as clusters of people joined by a variety of links. Related research focusses on patterns of relationships among people rather than on people in isolation from one another (Brass, 1984). Employees rely on colleagues in their network during times of perceived contract violation when trying to cope with circumstances such as radical change or organisational crises (Krackhardt, 1992). It has also been found that employees also use their networks to overcome job uncertainty (Burkhardt and Brass, 1990; Rice and Aydin, 1991). Social networks can help or hinder employer efforts to promote psychological contracts that are mutually beneficial to both employees and the employer. The two network influence mechanisms being investigated in this paper draw on the recent work of Dabos and Rousseau (2013) and are (1) social status and (2) local ties/connectedness. Social status looks at network position – specifically the position each individual holds in the larger informal network or structure and the influence resulting from this position. Centrality is a key indicator of an individual's social status in an organisation as it reflects the extent of his/her ties. Local ties can be conceptualised as focussing on connectedness. Influence via connectedness occurs through direct ties to others. These networks can increase, which can help individuals perform their jobs more effectively, but also receive more positive cues from the organisation's contract makers (Ho et al., 2006). Previous research has commonly focussed on the psychological contract and turnover intention. However, there has only been limited research into the moderating effects of workplace social networks on turnover intention from a psychological contract perspective (Ho et al., 2006). In particular, we focus on the *overall structure* of relationships in the employment relationship. An integration of the psychological contract and network literatures is potentially valuable because it enables a focus on the effects of patterns of informal relationships and social cues on the employment relationship from a psychological contract perspective.

LITERATURE REVIEW AND HYPOTHESES

Rousseau (1995) defined the psychological contract as 'an individual's belief regarding the terms and conditions of a reciprocal exchange relationship between the focal person and another party' (p. 9). Rousseau's (1995) definition highlights that promises of future behaviour by the organisation are contingent upon some action by the individual. Although the organisation is perceived as making these promises, these reciprocal obligations are, according to Rousseau, defined by the individual, not the organisation. They are, therefore, highly subjective. The individual interprets the various actions of the organisation on the basis of these actions. Employees enter into an employment relationship with an understanding that their employer has certain obligations to them, and they to their employer, thus creating an atmosphere of reciprocity. It is important to note that, to the employee, the organisation/employer is represented by recruiters, mentors, and – in particular – line managers (Guest and Conway, 2002; Taylor and Tekleab, 2004). The contract is, therefore, largely informal, unwritten, and constantly developing as the individual interacts with the organisation through their management (McDonald and Makin, 2000).

Human resources (HR) practices, such as rewards and performance management, career and skill development, job design, autonomy, and employee involvement, all contribute to the development of psychological contract obligations. Transactional or monetary obligations are the most common in today's workplace and involve compensation for specific forms of labour, as expressed by 'a fair day's work for a fair day's pay' (McDermott et al., 2013). Where money is the dominant concern, psychological contracts tend to be explicit in their terms. Obligations between workers and employers are relatively rare where predominantly monetary contracts are concerned. Their duration tends to be of a short term, with few – if any – commitments made regarding the future on the part of either worker or firm. Transactional obligations generally include competitive resources in workplaces, which are scarce in an absolute or socially imposed sense (Hirsch, 1976). Scarcity arises due to constraints in the amount available (e.g. limited budgets) or rules that restrict who gets a resource (e.g. committee membership). In the Defence Forces, these can include access to promotions, overseas deployments, training courses, and a qualification in a specific field, which will give rise to an increased chance of promotion or overseas service. The attainment of competitive resources depends on factors shaping the competitive success of individuals at work, including their performance and other factors determining performance, such as resource access and supports from powerful peers or superiors.

Relational obligations involve socio-emotional resources, such as mutual support and concern between the employer and the employee (Rousseau, 1990). Social and interpersonal concerns dominate in arrangements generating high-commitment employment. Psychological contracts that are largely relational are broader in the

terms they involve, include many forms of employer rewards and individual contributions, and often cover a longer time frame. Such relational agreements also tend to include employee development and future growth opportunities (e.g. Bal et al., 2010; Coyle-Shapiro and Kessler, 2000) in anticipation of value-adding contributions to the employer over time or employability on the external job market.

Employment contracts can combine both transactional and relational terms, including pay, pension, and retirement benefits on the one hand and future growth opportunities on the other. Thus, the psychological contracts that employers create with their employees can mix transactional and relational features in a myriad ways (Rousseau, 1995). Relational obligations generally include non-competitive resources, such as safe working environments and healthcare benefits. Unlike with competitive resources, one employee's successful attainment of non-competitive resources need not diminish another's (Dabos and Rousseau, 2013).

Due to the nature of the psychological contract, with each individual employee having his/her own informal contract, it can involve a high degree of subjectivity (Rousseau, 1995). Implicit in this is that they are based on perceived promises (explicit or implicit) made by the employer. When employees believe that the organisation has failed to fulfil obligations contained in the contract, breach occurs (Rousseau, 1990). Previous literature on psychological contracts has employed the sensemaking theory to explain the dynamics of contract breach (Conway and Briner, 2005; Morrison and Robinson, 1997). This paper will adopt a sensemaking approach consistent with Rousseau's (2001) position on psychological contracts as cognitive schemata (Morrison and Robinson, 1997). Schema-based sensemaking processes are generally understood to be naturally occurring for new employees from entry onwards (Harris, 1994). When new hires enter the organisation, they have already formulated numerous expectations about their future employment relationship (De Vos et al., 2005). However, it is also clear that these expectations are subject to revision through the course of interactive exchanges with insiders – both individual and organisational sources of information (Thomas and Anderson, 1998; Sherman and Morley, 2015). Thomas and Anderson's (1998) study of new recruits in the British Army found that recruits adjusted their expectations of the Army upward over an 8-week period. In particular, relational aspects of the psychological contract showed upward change, reflecting the strong identification that soldiers often have with the Army. These increasing elements of the psychological contract can have positive benefits (e.g. citizenship behaviour), but, in return, absolute higher levels of employer expectations may make breach or violations more likely (Thomas and Anderson, 1998; Robinson et al., 1994).

When employees perceive that there has been a breach in the psychological contract, it can lead to significant changes in work attitudes and behaviours. PCB, i.e. employees perceiving unmet promises made by their employers (Morrison and Robinson, 1997; Robinson, 1996), has been demonstrated to have a negative effect on almost all work-related outcomes (Zhao et al., 2007). Based on the affective event theory, Zhao et al.'s (2007) meta-analysis revealed significant relations between PCB and work-related outcomes, including commitment, productivity, and turnover.

Turnover intention is defined as a conscious desire to seek out a job with a new organisation (Tett and Meyer, 1993). It is understood to have an impact on organisational effectiveness (Chen et al., 2011) and job satisfaction (Dickter et al., 1996), and it is recognised as the final cognitive step in the decision-making process of voluntary turnover (Hom and Griffeth, 1995). Existing studies have found consistent positive relationships between turnover intention and actual turnover and suggest that turnover intentions are the best predictors of actual turnover (Hom and Griffeth, 1995). Empirical evidence suggests that PCB is significantly and positively related to turnover intentions (Robinson and Rousseau, 1994; Shore and Barksdale, 1998; Coyle-Shapiro and Conway, 2005). It has also been found that PCB, as a negative event for employees, can increase their tendency to leave an organisation (Zhao et al., 2007). After a PCB, employees may be less willing to exert extra effort on behalf of the organisation and have a lower desire to remain employees of their organisation (De Hauw and De Vos, 2010). Turnover as a result of breach not only severs the dissatisfactory employment relationship but also punishes the organisation because turnover usually results in high costs to employers due to the substantial time and money required to refill positions in the form of recruitment, selection, and training costs.

Moderating role of social networks

To provide insight into conditions that may determine the extent to which employees withdraw from the organisation in response to PCB, we combine the schema theory with the social network theory. There has only been limited research into the moderating effects of workplace social networks on turnover intention from a psychological contract perspective (Ho et al., 2006). Krackhardt (1992) noted that the strength of the emotional and behavioural

reactions that follow a contract breach might be moderated by an individual's network within the organisation. Drawing on the schema theory perspective, Sherman and Morley (2015) explore how individual and organisational sources of information differentially affect the formation of the psychological contract – it may also influence how employees react to its breach. These sources include contract makers, who send organisational messages, and co-workers, who provide social cues (Rousseau, 1995). Often studies fail to look beyond formal management systems and do not recognise social bias as an influence of behaviour. Bernard (1938) recognised how the informal aspects of organisations helped maintain organisational cohesiveness; and Gouldner's (1954) study highlighted how solidarity and influential norms established role expectations independent of bureaucratic rules. The consistent thread running through these studies is the recognition that employees adapt their behaviour consistent with the norms and expectations of people around them (Moynihan and Pandey, 2008). This is particularly relevant to levels of turnover intention in organisations such as the Defence Forces, where the organisation has a wide geographical spread.

Employees rely on colleagues in their network during socialisation when developing their psychological contract and also in times of perceived contract breach when trying to cope with circumstances such as radical change or organisational crises (Krackhardt, 1992). Social networks can help or hinder employer efforts to promote psychological contracts that are mutually beneficial to both employees and the employer. The informal network, which often does not parallel the organisation's formal structure (Krackhardt and Hanson, 1993), has been found to play an important role in shaping the psychological contract and its related beliefs (Ho, 2005; Ho and Levesque, 2005), ultimately affecting employee attitudes and perceptions (Rice and Aydin, 1993). Understanding the dynamics underlying employee psychological contracts is important for several reasons in relation to social networks. First, gaps between the signals conveyed officially by senior officers and those conveyed by the informal organisation can complicate individual and organisational efforts to comply with and fulfil the commitments they believe themselves party to. Secondly, effective management of the multiple sources of information, including informal information, pertinent to psychological contracts can yield substantial benefits in the form of improved worker performance (Robinson, 1996; Robinson and Rousseau, 1994). Conversely, failure to comprehend and fulfil psychological contract obligations can result in negative consequences, such as high turnover and low citizenship behaviour (Robinson and Morrison, 1995; Robinson et al., 1994). There is still no clarity, however, on whether an employee's network encompasses contract makers or other information sources. Recent work by Sherman and Morley (2015) highlighted the multiple agents active in the exchange of contract-related information, including supervisors and co-workers. This paper focusses on two particular elements of the social network in an organisation incorporating these two agents, namely, (1) social status and (2) local ties/connectedness.

Social status

Social status can be conceptualised as belonging to a particular status through informal network position. In the same way as the psychological contract is a perception of reciprocity, the norm of reciprocity underlies the explanation for the relationship between the informal network position and psychological contract beliefs (Dabos and Rousseau, 2013). Certain network positions privilege employees with competitive advantage, benefits, and resources, enabling them to contribute more to the organisation, accomplishing their objectives faster, more easily, and more effectively than others in less-advantaged positions (Burt, 2000). This, in turn, can lead to an increased feeling of entitlement of an increased obligation from the employer. This is possible due to the network position afforded to the employee from the organisation. These employees, due to their advantageous network positions, receive positive social cues from other organisational members who shape their work-related perceptions; they also have different opportunity structures because of their familial or other connections and thus have high social status positions.

In contrast, those with low social status receive less number of positive cues, resulting in more negative work-related perceptions (Smith-Doerr et al., 2004). Such cues can signal the vital role that a well-positioned employee plays in the organisation, his or her importance in getting things done, and the rewards the employee can anticipate as a result, which in turn shape the employee's beliefs that the organisation is more obligated to provide him or her with benefits and resources in return.

In network analysis, centrality is an important indicator of an individual's social status or position and reflects the extent to which certain individuals are better connected in the network in terms of the quantity and quality of their social ties (Friedkin, 1993). Whereas most studies focussed on centrality as a source of leadership and power (e.g. Brass and Burkhardt, 1993), centrality also shapes attitudes and beliefs by enhancing or constraining the

opportunities for goal attainment (Friedkin, 1991). Opportunities often accrue to central individuals in high status positions (Brass, 1984), who in turn are likely to hold more positive perceptions of the organisation.

The influence of centrality in the informal structure stems from differences in social status that affect which individuals get access to scarce competitive resources, such as financial benefits or recognition (Pfeffer and Salancik, 1978). High-status individuals tend to develop more positive attitudes and beliefs than their low-status counterparts do, because their network position often provides advantages (Ibarra and Andrews, 1993). At the same time, the more favourable attitudes and beliefs of high-status individuals can be reinforced by the influence of the socially proximate others with whom they interact (who are also likely to be highly central in the network; Friedkin, 1991). These high-status relationships may buffer the negative affective responses to PCB. Morrison and Robinson (1997) argue that cognitive sensemaking allows employees to derive meaning from the cognition of breach. Through information seeking and explanation, employees may interpret and react to breach differently. High social status facilitates this perception of information and influence, giving employees 'perceived controllability', which influences an individual's response to breach (Weiner, 1986). Therefore, we propose that the following:

> *Hypothesis 1: Social status will moderate the relationship between psychological contract breach and turnover intentions, such that the positive relationship between psychological contract breach and turnover intentions will be weakened when social status is high relative to when social status is low.*

Local ties and connectedness

People tend to share attitudes and beliefs to the extent that they are socially proximate and exposed to each other's opinions and behaviours (Marsden and Friedkin, 1994). Two primary mechanisms account for this convergence: cohesion and structural equivalence. Structural equivalence occurs through indirect exposure through intermediaries and has weaker effects (Erickson, 1988). Influence via cohesion occurs through direct (i.e. non-mediated) ties to others. Cohesion denotes frequent interaction and emotional closeness and offers ample opportunities for information sharing and social comparison. Over time, direct exposure to others' opinions and behaviours influences the salience of that information, affecting an individual's own beliefs and actions (Rice and Aydin, 1991). In the workplace, this can include peers, subordinates, and superiors. Psychological contract researchers argue that the information exchanged, particularly for new entrants, is the foundation of psychological contracting (Conway and Briner, 2005; Sherman and Morley, 2015).

The direct effects of cohesion are well documented. It influences work-related perceptions (Ibarra and Andrews, 1993), attitudes towards new technology (Rice and Aydin, 1991), and opinions about fellow employees (Krackhardt and Kilduff, 1990). The influence of cohesion derives from the cooperation and trust that often exist between two directly tied individuals. When opinions of people with cohesive ties become known, mutual adjustment, agreement, and compromise occur, leading them to hold similar attitudes and beliefs (Marsden and Friedkin, 1994). The effects of structural equivalence occur when individuals share access to the same people regardless of whether they themselves interact (Marsden and Friedkin, 1994). Two people are structural equivalents if each has ties with (or lack ties with) the same people. Because structurally equivalent individuals occupy similar roles in the social network, they are likely to be exposed to comparable information and social demands, thereby developing similar attitudes and beliefs.

Previous research has found that a sense of community within local ties has a relationship with emotional connectedness and has attributes including feelings of membership and belongingness. There can also be a feeling that one is part of a bigger structure, with mutual interdependence taking precedence over the needs of the individual (Rovai, 2002). This is known as connectedness. Connectedness is defined as the 'feeling of belonging and acceptance, and the creation of bonding relationships' (Rovai, 2002: 322). Simply put, if junior officers feel like they are not accepted, are unable to freely access information, and lack a sense of safety and trust in the workplace, they will not feel connected to their peers and/or superior officers in their home unit. This may lead them to have few local ties and cause them to look for a connection with officers from outside of their home unit. However, if they feel connected to their peers and superiors in their unit, they will have stronger local ties and less of a requirement for indirect exposure from outside of their home unit.

Research has found that the prevalence of friendships in the workplace is related to decreased turnover intentions (Morrison, 2002). The Army is a unique workplace for a number of reasons, including the knowledge, skills, and intense training provided to its junior officers, often in difficult conditions, with the aim of replicating a conflict situation. It is also unique in the conditions that junior officers are exposed to. When taking domestic

training and overseas operations and service into account, where conditions can be poor, this can help to facilitate friendships, local ties, and connectedness by forcing junior officers to rely on each other and therefore decreasing levels of turnover intentions (Morrison, 2002). Rousseau (2001) meanwhile argues that employees' co-workers provide information that facilitates understanding of signals from the organisation. Drawing on the attribution theory (Fiske and Taylor, 1991), we argue that this allows employees to objectively understand the causes of PCB and make attributions that might be less damaging (Zagenczyk et al., 2009). Therefore, we propose the following:

Hypothesis 2a: Junior Officer-to-Junior Officer Connectedness will moderate the relationship between psychological contract breach and turnover intentions, such that the positive relationship between psychological contract breach and turnover intentions will be weakened when Junior Officer-to-Junior Officer Connectedness is high relative to when Junior Officer-to-Junior Officer Connectedness is low.

Although the workgroup, and co-worker in particular, are important in shaping the psychological contract (Sherman and Morley, 2015), supervisors are often the main sources of contract-related information for employees (Conway and Briner, 2005). Similar to co-workers, a strong network with a supervisor or more senior officers may offer explanations to an employee that may change their attributions for breach and thus reduce their negative reactions. We also propose that a strong network with senior officers may reduce the negative effects of PCB experienced by an employee. This draws on the stress-buffering hypothesis (Cohen and Willis, 1985), which contends that social support reduces the adverse effects of stress.

Hypothesis 2b: Junior Officer-to-Senior Officer Connectedness will moderate the relationship between psychological contract breach and turnover intentions, such that the relationship between psychological contract breach and turnover intentions will be weakened when Junior Officer-to-Senior Officer Connectedness is high relative to when Junior Officer-to-Senior Officer Connectedness is low.

Figure 1 below depicts the hypothesised relationships examined in this study.

Figure 1. Proposed model of study.
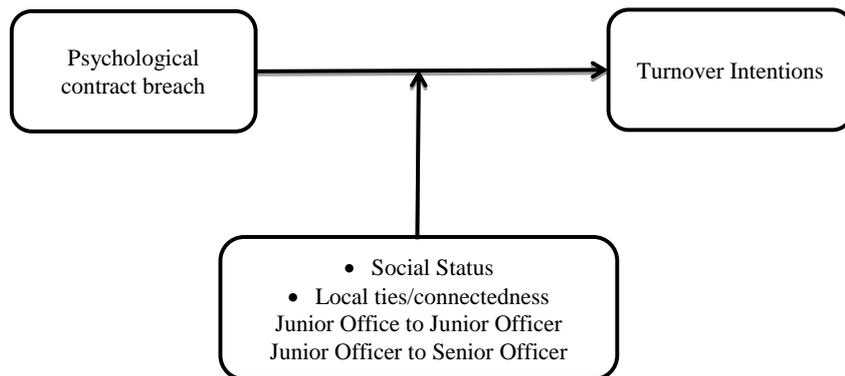
METHOD

Sample and procedure

The data for this study were gathered with the help of a structured questionnaire distributed among officers from the Irish Defence Forces. The questionnaires were distributed among 528 officers from across the organisation, which was made up of 228 Lieutenants and 300 Captains (79 female officers and 449 male officers). The questionnaires were distributed mainly using a Web-based tool, with some distributed by paper and pencil[1]. Some researchers suggest poor measurement equivalence with mixed modes. However, our analysis showed no significant differences in responses between those who responded via paper–pencil versus those online. De Beuckelaer and Lievens

(2009) provide additional support by reporting an empirical justification for using, combining, and comparing data from mixed-mode surveys. The survey resulted in data from 293 total responses. Incomplete information from 51 participants resulted in a final sample of 242. This represents a response rate of 45.88%. Of the respondents, 142 were Captains and 100 were Lieutenants; 87.2% were aged between 25 and 34 years; and 83.5% were male. Moreover, 95% held an ordinary-level degree qualification or higher, and 46.3% indicated they were in the organisation for <10 years.

Measures

We used previously published scales to collect data relevant for the study. Unless otherwise noted, all items were measured using a five-point Likert response scale (1 = *strongly disagree* to 5 = *strongly agree*).

Turnover intention. This was measured by using the three-item scale by Mobley et al. (1978). Example items include 'I think a lot about leaving the Defence Forces' and 'I am actively searching for an alternative to the Defence Forces'. The Cronbach's alpha for this scale was 0.87.

PCB. Two different measures have been developed to investigate PCB in previous research (Zhao et al., 2007). On the one hand, composite measures include items referring to specific employer promises (e.g. pay, training) and measure employees' perceptions of breach of these specific promises. Global scales, in contrast, measure global assessments of perceptions of breach of promises (Robinson and Morrison, 2000). For this study, we chose content-specific measures of PCB. PCB was measured using the 12-item scale from Coyle-Shapiro and Conway (2005), which measured to what extent the Army met the expectations of the respondent. Characteristics of the employment relationship such as long-term job security, pay, career prospects, and training were queried about in order to gather the data. This scale was used as it is possible to measure the different obligations of the psychological contract, including relational and transactional psychological contract obligations. This scale asked respondents to rate the extent to which the Army had met their expectations in relation to different statements using a Likert scale ranging from 1 = 'not at all' to 5 = 'very much'. This scale was then reverse-coded to assess PCB. Using the oblique rotation approach, an exploratory factor analysis with the principal component method was conducted. A clear two-factor structure was achieved, with items loaded on the relational and transactional dimensions of psychological contract. One item on long-term job security had very low loading (0.22) and was deleted from further analysis. Deletion of this item is reasonable given that the data were collected during the Irish financial crisis, when many redundancy/downsizing activities were taking place. In this study, we are interested in the psychological contract as a whole construct. We treat the relational and transactional psychological contract as two elements of the whole construct. Particularly, we use these two dimensions (aggregated mean of transactional and relational psychological contract) in the further factor analysis presented in the subsections and find support for doing so. Cronbach's alpha for the measure was 0.802 for PCB, 0.804 for transactional PCB, and 0.705 for relational PCB.

Perceived social status. This was measured using the Differential Status Identity Scale developed by Brown et al. (2002). As the scale was originally developed as a measure of perceived social status measured against the average citizen of the USA, a number of items were removed from the scale as they were not relevant to an organisation such as the Defence Forces. They included 'Become a millionaire by legal means' and 'Influence where and when water treatment facilities are built and operated'. This final 10-item scale was also amended to ask respondents to compare themselves against the average 'Lieutenant/Captain' in the Defence Forces, as this was the population group. Examples items include 'Contact people in high places for a job or position' and 'Influence the policies of your home Brigade/Formation'. The questionnaire was created with response options ranging from –2 (very much below average) to +2 (very much above average), so that a score of zero would indicate that the individual completing the questionnaire identified himself/herself as being 'equal' to the 'average Lieutenant/Captain of the Defence Forces' for that item. This scale was found to be reliable, reporting a Cronbach's alpha of 0.879.

Perceived local ties/connectedness. The perceived local ties/connectedness of the respondent was measured using an adapted version of the Doctoral Student Connectedness Scale (DSIS) (Terrell et al., 2009). This 18-item measure had the advantage that it could measure the total level of connectedness of the respondent, as well as the level of connectedness with both their peers and their superior officer. The adapted version of the scale developed by Erwee et al. (2013) was used, wherein they removed the American word 'faculty' and inserted 'supervisor'. In this study, the words 'faculty' and 'organisation' were removed and replaced by 'superior officer' and 'Army' in order to make the scale relevant to the research context. Permission was sought and granted by Prof. Ronel Erwee in the University of South Queensland in Australia to use the adapted version. Example items are 'I feel I can easily communicate with other junior officers about work practices' and 'I feel the feedback I receive from my

superior officer (reporting officer) is valuable'. This scale was found to be reliable as the Cronbach's alpha was 0.904 for the Junior Officer-to-Junior Officer Connectedness scale and 0.911 for the Junior Officer-to-Senior Officer Connectedness scale.

Control variables. We controlled for several variables to rule out alternative explanations, including individual demographics, human capital, and formal position. Because individuals' age, gender, tenure in the organisation, and education level have been associated with PCB in previous research (e.g. Flood et al., 2001; Hao et al., 2007), they were included as controls. For example, Raja et al. (2004) report that tenure affects contract dynamics as they may change over the course of an individual's career. We controlled for age because research suggests that older employees often respond to breach differently than younger employees (Bal et al., 2008). Research has also suggested that these control variables are important to understanding turnover (Cohen, 1992). Rank and current organisational level were also used as controls given the research context.

Data analysis

The data were analysed in several phases. First, we examined the distinctiveness of our study variables using confirmatory factor analysis via AMOS 18.0. The fit index shows a good fit to the five-factor model (c^2/df = 824.69/514 = 1.60, p <0.001, comparative fit index [CFI] =0.90, root-mean-square error of approximation [RMSEA] =0.06, and the standardized root-mean-square residual [SRMR] =0.07). We also run a one-factor model, which has a very low level of model fit (c^2/df =2079.71/524 = 3.97, p <0.001, CFI =0.51, RMSEA =0.13, SRMR =0.14). Second, regression analysis was used to test the hypotheses. Hierarchical moderated regression was used to test the moderation hypotheses (Cohen and Cohen, 1983). As interaction terms often created multicollinearity problems because of their correlations with main effects, interaction terms were computed by centring the independent and moderator variables first, before multiplying them with each other (Aiken and West, 1991).

RESULTS

Mean values, standard deviations, and bivariate correlations are reported in Table 1. Moderate-to-strong negative correlations were found between overall PCB and turnover intentions. Relational PCB was also significantly associated with turnover intentions. Surprisingly, transactional PCB was not correlated with turnover. Strong social status was negatively correlated to both PCB and relational PCB. This was also the case for the two connectedness measures. There were no correlations with transactional PCB.

Regression analysis was conducted to examine the direct relationship between PCB and turnover intentions (Table 2). The analyses controlled for age, gender, current level in organisation, rank, tenure, and education in the first step[2]. Model 1.2 shows that PCB was found to be positively related to turnover intention (b =0.302, p <0.001). The more the respondents perceived that their psychological contract had been breached, the more likely they were to intend leaving the organisation. This outcome supports Hypothesis 1. In the second analysis (Model 1.3), the two dimensions of PCB – relational and transactional – were entered in the second step in order to examine which component explains the most variance in turnover intention. Only relational PCB emerged as significant (b =0.395, p <0.001).

Hypothesis 1 proposes that social status moderates the relationship between PCB and turnover intentions. We follow Cohen et al.'s (2003) four-step procedure: first, we only introduce the control variables; in the second step, we add the independent variable, PCB (Model 1.3); in the third step, we add the moderating variable, social support (Model 1.3); and, finally, the interaction term (PCB × Social status) is entered into the regression (Model 1.4). Moderation occurs if the interaction term is statistically significant and the *F*-test shows that the increment of explained variance (measured as the difference of adjusted R^2) is significant, i.e. the model including all variables accounts for a significant portion of variance above and beyond the control variables model. As we previously explained, a positive and significant influence of PCB on turnover intentions was found. Model 1.3 shows that the relation between PCB and turnover intentions is lower but still significant when the moderating variable is added to the regression. Finally, Model 1.4 shows that the interaction term (PCB × Social status) has a positive and significant influence on turnover intentions (b =0.135, p <0.05). We observe a significant change in R^2, indicating an increase in the predictive power of the regression model; thus, Hypothesis 2 is supported. Figure 2 graphically illustrates that the positive relationship between PCB and turnover is moderated by social support. Employees' turnover intention is highest when there is high PCB and low social support.

Table 1 Mean values, standard deviations (S.D.), and correlations of variables

|	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Age	-	-	1												
2 Gender	-	-	0.053	1											
3 Current organisational level	-	-	0.263**	-0.069	1										
4 Education on enlistment	-	-	0.166**	-0.134*	-0.123	1									
5 Rank	-	-	0.471**	0.124	0.385**	-0.317**	1								
6 Organisational tenure	-	-	0.613**	0.080	0.359**	-0.322**	0.771**	1							
7 PCB	3.28	0.66	-0.012	0.110	-0.163*	0.081	-0.064	-0.062	1						
8 Transactional PCB	2.90	0.87	0.113	0.032	-0.011	0.129*	-0.035	0.050	0.676**	1					
9 Relational PBC	3.50	0.79	-0.107	0.113	-0.196**	0.023	0.078	-0.120	0.888**	-0.298**	1				
10 Social status	-0.38	0.71	0.183**	-0.068	0.420**	-0.045	0.256**	0.196**	-0.352**	-0.055	-0.428**	1			
11 Junior Officer-to-Junior Officer CSS	3.65	0.70	-0.187**	0.114	-0.081	-0.011	-0.247**	-0.182*	-0.272**	-0.147	-0.245**	0.188**	1		
12 Junior Officer-to-Senior Officer CSS	3.37	0.82	0.059	-0.184*	0.114	0.124	-0.011	0.038	-0.464**	-0.098	-0.569**	0.400**	0.354**	1	
13 Turnover intentions	3.28	1.05	0.098	0.200**	-0.021	-0.034	0.259**	0.229**	0.325**	0.091	0.373**	-0.118	-0.202**	-0.329**	1

Valid N (listwise) = 242.
**$p < 0.01$ level (two-tailed); *$p < 0.05$ (two-tailed).
CSS = connectedness; PCB = psychological contract breach

Table 2. Regression results testing the direct and moderation hypotheses.

Variables	Model 1.2	Model 1.2.1	Model 1.3	Model 1.4	Model 2.3	Model 2.4	Model 3.3	Model 3.4
				Turnover intentions				
1 Control variables								
Age	-0.129	-0.098	-0.118	-0.094	-0.175	-0.164	-0.157	-0.134
Gender	-0.145*	-0.152*	-0.147*	-0.1389*	-0.153*	-0.150*	-0.137*	-0.127*
Level	-0.024	0.001	0.012	0.032	-0.070	-0.068	-0.013	0.015
Education	0.116	0.135	0.110	0.113	0.142	0.140	0.161*	0.150
Rank	-0.223*	-0.182*	-0.237*	-0.242*	-0.212	-0.207	-0.202*	-0.201*
Tenure	0.178	0.209	0.164	0.161	0.175	0.172	0.225*	0.212
2 Independent variable								
PCB	0.320***		0.308***	0.329***	0.240**	0.248**	0.193**	0.203**
Transactional PCB		0.029						
Relational PCB		0.395***						
Social status (SS)			-0.067	-0.075				
JOCSS					-0.099	-0.115		
SOCSS							-0.234**	-0.260***
3 Moderators								
PCB × SS				0.135*				
PCB × JOCSS						0.059		
PCB × SOCSS								0.133*
R2	**0.212**	**0.256**	**0.221**	**0.237**	**0.179**	**0.182**	**0.252**	**0.268**
Ad R2j	**0.188**	**0.230**	**0.193**	**0.207**	**0.142**	**0.140**	**0.225**	**0.238**
DR2	**0.098**	**0.142**		**0.106**		**0.003**		**0.127**
F	**8.847***	**9.987***	**7.995***	**7.767***	**4.848***	**4.374***	**9.228***	**8.865***

*= $p<0.05$; ** = $p<0.01$; *** = $p<0.001$ (standardised coefficients reported).
PCB = psychological contract breach; JOCSS = Junior Officer Connectedness; SOCSS = Senior Officer Connectedness.

Figure 2. Social status as a moderator of psychological contract breach and turnover intentions.
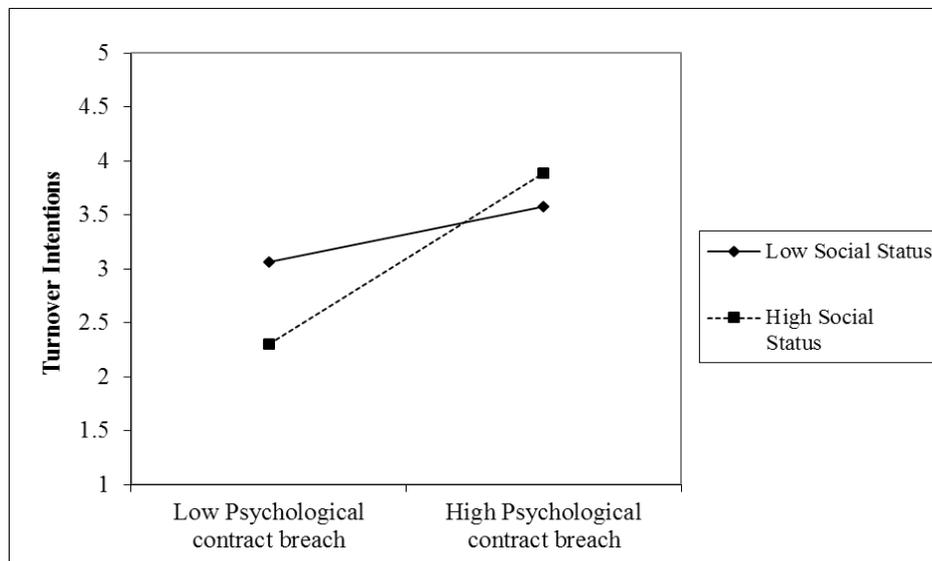

Hypothesis 2a proposed that Junior Officer-to-Junior Officer Connectedness would moderate the relationship between PCB and turnover intentions. Models 2.3 and 2.4 show that the introduction of neither the moderator nor the interaction term had a significant impact on the dependent variable. Thus, Junior Officer Connectedness did not moderate the positive relationship between PCB and turnover intentions. Thus, Hypothesis 2a was not supported.

Finally, Hypothesis 2b proposed that Junior Officer-to-Senior Officer Connectedness would moderate the relationship between PCB and turnover intentions. After introducing the control variables (Step 1), the independent variable PCB (Model 1.3), the moderating variable Senior Officer Connectedness (SOCSS) (Model 3.3), and, finally, the interaction term (PCB × SOCSS) into the regression (Model 3.4), we find that SOCSS interacted with PCB in a way that significantly affected employees' turnover intentions (b =0.133, p <0.05). These results confirm that SOCSS moderates the relation between PCB and turnover intentions but not in the direction we had envisaged. In Figure 3, the slope analyses plots the interactions for SOCSS and demonstrates that the nature of these interactions was not as anticipated. When high scores were seen for Low Junior Officer-to-Senior Officer Connectedness and the PCB was high, then turnover intention was also high. This is as hypothesised. However, respondents with high scores on High Junior Officer-to-Senior Officer Connectedness also expressed greater turnover intention when PCB was high. This relationship was not in the direction we had originally hypothesised.

DISCUSSION

The purpose of this study was to explore the PCB–turnover link and the moderating role of social networks on this relationship. In doing so, we connected various streams of research in organisational behaviour: psychological contracts, feelings of breach, turnover intention, and the role of social networks. Our analyses provided further support for the PCB–turnover relationship, indicating that turnover intention is more likely to occur when employees feel that their organisation is not meeting their obligations. Relational contract breach was found to be the most significant predictor of intention to leave. In contrast, transactional breach was not related to turnover intentions. These findings are consistent with previous research that has found stronger effects for breach of relational contract compared with breach of transactional contract for some outcome variables (Restubog et al., 2006; Turnley et al., 2003). Thomas and Anderson (1996) underlined the importance of the Army context in their study, by drawing on differences in findings due to samples used. Soldiers identify strongly with the Army, more so than Master of Business Administration (MBA) students who have been studied in previous research. The latter work in industrial settings and so may have a more transactional connection with the organisation.

Figure 3. Junior Officer-to-Senior Officer Connectedness as a moderator of psychological contract breach and turnover intentions. JO = Junior Officer; SO = Senior Officer.
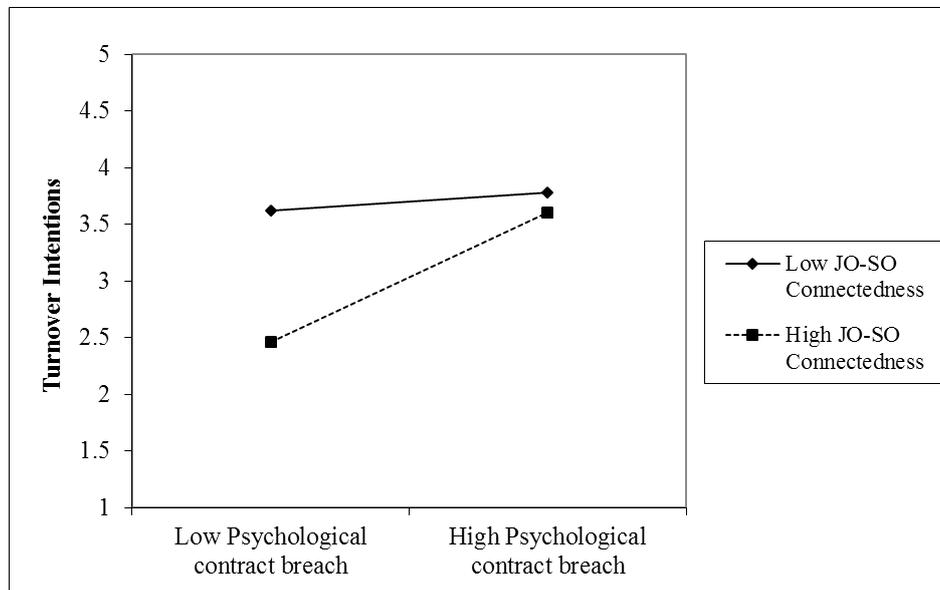
Furthermore, we presented two interaction hypotheses between PCB and two social network variables: one where social status buffers the relationship between contract breach and turnover intention, and the second where connectedness moderates the relations between contract breach and turnover intentions (drawing on attribution theory and stress-buffering hypothesis). The identification of social networks as a moderator of PCB and turnover makes an important contribution to the wider literature on PCB. Our findings suggest that social networks are an important moderator in PCB research. This extends the recent work of Dabos and Rousseau (2013), who examined the role of an organisation's informal network on psychological contract beliefs. Informal social networks can shape how employees understand their employment relationship and buffer how they respond to breaches. In particular, we found that social status was a significant moderator of the PCB–intention-to-leave relationship. High social status is an indicator of an individual's position within an informal network and the extent to which they have influence on scarce or valued resources such as promotions, pay etc. When employees perceive that the organisation has not fulfilled their obligations to them with regard to pay, training, promotions, and so on, unfavourable reactions may occur, such as turnover intention. This study found that, in this instance, when PCB and turnover intention are high, employees reporting high social status demonstrated lower turnover intentions as a result of PCB. Previous research has shown that opportunities or advantages often accrue to individuals in high status positions through better opportunities (Leana and Van Buren, 1999) and thus they are more likely to develop attitudes that are more positive, based on social exchange theory, to deal with negative consequences of breach.

Connectedness was defined as the feeling of belonging and acceptance and the creation of bonding relationships (Rovai, 2002). This has several advantages, including favours, rewards, and increased communication with their supervisors (Wayne et al., 1997). This feeling of connectedness is extremely important in the army as an organisation, with a wide geographical spread and few junior officers in some locations. No support was found for our hypothesis suggesting that Junior Officer-to-Junior Officer connectedness would moderate the PCB–turnover relationship. The context in which the study was completed sheds some light on this finding. Due to scarce resources in the Defence Forces, competition between junior officers is extremely high (e.g. promotions). This may explain why high connectedness between officers at the same rank may not have any impact on the positive relationship between PCB and turnover intentions.

Contrary to expectations, Junior Officer-to-Senior Officer Connectedness acted as a moderator but not in the way that was originally expected. Research has shown that a positive relationship between PCB and turnover intentions was weakened when employees perceived that their supervisors were loyal to them and protective of them (Stonel et al., 2011). Zagenczyk et al. (2009) found that mentors and supervisory support moderated the relationship between

breach and perceived organisational support. In this instance, high Junior Officer-to-Senior Officer Connectedness did not weaken the PCB–turnover intention relationship but rather strengthened it. There are a number of reasons for this unusual finding. It may be that high Junior Officer-to-Senior Officer Connectedness may not always have such a positive influence on the employment relationship; in fact, it may have a potentially negative side. Leader–member exchange (LMX) researchers, such as Harris and Kacmar (2006), have found that there is a curvilinear relationship between LMX and stress such that too low or two high LMX can positively affect stress levels. This might also be the case in this instance. A relationship with your supervisor, which is low on connectedness as a result of not being accepted, being unable to freely access information, and a lack of sense of safety and trust in the workplace can have negative consequences. However, employees reporting high Junior Officer-to-Senior Officer Connectedness may experience higher stress levels due to extra pressure and obligations (Gouldner, 1960); thus, the moderating role of Junior Officer-to-Senior Officer connectedness may in fact strengthen the positive relationship between PCB and turnover as it is seen as a work intensifier rather than a buffer. It is also important to note that employees may react to PCB in ways not captured in the outcome (turnover intention) examined in this study. A second explanation may be due to the supervisors' dual role as agents of the organisation and as employees themselves (Sherman and Morley, 2015), where role conflict can be a source of negative affect. A supervisor's own psychological contract can significantly affect the message sent to employees (Roussean, 2001). Drawing on social learning theory, Zagenczyk et al. (2009) suggest that individuals learn from observing the behaviours of others. In their study, they suggest that if an employee's mentor or role model perceived breach as a signal that they were not valued by the organisation, it is quite possible that those who emulate them do so also.

PRACTICAL IMPLICATIONS

In this section, we draw out some practical implications for organisations to shape psychological contracts and retention. Research shows that the psychological contract plays an important role in explaining turnover intentions among officers in the Defence Forces. First, we recommend that social networks be viewed as not just networks linked to common interests and similar personalities (Cross et al., 2004), but as networks that can also arise from the organisational context itself and that can be shaped by managerial and HR practices (Dabos and Rousseau, 2013). Implementation of a mentor programme, whereby each mentee would have the opportunity to self-select his/her mentor, would create groups of like-minded individuals who could help the junior officers to create their own sense of belonging and identity within the organisation. These communities of practice have been found to reduce levels of turnover in other sectors such as the education sector (Terrell et al., 2009). They would also help to mitigate the increasingly fragmented workplace, which has developed from an increasingly individualistic society (Guest, 2004). In addition, we strongly recommend that the Defence Force should begin to manage the expectations of its members from the moment they apply to join the organisation until the time they leave the organisation through clear communication of policies. The signalling theory highlights that potential new entrants can receive both formal and informal messages that can influence expectations and thus result in information asymmetry (Sherman and Morley, 2015). On the military website, the Defence Forces should have a career guideline planner using real-time information, which would allow prospective applicants to have a qualified estimate of when they will make certain milestones in their career if they join the Army. This would allow any potential member of the public to see a qualified estimate of the reality of what their life could be like in the military. The Army should also have a similar system in place for junior officers in relation to planning events such as career courses, overseas deployments, and promotions. This would allow for a single source of qualified information regarding life in the military. This would reduce misinformation regarding expectations and obligations for non-members and members of the organisation alike.

LIMITATIONS

Although the research carried out in this paper provides novel insights into the complexities of social networks in relation to PCB and turnover intentions in the Defence Forces, it is not without limitations. First, all variables in this study were measured using self-reports and originated from the same source; thus, the problem of common method variance may have influenced the results (Podsakoff et al., 2003). The lack of fit of the single-factor measurement model could, however, be interpreted as indicating that common method variance was not a serious problem with

the data. A second limitation concerns the difficulty of making causal inferences from the cross-sectional design. Only a replication of the present findings using a longitudinal or experimental design can establish the direction of causality. Thus, we encourage future research on this topic to confirm these findings. Future research might also include other important employee outcomes, such as commitment and organisational citizenship behaviour. Thirdly, the content measure of PCB used in this study may not comprehensively capture the experience of breach for every respondent in the sample. For some respondents, the components may not be highly relevant, and, for others, significant components may be underrepresented. Zhao et al. (2007) believe that global measures of breaches have advantages over composite measures when a specific type of content (e.g. pay) is not the research focus. Therefore, it may be that a global measure would likely be better at capturing the respondents' overall assessments of breach. This study is heavily reliant on self-report measures due to inadequate resources to provide for a technology-based social network analysis. A social network analysis taking data from the Army communications network instead of self-reported ties would provide more accurate data in relation to who people contact for work advice. Finally, we conducted multiple moderation analyses using PROCESS on SPSS (refer Hayes, 2013). The result of an overall moderation model was not significant. We acknowledge this as a limitation, but suggest that this may be as a result of the small sample used in this study. The individual moderation analysis still highlights significant findings, which future researchers can draw on.

CONCLUSION

The study found that perceptions of PCB were associated with higher turnover intentions. Employees who believed that their organisation had not fulfilled its obligations towards them were significantly more likely to want to leave the organisation. Perceptions of social networks were seen to mitigate the negative effect of contract breach on turnover, in particular through social status and strong connectedness with the respective senior officers. The research confirmed the important link between PCB and employee social network positions (Ho et al., 2006).

ENDNOTES

[1] This was primarily due to an opportunity to access a large group of the sample at one location during a training course. We ensured that those who attended this course did not receive the survey again via email.
[2] Results from analysis still remained significant when control variables were not included in the model.

References

Aiken, L.S. and West, S.G. (1991). *Multiple Regression: Testing and Interpreting Interactions*, Newbury Park, London: Sage.

Bal, P., De Lange, A., Jansen, P. and Van Der Velde, M. (2008). 'Psychological contract breach and job attitudes: A meta-analysis of age as a moderator'. *Journal of Vocational Behavior,* 72: 1, 143-158.

Bal, P.M., Jansen, P.G., Van Der Velde, M.E., de Lange, A.H. and Rousseau, D.M. (2010). 'The role of future time perspective in psychological contracts: A study among older workers'. *Journal of Vocational Behavior,* 76: 3, 474-486.

Brass, D.J. (1984). 'Being in the right place: A structural analysis of individual influence in an organisation'. *Administrative Science Quarterly,* 29: 4, 518-539.

Brass, D.J. and Burkhardt, M.E. (1993). 'Potential power and power use: An investigation of structure and behaviour'. *The Academy of Management Journal,* 36: 3, 441-470.

Brown, M.T., D'Agruma, H.D., Brown, A., Sia, A. and Yamini-Diouf, Y. (2002). 'Differential status identity: Construct, measurement, and initial validation'. Symposium presented during the annual convention of the *American Psychological Association*, Chicago, IL.

Burkhardt, M.E. and Brass, D.J. (1990). 'Changing patterns or patterns of change: The effect of a change in technology on social network structure and power'. *Administrative Science Quarterly,* 35: 1, 104-127.

Burt, R.S. (2000). 'The network structure of social capital'. *Research in Organisational Behavior,* 22, 345-423.

Chen, G., Ployhart, R.E., Thomas, H.C., Anderson, N. and Bliese, P.D. (2011). 'The power of momentum: A new model of dynamic relationships between job satisfaction change and turnover intentions'. *The Academy of Management Journal,* 5: 1, 159-181.

Cohen, J. and Cohen, P. (1983). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences,* 2nd edn, Hillsdale, NJ: Erlbaum.

Cohen, A. (1992). 'Antecedents of organizational commitment across occupational groups: A meta-analysis'. *Journal of Organizational Behavior,* 13: 6, 539-558.

Cohen, S. and Willis, T.A. (1985). 'Stress, social support, and the buffering hypotheses'. *Psychological Bulletin,* 98: 2, 310-357.

Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. (2003). *Applied Multiple Correlation/Regression Analysis for the Behavioral Sciences.* New Jersey: Lawrence Erlbaum.

Conway, N. and Briner, R. (2005). *Understanding Psychological Contracts at Work: A Critical Evaluation of Theory and Research*, New York, NY: Oxford University Press.

Coyle-Shapiro, J. and Conway, N. (2005). 'Exchange relationships: Examining psychological contracts and perceived organizational support'. *Journal of Applied Psychology,* 90: 4, 774-781.

Coyle-Shapiro, J. and Kessler, I. (2000). 'Consequences of the psychological contract for the employment relationship: A large scale survey'. *Journal of Management Studies,* 37: 7, 903-930.

Cross, R., Parker, A., Christensen, C.M., Anthony, S.D. and Roth, E.A. (2004). *The Hidden Power of Social Networks.* Audio-Tech Business Book Summaries, Incorporated.

Dabos, G.E. and Rousseau, D.M. (2013). 'Psychological contracts and informal networks in organizations: The effects of social status and local ties'. *Human Resource Management,* 52: 4, 485-510.

De Beuckelaer, A. and Lievens, F. (2009). 'Measurement equivalence of paper-and-pencil and internet organisational surveys: A large scale examination in 16 countries'. *Applied Psychology: An International Review,* 58: 2, 336-361.

De Hauw, S. and De Vos, A. (2010). 'Millennial' career perspective and psychological contract expectations: Does the recession lead to lowered expectations?' *Journal of Business and Psychology,* 25: 2, 293-302.

Defence Forces. (2011). *Defence Forces Review 2011*, Dublin: Defence Forces Printing Press.

De Vos, A., Buyens, D. and Schalk, R. (2005). 'Making sense of a new employment relationship: Psychological contract-related information seeking and the role of work values and locus of control'. *International Journal of Selection and Assessment,* 13: 1, 41-52.

Dickter, D., Roznowski, M. and Harrison, D. (1996). 'Temporal tempering: An event history analysis

of the process of voluntary turnover'. *Journal of Applied Psychology, 81: 6,* 705-716.

Erwee, R., Albion, P. and van der Laan, L. (2013). 'Connectedness needs of external doctoral students,' in *Outlooks and Opportunities in Blended and Distance Learning. Advances in Mobile and Distance Learning*, Hershey, PA, USA: IGI Publishing, pp.317-330.

Fiske, S.T. and Taylor, S.E. (1991). *Social Cognition*, 2nd edn, Reading, MA: Addison-Wesley.

Flood, P.C., Ramamoorthy, N., McDermott, A.M. and Conway, E. (2008). '*Leadership, Human Resource Management and the Content of the Psychological Contract'*, The Learning, Innovation and Knowledge (LINK) Research Centre Working Paper Series.

Friedkin, N.E. (1991). 'Theoretical foundations for centrality measure'. *American Journal of Sociology,* 96: 6, 1478-1504.

Friedkin, N.E. (1993). 'Structural bases of interpersonal influence in groups: A longitudinal case study'. *American Sociological Review,* 58: 6, 861-872.

Gouldner, A.W. (1954). *Patterns of Industrial Bureaucracy,* Glencoe, IL: Free Press.

Gouldner, A.W. (1960). 'The norm of reciprocity: A preliminary statement'. *American Sociological Review, 25: 2*, 161-178.

Guest, D.E. and Conway, N. (2002). 'Communicating the psychological contract: An employer perspective'. *Human Resource Management Journal,* 12: 2, 22-38.

Guest, D.E. (2004). 'The psychology of the employment relationship: An analysis based on the psychological contract'. *Applied Psychology,* 53: 4, 541-555.

Hao, Z., Wayne, S.J., Glibkowski, B.C. and Bravo, J. (2007). 'The impact of psychological contract breach on work-related outcomes: A meta-analysis'. *Personnel Psychology,* 60: 3, 647-680.

Hirsch, F. (1976). *Social Limits to Growth*, London: Routledge.

Harris, K.J. and Kacmar, K.M. (2006). 'Too much of a good thing: The curvilinear effect of leader-member exchange on stress'. *Journal of Social Psychology,* 146: 1, 65-84.

Hayes, A.F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis*, New York: The Guilford Press.

Ho, V.T., Rousseau, D.M. and Levesque, L.L. (2006). 'Social networks and the psychological contract: Structural holes, cohesive ties, and beliefs regarding employer obligations'. *Human Relations,* 59: 4, 459-481.

Ho, V.T. and Levesque, L.L. (2005). 'With a little help from my friends (and substitutes): Social referents

and influence in psychological contract fulfilment'. *Organization Science,* 16: 3, 275-289.

Ho, V.T. (2005). 'Social influence on evaluations of psychological contract fulfillment'. *The Academy of Management Review,* 30: 1, 113-128.

Hom, P.W. and Griffeth, R.W. (1995). *Employee Turnover*, Cincinnati: South-Western.

Hui, C., Lee, C. and Rousseau, D.M. (2004). 'Psychological contract and organizational citizenship behavior in China: Investigating generalizability and instrumentality', *Journal of Applied Psychology,* 89: 2, 311-321.

Ibarra, H. and Andrews, S.B. (1993). 'Power, social influence, and sense making: Effects of network centrality and proximity on employee perceptions', *Administrative Science Quarterly,* 38: 2, 277-303.

Krackhardt, D. (1992). 'The strength of strong ties: The importance of Philos in organizations', in N. Nohria and R.G. Eccles (eds), *Networks and Organizations: Structure, Form and Action*, Cambridge, MA: Harvard University Press, pp.216-239.

Krackhardt, D. and Hanson, J.R. (1993). 'Informal networks'. *Harvard Business Review,* 71: 4, 104-11.

Krackhardt, D. and Kilduff, M. (1990). 'Friendship patterns and culture: The control of organisational diversity', *American Anthropologist,* 92: 1,142-154.

Leana, C.R. and Van Buren, H.J. III. (1999). 'Organizational social capital and employment practices'. *The Academy of Management Review,* 24: 3, 538-555.

Marsden, P.V. and Friedkin, N.E. (1994). 'Network studies of social influence', in S. Wasserman and J. Galaskiewicz (eds), *Advances in Social Network Analysis*, Vol. 22, Thousand Oaks, CA: Sage, pp.3-25.

Mehra, A., Kilduff, M. and Brass, D. (1998). 'At the margins: A distinctiveness approach to the social identity and social networks of underrepresented groups'. *The Academy of Management Journal*, 41: 4, 445-452.

McDermott, A.M., Conway, E., Rousseau, D.M. and Flood, P.C. (2013). 'Promoting effective psychological contracts through leadership: The missing link between HR strategy and performance'. *Human Resource Management,* 52: 2, 289-310.

McDonald, D.J. and Makin, P.J. (2000). 'The psychological contract, organisational commitment and job satisfaction of temporary staff'. *Leadership and Organisation Development Journal,* 21: 2, 84-91.

Mobley, W.H. (1977). 'Intermediate linkages in the relationship between job satisfaction and employee turnover'. *Journal of Applied Psychology*, 62: 2, 237-240.

Morrison, E.W. (2002). 'Newcomers' relationships: The role of social network ties during socialization', *The Academy of Management Journal,* 45: 6, 1149-1160.

Morrison, E.W. and Robinson, S.L. (1997). 'When employees feel betrayed: A model of how psychological contract violation develops', *The Academy of Management Review,* 22: 1, 226-256.

Moynihan, D.P. and Pandey, S.K. (2008). 'The ties that bind: Social networks, person-organisation value fit, and turnover intention'. *Journal of Public Administration Research and Theory,* 18: 2, 205-227.

O'Leary-Kelly, A., Henderson, K.E., Anand, V. and Ashforth, B. (2014). 'Psychological contracts in a nontraditional industry exploring the implications for psychological contract development'. *Group and Organization Management,* 39: 3, 326-360.

Pfeffer, J. and Salancik, G.R. (1978). *The External Control of Organisations: A Resource Dependence Perspective,* Harper and Row.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003). 'Common method biases in behavioral research: A critical review of the literature and recommended remedies'. *Journal of Applied Psychology,* 88: 5, 879.

Raja, U., Johns, G. and Ntalianis, F. (2004). 'The impact of personality on psychological contracts'. *The Academy of Management Journal,* 47: 3, 350-367.

Restubog, S.L.D., Bordia, P. and Tang, R.L. (2006). 'Effects of psychological contract breach on performance of IT employees: The mediating role of affective commitment'. *Journal of Occupational and Organisational Psychology,* 79: 2, 299-306.

Rice, R.E. and Aydin, C. (1991). 'Attitudes toward new organizational technology: Network proximity as a mechanism for social information processing'. *Administrative Science Quarterly,* 36: 2, 219-244.

Robinson, S.L. (1996). 'Trust and breach of the psychological contract'. *Administrative Science Quarterly,* 41: 4, 574-599.

Robinson, S.L. and Rousseau, D.M. (1994). 'Violating the psychological contract: Not the exception but the norm'. *Journal of Organisational Behaviour,* 15: 3, 245-59.

Robinson, S.L., Kraatz, M.S. and Rousseau, D.M. (1994). 'Changing obligations and the psychological contract: A longitudinal study'. *The Academy of Management Journal,* 37: 1, 137-152.

Robinson, S.L. and Morrison, E.W. (2000). 'The development of psychological contract breach and violation: A longitudinal study'. *Journal of Organisational Behaviour,* 21: 5, 525-546.

Rousseau, D.M. (1990). 'New hire perceptions of their own and their employer's obligations: A study of psychological contracts'. *Journal of Organisational Behaviour,* 11: 5, 389-400.

Rousseau, D.M. (1995). *Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements*, Thousand Oaks, CA: Sage Publications.

Rousseau, D.M. (2001). 'Schema, promise and mutuality: The building blocks of the psychological contract'. *Journal of Occupational and Organizational Psychology,* 74: 4, 511-541.

Rovai, A.P. (2002). 'Development of an instrument to measure classroom community'. *The Internet and Higher Education,* 5: 3, 197-211.

Sherman, U.P. and Morley, M.J. (2015). 'On the formation of the psychological contract a schema theory perspective'. *Group and Organization Management,* 40: 2, 160-192.

Shore, L.M. and Barksdale, K. (1998). 'Examining degree of balance and level of obligation in the employment relationship: A social exchange approach'. *Journal of Organisational Behavior,* 19: 1, 731-744.

Smith-Doerr, L., Manev, I.M. and Rizova, P. (2004). 'The meaning of success: Network position and the social construction of project outcomes in an R&D lab'. *Journal of Engineering and Technology Management,* 21: 1-2, 51-81.

Stonel, J.S., Gallagher, V.C. and Stoner, C.R. (2011). 'The interactive effects of emotional family support and perceived supervisor loyalty on the psychological contract breach – turnover relationship'. *Journal of Managerial Issues,* 23: 2, 124-143.

Taylor, M.S. and Tekleab, A.G. (2004). 'Taking stock of psychological contract research: Assessing progress, addressing troublesome issues, and setting research priorities'. *The Employment Relationship: Examining Psychological and Contextual Perspectives*, 253-283.

Terrell, S.R., Snyder, M.M. and Dringus, L.P. (2009). 'The development, validation, and application of the Doctoral Student Connectedness Scale. *The Internet and Higher Education,* 12: 2, 112-116.

Tett, R.P. and Meyer, J.P. (1993). 'Job satisfaction, organisational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings'. *Personnel Psychology*, 46: 2, 259-293.

Thomas, H.D.C. and Anderson, N. (1998). 'Changes in newcomers' psychological contracts during organizational socialization: A study of recruits entering the British Army'. *Journal of Organizational Behavior*, 19: 51, 745-67.

Turnley, W.H. and Feldman, D.C. (2000). 'Re-examining the effects of psychological contract violations: Unmet expectations and job dissatisfaction as mediators'. *Journal of Organizational Behaviour,* 21: 1, 25-42.

Turnley, W.H., Bolino, M.C., Lester, S.W. and Bloodgood, J. (2003). 'The impact of psychological contract fulfillment on the performance of in-role and organizational citizenship behaviors'. *Journal of Management,* 29: 2, 187-206.

Wayne, S.J., Shore, L.M. and Liden, R.C. (1997). 'Perceived organizational support and leader-member exchange: A social exchange perspective'. *The Academy of Management Journal, 40: 1*, 82-111.

Weiner, B. (1986). *An attributional theory of motivation and emotion,* New York: Springer-Verlag.

Zagenczyk, T.J., Gibney, R., Kiewitz, C. and Restubog, S.L.D. (2009). 'Mentors, supervisors and role models: Do they reduce the effects of psychological contract breach?'. *Human Resource Management Journal,* 19: 3, 237-259.

Zhao, H., Wayne, S.J., Glibkowski, B.C. and Bravo, J. (2007). 'The impact of psychological contract breach on work-related outcomes: A meta-analysis'. *Personnel Psychology,* 60: 3, 647-680.