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An Exploration of Factors Predicting Work Alienation of Knowledge Workers

ABSTRACT

Purpose - There is limited research on work alienation of knowledge workers in management studies. This paper seeks to address this gap by exploring the extent and reasons for the alienation of knowledge workers.

Approach/Methodology - In the absence of a comprehensive framework for understanding work alienation of knowledge workers, various factors such as structural elements of centralization and formalization, work characteristics of autonomy, variety, creativity, meaningfulness and self expressiveness, quality of work relationships and justice perceptions were examined as predictors of work alienation. Survey data was collected from six different organizations in the information technology sector (N = 1142) in India.

Findings - Around 20% of the sample was found to be alienated from work. The strongest predictors of work alienation for knowledge workers were found to be lack of meaningful work, inability of work to allow for self expression, and poor quality work relationships.

Implications - Organizations employing knowledge workers cannot risk alienating them. The study indicates that one in every five knowledge worker is likely to be alienated. For organizations and practitioners this is a wake up call, pointing to the urgent need to try and understand the factors that are likely to cause alienation among knowledge workers and take adequate preventive steps to ensure an enthused workforce.

Originality/Value - Research on alienation in present times has been somewhat limited. This is a first of its kind research across knowledge workers in the information technology industry that attempts to capture their work alienation and factors predicting it.

Keywords: Work alienation, knowledge worker, IT industry;

Paper type: Research paper

'The hidden conflict between the knowledge workers view of himself as a 'professional' and the social reality in which he is the upgraded and well paid successor to the skilled worker of yesterday, underlies the disenchantment of so many highly educated young people with the jobs available to them' - (Drucker, 1969, p. 259)

Knowledge workers (KWs), considered as the engines of growth of the new economy (Davenport *et al.*, 2002; Yigitcanlar *et al.*, 2007) are the key strategic and competitive resources of today's organizations (Drucker, 1999; Grant, 1996; O'Neill and Adya, 2007). Considerable attention has been directed to the analysis of knowledge work and knowledge intensive firms in recent years (Alvesson, 1993, 1995, 2001; Burton-Jones, 1999; Davenport *et al.*, 2002; Donnelly, 2006; Edvinsson and Malone, 1997; Swan and Scarborough, 2001). Most of the work on knowledge workers has focused on understanding or analyzing the nature of knowledge work (Alvesson, 1993; Blackler, 1995; Collins, 1997) and its management (Alvesson, 1995; Alvesson and Karreman, 2001; Kelloway and Barling, 2000; Swan and Scarbrough, 2001). Because of the emphasis on human capital in knowledge-intensive firms (Edvinsson and Malone, 1997), where tacit knowledge residing within workers is the chief asset of the organization, it has become imperative to retain KWs and ensure their continued commitment and loyalty to the organization. Ensuring the productivity of the KW has been noted (Drucker, 1999) as the greatest challenge of the 21st century.

Etzioni (1961) discussed the three forms in which individuals can be oriented towards the organization. These three forms of involvement were posed as moral, calculative and alienative. Subsequent literature however has neglected the alienative component, possibly as discussed by Swailes (2002) due to its negative orientation. Davenport *et al.* (2002) observe that companies cannot risk alienating the KW. However, there has been little attention directed at alienation of KWs in contemporary management research, even though Drucker hinted at their potential alienation early on, as the opening quote suggests.

Knowledge intensive firms are human capital intensive, comprising of KWs who are highly mobile, autonomous and who resist command and control (Alvesson, 2001; Davenport *et al.*, 2002; Yigitcanlar *et al.*, 2007). They are highly paid and are likely to be attractive to other competing firms if they chose to move, which they often do in search of challenges, better working conditions, higher salaries etc. Thus, the knowledge intensive firm faces a constant challenge of keeping their employees

engaged, committed and involved in their work and the workplace. In case a KW becomes alienated, the knowledge intensive firm loses on two counts. An alienated worker would be no good for the organization and when they leave they cause a knowledge void in the organization. Therefore, an understanding of factors that might lead to disengagement is important and remains a research gap in the literature.

This paper examines the extent and reasons for KWs alienation from work. A brief review of the research on work alienation is provided and potential linkages with factors determining alienation of KWs are identified. A model of work alienation for KWs in terms of the predictor variables is proposed and tested using structural equation modeling.

Alienation of Knowledge Workers

Alienation as a concept has been discussed since long. Even though the term came into prominence in the early writings of Marx (1844/1932), the concept of alienation finds reference across a broad range of subjects such as theology, philosophy, sociology, psychology and psychiatry (see Johnson, 1973 for a review of the usage of the term across various disciplines). However, alienation has not received much attention in organizational studies (Kohn, 1976:113). In one of the more recent textbooks on work and organization behavior, Bratton *et al.* (2007) draw attention to the fact that much of the psychology based research appears indifferent and ignorant of the concept of alienation.

Fromm (1955) discussed alienation as the mode of experience in which a person experiences him/herself as an alien or in other words becomes estranged from the self. Horowitz (1966) suggests that alienation implies an intense separation first from objects of the world, second from people, and third from ideas about the world held by other people. The core meaning of the concept of alienation has also been identified with a dissociative state of the individual (a cognitive sense of separation) in relation to some other element in his or her environment (Kanungo, 1979; Schacht, 1970). In exploring the epistemological and ontological considerations of the term, Overend (1975) classifies alienation as a separation/estrangement of man from the citizen body, from nature, from production, from other men, and ultimately from him/herself. The common theme appearing in most conceptualizations of alienation appears to be the notion of estrangement or separation.

Traditionally studied with respect to the manual or blue collar worker, research on alienation among the white collar or non manual worker is limited although some research attention has been

devoted to alienation among professionals (Allen and Lafollette, 1977; Chisholm and Cummings, 1979; Korman *et al.*, 1981; Lang, 1985; Miller, 1967; Organ and Greene, 1981; Podsakoff *et al.*, 1986). It may be noted that this research was conducted more than two decades ago and there is very little current research on alienation of the professional. Even though the new economy comprises predominantly of KWs (Davenport *et al.*, 2002; Drucker, 1999; Flood *et al.*, 2001; Yigitcanlar *et al.*, 2007) and some authors like Drucker (1969) have hinted at their possible alienation, there are no empirical studies on alienation among KWs.

In trying to understand what causes alienation, the variables that have been discussed in the literature have largely been the structural elements of centralization and formalization (Allen and Lafollette, 1977; Aiken and Hage, 1966; Blauner, 1964; Greene, 1978; Organ and Greene, 1981). Tasks that grant less autonomy have also been discussed as contributing to alienation (Blauner, 1964; Mottaz, 1981). A few authors have explored the effect of individual level differences on work alienation (Dean, 1961; Korman *et al.*, 1981; Lang, 1985; Mottaz, 1981). Higher education levels and income have been related to alienation (Lang, 1985; Mottaz, 1981). The relation of age on alienation offers mixed results (Dean, 1961; Mottaz, 1981). Korman *et al.* (1981) note a significant correlation between alienation and both disconfirmed expectations and loss of affiliative satisfactions. While these studies have examined some variables in relation to alienation, a comprehensive model capable of explaining work alienation is still missing in the literature.

Both centralization and formalization have been linked to greater work alienation (Aiken and Hage, 1966; Allen and Lafollette, 1977; Greene, 1978). However, the relationship between alienation and formalization for professionals' yields mixed results in the literature. Some (Allen and Lafollette, 1977; Greene, 1978) have found alienation to be directly related to formalization, while others (Organ and Greene, 1981; Podsakoff *et al.*, 1986) observe the effect of formalization as a reduction in alienation through a decrease in role ambiguity. Research on KWs suggests that they thrive in an environment of less structure (Davenport *et al.*, 2002). Given the ambiguity in the literature on the role of formalization on alienation for professionals, it may be proposed that for KWs, formalization may serve as a form of control that could lead to work alienation.

From the Marxian notion of alienation emerging from a lack of control for the worker over his/her product of labor and/or work process, to the later multidimensional conceptions of alienation, lack of

control or powerlessness emerges an important variable defining alienation (Allen and LaFollette, 1977; Kohn, 1976; Mottaz, 1981). Closely related to this is the need for autonomy. Blauner (1964) was able to show that repetitive routine tasks that grant less autonomy lead to alienation. In examining changing work meanings, Quintanilla and Wilpert (1991) report increasing autonomy for the worker with rise in education levels. However Donnelly (2006) questions if claims of increased flexibility and autonomy for the KW are indeed true. But the fact remains that KWs are known to resist command and control style of working and seek autonomy in their work (Davenport *et al.*, 2002; Horwitz *et al.*, 2003).

Other characteristics of the work, such as challenge and stimulation have also been pointed out to be of value for professionals (Fineman, 1983). Research on the manual worker (Blauner, 1964) has shown that repetitive tasks that grant less variety are associated with greater alienation. This is likely to hold true for KWs as well. Drucker (1999) also argues that continuing innovation or room for creativity has to be part of the work of KWs.

High education of the KW has been associated with increased expectations from work (Rosner and Putternam, 1991) which could be indicative of a desire for greater meaning from work. Parker (1983) points that meanings of work differ according to the class of work; with low skilled workers primarily seeking monetary compensation and professionals seeking work that grants them a means of self expression. The task condition of meaninglessness, defined as the failure to view ones job as a significant contribution to the work process has been considered as a determinant of work alienation (Mottaz, 1981: 519). Thus, the perceived meaningfulness of the work itself and its ability to serve as a means of self expression can be a factor in the alienation of the KW. It is therefore proposed that lack of autonomy, absence of variety, challenge and creativity, and work that is not inherently meaningful and that which does not allow for self expression, are characteristics of the work or task that are likely to predict alienation of the KW.

Superior subordinate relationship is thought to be essential to the role of task accomplishment in the organization (Lee and Jablin, 1995). Attributional conflict between leader and subordinate has been shown to be related to subordinate turnover intentions and satisfaction (Wilhelm *et al.*, 1993). Therefore poor superior subordinate relations could also be a factor in the experience of alienation. In addition to relations with the supervisor, an individual also has relations with others in the organization such as

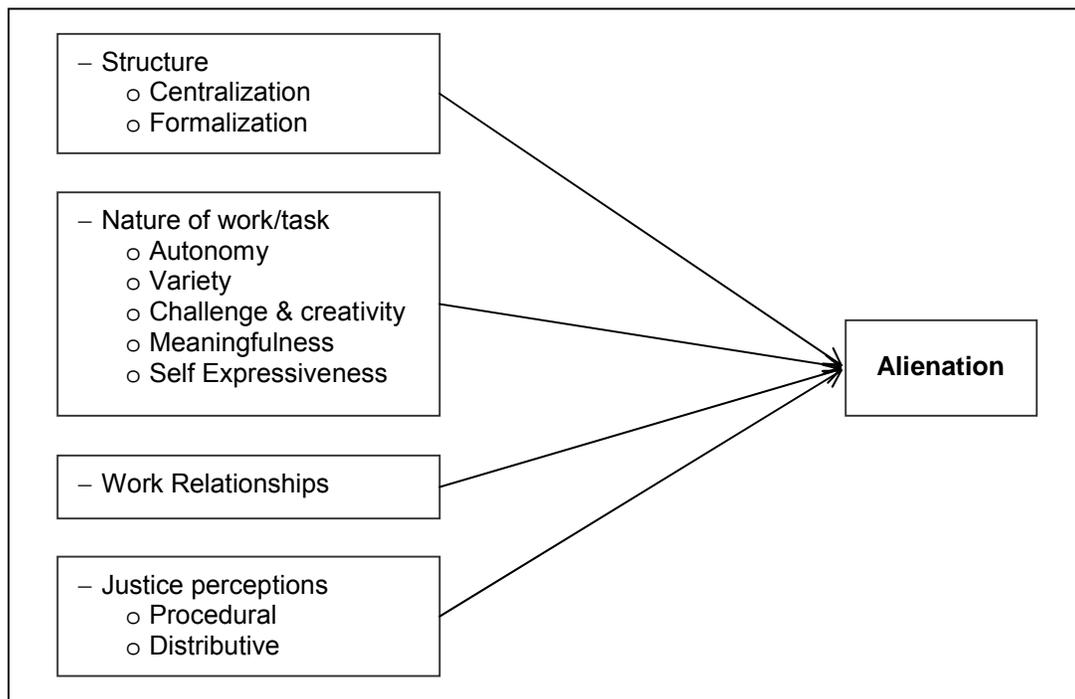
peers, subordinates, clients, etc. The perceived lack of having satisfied needs for interpersonal satisfaction has been referred to as loss of affiliative satisfaction (Korman *et al.*, 1981) or lack of interpersonal fulfillment (Lang, 1985), which has been related to alienation among professional managers (Korman *et al.*, 1981). Thus, it may be hypothesized that poor work relations that includes relations with superiors and other work relations in general, could be a factor in the experience of work alienation for KWs.

Perceptions of procedural and distributive justice have been related with many employee attitudes such as satisfaction and intention to turnover (Gilliland and Chan, 2001). Organizational justice addresses perceptions of fairness and can be broadly divided into fairness of outcomes (distributive justice) and fairness of processes (procedural justice). Although there are other forms of justice such as fairness related to interpersonal treatment, called interactional justice (Bies and Moag, 1986) and informational justice (Colquitt, 2001; Greenberg, 1993), the two factor construct of organizational justice as procedural and distributive justice has received consistent support in the literature (Gilliland and Chan, 2001; Greenberg, 1990; Sweeney and McFarlin, 1993). There is evidence that perceptions of poor organizational justice can lead to organizational retaliatory behavior or aggression (Aquino *et al.*, 1999; Colbert *et al.*, 2004; Skarlicki and Folger, 1997). Given that retaliatory or deviant behavior can also be considered as outcomes of work alienation (Jermier, 1988), it may be proposed that perceptions of organizational injustice would also predict work alienation.

The combined model of alienation for KWs with the discussed predictor variables is shown in Figure 1.

Figure 1

Model with Predictors of Work Alienation for Knowledge Workers



Method

Sample

The sample of KWs was intended to be representative of a group as distinguished from the manual worker, characterized by tacit knowledge and high education as per Drucker's (1973) definition. KWs were operationalized as those with higher educational levels (with a graduate in any field a minimum criterion) and who are expected to use their knowledge and analytical skills in their work. Respondents were drawn from a cross section of different organizations in the IT (Information Technology) sector based on purposive sampling. The sample comprised of KWs working in differing areas such as hardware, software, data analysis, programmers, consultants, researchers, etc., with at least one year work experience. Data was collected from 1142 KWs across six large, medium and small organizations in the IT industry in India. All the organizations had operations both in India and across the globe. The two large companies represented 35% of the sample with an equal representation from the medium sized company (35%) and the three smaller companies contributing to the remaining 30% of the sample.

Majority (74%) of the respondents were male. By educational level, graduates comprised the major category (67%) with 32% of the sample having highest educational level as masters and the remaining 1% comprised of those with a doctorate degree. Considering job levels, middle level formed the bulk of the respondents (54%), followed by junior level (31%) and senior level respondents forming the remaining 15%. The mean age of the respondents was 29.22 years with work experience ranging from 1 year to 41 years.

Procedure

Survey data was collected from KWs across the six IT organizations via the online survey tool, QuestionPro. Items were on a likert scale of 1 to 7. Contact was established with the human resource personnel in each organization who also served as facilitators for rolling out the survey to KWs in each organization. Responses were anonymous with each respondent identified through a computer generated code. In all 1142 usable questionnaires were obtained from across the six participating organizations.

Measures

Work Alienation. A review of the literature of alienation indicated that there was much variability in how alienation has been operationalized and measured. In the absence of a robust measure of work alienation, a new measure of work alienation was first developed and tested as part of a pilot study conducted on 301 management executives participating in a management development program at a leading business school in India. In developing a new measure of work alienation, first a conceptually grounded pool of potential items was generated. Subjecting the items to exploratory factor analysis, eight items for the alienation measure were selected. The eight items were found to load on a single factor, capable of explaining 51.27 % of the total variance. Confirmatory factor analysis indicated good fit ($\chi^2/df = 2.278$, GFI = 0.945, AGFI = 0.901, CFI = 0.939, IFI = 0.940, PNFI = 0.642, PCFI = 0.671, MSEA = 0.08) and all the items had a factor loading of greater than 0.5. The internal consistency reliability ($\alpha = 0.828$) and the construct reliability of 0.824, were both high. The findings provided preliminary support for the eight item single factor measure of work alienation and given the importance of having parsimonious measures of key constructs for use in research, the eight item measure of work alienation was used in the study. The items for the alienation measure are shown in Appendix I.

Structure. One of the most widely used instruments for measuring organizational structure has been the scale developed by Aiken and Hage (1966, 1967), with centralization operationalized as Hierarchy of Authority and Participation in Decision Making, and formalization operationalized as Job Codification, Rule Observation and Job Specificity. Dewar *et al.* (1980) have validated the measures and found moderate to high reliability coefficients of 0.76, 0.93 and 0.76 for the constructs of Job codification, Rule Observation and Job Specificity respectively. Both the centralization scales of Participation in Decision Making and Hierarchy of Authority were also found to have high reliability of 0.92 and 0.96 respectively. However the five factor model of organizational structure was not found to be sustainable under confirmatory factor analysis by Sarros *et al.* (2002). The three factor (Hierarchy of Authority, Rule Observation, and Job Codification) measure of Hage and Aiken (1967) was found to be valid (Sarros *et al.*, 2002). Thus the Hage and Aiken (1967) measure was used for organizational structure.

Autonomy and Variety. Items from the Hackman and Oldham (1975) Job Diagnostic Survey were used to measure the characteristic of autonomy and variety. The coefficient alpha value for their scale of autonomy has been found to vary from .65 to .81 and for skill variety from 0.65 to 0.78 across various studies (Fields, 2002). The test-retest reliability of the JDS has been reported with an alpha of 0.62 (Taber and Taylor, 1990).

Creativity and Challenge. An instrument for assessing the climate for creativity was developed and validated by Amabile *et al.* (1996), called the KEYS scale. The internal scale reliability has been reported to be 0.84 (Amabile *et al.*, 1996). However, in testing the dimensions underlying the KEYS instrument, Mikdashi (1999) found challenge and creativity items to load on a single factor. As implied by their study, the four items from the KEYS instrument were used to measure creativity and challenge in work.

Meaningfulness. Whether work is inherently meaningful or not, is what is intended to be captured by this task characteristic. The developed three item measure of meaningfulness had an internal consistency reliability of $\alpha = 0.752$.

Self expressiveness. This measure assesses the extent to which work lends itself to self expression. The developed two item measure of self expressiveness had a coefficient alpha of 0.757.

Work Relationships. This was measured by items that ask the respondent to rate their degree

of satisfaction in their relationship with each of the following: supervisor/manager, work team or coworkers, and satisfaction with work relationships in general. The three item scale was found to have an internal consistency reliability of 0.713.

Justice Perceptions. Perceptions of organizational justice were measured by the two factors of procedural and distributive justice based on the justice measure offered by Colquitt (2001). In examining the dimensionality of the justice measure, Colquitt offers construct validation for the measure and the scales of procedural and distributive justice are reported to have reliability coefficients of 0.78 and 0.92 respectively.

Results

Analysis of the survey data indicated that of the 1142 knowledge workers surveyed, a total of 227 could be considered as alienated (average alienation score greater than 4 on a scale of 1 to 7). This was around 20 % of the total sample, implying that one in every five knowledge worker is likely to be alienated.

The main effects model (Figure 1) of the predictors of work alienation for KWs was tested using structural equation modeling (SEM). Results of SEM analysis for main effects are shown in Table 1.

Table 1 - SEM Model Fit Summary

χ^2/df	AGFI	PGFI	NFI	TLI	CFI	PNFI	RMSEA
3.123	0.878	0.772	0.916	0.935	0.941	0.826	0.043

The fit indices indicate good fit for the model, with a chi-square to degrees of freedom ratio of 3.123 which is close to the suggested cut off limit of 3 (Bollen, 1989; Gallagher *et al.* 2008; Schermelleh-Engel *et al.*, 2003). As this statistic is very sensitive to sample sizes (Bollen, 1989), other fit indices have to be examined. The absolute fit index of Adjusted Goodness of Fit Index (AGFI) is greater than the acceptable 0.85 cut off (Gallagher *et al.*, 2008). Root mean square error of approximation is also lesser than 0.05. The incremental fit indices of TLI, NFI and CFI are all above the 0.90 cut off level (Hair *et al.*, 1998). In addition the parsimony fit indices of PGFI and PNFI are both above the suggested 0.50 (Gallagher *et al.*, 2008; Muliak *et al.*, 1989) for acceptable fit. Based on the chi-square statistics, absolute, incremental and parsimony fit indices it can be concluded that the model has a good fit. Multiple R square for the model was 0.615. The path coefficients or standardized regression weights for

the predictor relationships are shown in Table 2.

Table 2 - Path Coefficients from SEM analysis

			Estimate	p value
Alienation	<---	Work Relationships	-0.153	0.002
Alienation	<---	Justice (Procedural)	-0.045	0.238
Alienation	<---	Justice (Distributive)	-0.001	0.966
Alienation	<---	Self Expressiveness	-0.338	0.007
Alienation	<---	Meaningfulness	-0.388	0.000
Alienation	<---	Creativity & Challenge	-0.176	0.392
Alienation	<---	Variety	0.102	0.568
Alienation	<---	Autonomy	0.098	0.258
Alienation	<---	Formalization	-0.036	0.416
Alienation	<---	Centralization	0.054	0.263

As can be seen SEM results indicate that only work relationships, self expressiveness and meaningfulness appear significant ($p < 0.001$) in predicting alienation. The direction of influence is consistent with the predicted direction of influence, in that increase in meaningfulness, self expressiveness and quality of relationships would result in lower work alienation. Further, meaningfulness appears to be the strongest predictor (coefficient of 0.388), followed by self expressiveness (coefficient of .338) and then works relationships (coefficient of 0.153).

Discussion

While it is well recognized that knowledge workers are an essential asset to organizations today and given that organizations have much to loose with a disenchanting workforce, there is considerably less research on the nature of this disconnect with work or the factors that are likely to contribute to it. In reviewing the literature of work alienation it was found that there is very little contemporary work on alienation. Most of the studies on alienation emerged during the 1970s and 1980s, with only occasional research on it since then. Further, research on alienation has traditionally focused on the blue collar or factory worker (Blauner, 1964; Dean, 1961; Shepard, 1977), with very little literature in recent years on alienation among non factory workers or workers in the new age work industries such as information technology sector.

Since the study of alienation has examined some variables such as centralization and formalization (Aiken and Hage, 1966; Allen and LaFollette, 1977; Organ and Greene, 1981; Podsakoff

et al., 1986), autonomy and variety (Blauner, 1964; Chisholm and Cummings, 1979; Mottaz, 1981) etc. in isolation, the stage of knowledge in the area is such that a comprehensive testing of several relevant variables for explaining alienation is in order. In exploring the factors leading to work alienation, structural elements of centralization and formalization, work characteristics of autonomy, variety, creativity and challenge, meaningfulness of work and its ability to allow self expression, quality of work relationships and organizational justice perceptions were hypothesized as predictors of work alienation.

The main effects model was examined using structural equation modeling. Results indicated good fit for the model ($\chi^2/df = 3.123$, AGFI = 0.879, NFI = 0.916, TLI = 0.935, CFI = 0.941, PNFI = 0.826, RMSEA = 0.043) with all goodness of fit, incremental and parsimonious fit indices above the cut off limits or within acceptable limits as for the RMSEA measure. The proposed model was also capable of explaining 61.5 % of the variance of work alienation for KWs. Based on the path coefficients, only work relationships, self expressiveness and meaningfulness appear significant ($p < 0.001$) in predicting alienation, indicating that increase in meaningfulness, self expressiveness and quality of relationships would result in lower work alienation. Meaningfulness was found to be the strongest predictor, followed by self expressiveness and then works relationships. This indicates that atleast for KWs, structural elements or the traditional work characteristics of autonomy and variety are less important as far as their potential alienation from work is concerned. Work that is meaningful and allows for self expression appear to be more central concerns for the knowledge worker.

The findings can be better understood by looking at the nature of work in the Indian IT industry. Most IT companies in India are providing solutions to companies all over the world for their work-related problems (Kumar, 2005). The solutions can be for very simple but repetitive (for example, a simple problem is maintenance or support services provided to a client) to fairly complex (such as delivering an ERP solution or developing the IT infrastructure for a new business). The knowledge worker is a technically qualified graduate and is expected to spend long hours working on a miniscule part of the problem not necessarily knowing how his/her part fits in the big picture. Since there are so many of them working on a problem it is important that work output is standardized. These exactly might be the reasons why meaningfulness and self expression are so influential in explaining alienation among IT workers. Thus, for those KWs whose work is inherently meaningful and expressive (maybe a product

designer or drug researcher) these factors may not be so influential. Self expression could mean, in the mind of the individual, a combination of autonomy and variety and challenge. Similarly, till the work is meaningful the employee may not mind the structure that is needed to organize a department, however, in a work setting where structures are rigid and stop a person from exercising flexibility in the delivery of work, that itself may become the reason for feeling disconnected. However, these are merely speculations at this time and need to be tested possibly through the use of qualitative techniques and testing this model among different kinds of knowledge workers (Alvesson, 1993; Kelloway and Barling, 2000).

Another variable that influences alienation significantly is the nature of work relationships. Dating from the work of leadership member exchange it has been shown that followers are influenced by the nature of exchange they have with their leader (Dansereau *et al.*, 1975; Graen and Uhl-Bien, 1995). There are other studies that have shown the importance of a collegial work environment on productivity (Gersick *et al.*, 2000). In a culture that is primarily collectivistic such as India (Kanungo and Mendonca, 1996; Sinha, 1990) it is to be expected that the nature of work relationships would be important for the members of a team or department. Thus, the impact of nature of work relationships on alienation may be understood. A knowledge worker in a structured environment, working on a problem that urges him/her to analyze and think but not widely enough and be limited in self expression, may feel even worse if the work relationships were not congenial. That is, if, even the need for affiliation was blocked then the worker might feel estranged or disconnected from work (Korman *et al.*, 1981). In the earlier conceptualizations of alienation among blue collar workers, it was found (Blauner, 1964) that alienation from work and self also happened because of basic needs such as ability to relate to each other not being fulfilled by work.

Justice perceptions have been generally seen as contributing to well being, satisfaction, and commitment of the employees (Gilliland and Chan, 2001). Perceptions of justice are linked to an evaluation of how others value you (Schroth and Shah, 2000). Thus, if a worker feels unjustly treated s/he may also feel less valued. Rather than feeling less valued and thus lowering self-esteem (Schroth and Shah, 2000) the person might disconnect from the work and the underlying negative evaluation. The disconnect may thus be a means to protect self worth. Though the path was not significant in the overall model, it does explain 23.5% variance considering its individual effect on alienation. It would be worth

exploring this further.

Implications for Practice

Organizations employing knowledge workers cannot risk alienating them, owing to their tacit knowledge and high mobility. The findings of this research indicate that one in every five knowledge worker is likely to be alienated. For the HR practitioner this would be an alarming number to contend with, given its implications for retention and productivity. According to the Gallup Organization poll conducted in the US across different industries, about 1 in every 10 worker is dissatisfied with their jobs (Gallup and Newport, 2004: 344). The range of dissatisfied workers in the US varies from 6-15% for the Gallup polls conducted between 1989 to 2008 (For more details see the Gallup Organization poll website: <http://www.gallup.com/poll/1720/Work-Work-Place.aspx>). In India, previous studies in the manufacturing sector (Ganguli, 1994: 62) have shown that about 34% of industrial workers are either dissatisfied or highly dissatisfied with their work in the engineering industry. Considering studies on employee engagement, which have been primarily conducted by practitioners, Budhwar and Bhatnagar (2009: 187) note that India records a high percentage of engaged employees at around 78% compared to other countries in Asia such as Japan. While this may be considered a high percentage, it also indicates that around 22% of Indian workers are disengaged from their work. This is very close to the results of our study. Comparing with dissatisfied workers, the results of our study indicating 20% alienated knowledge workers in the Indian IT industry, appears higher than dissatisfied workers in the US, but lesser than dissatisfied workers in the Indian manufacturing industry.

Understanding factors for worker disconnect or disenchantment with work can help in their retention as well as employee well being. Ensuring that employees are not alienated should also translate to higher commitment and loyalty to the organization. Work alienation has been associated with frustration, deviant behavior and cynicism (Jermier, 1988; Seeman, 1967), all of which can impede work and performance. Understanding what causes alienation is also a step in preventing negative behaviors and improving performance and productivity.

Isolating the factors causing alienation such as work that is not meaningful to employees, work that offers limited potential to express self, and poor work relations has implications for managers to take stock of existing work design, structure as well as processes. The findings of this

research point that work characteristic dimensions of meaningfulness and self expressiveness in work are of primal concern to knowledge workers. Therefore, managers while designing and assigning work would be advised to consider the potential of work to address these dimensions. It may be beneficial to question what would make the work more meaningful to employees or how workers may be able to express their potential or selves through the work they do.

Limitations and Future Research

There are some limitations of this research that need to be acknowledged. First, the study uses self report measures, implying that there could be a bias due to common source, common method variance. It would, however, seem difficult to employ valid non subjective measures for the measured variables especially since the experience of alienation is also likely to be subjective, so that responses from the individuals themselves are needed. Second, limits to generalizability of the results may stem from the fact that the sample of KWs was drawn from a specific work industry, that of the information technology industry, in a specific cultural context. While the sample represented a range of jobs across different organizations in this industry, there is a need for replication of the results in other cultural contexts and with other kinds of knowledge workers. Third, the sample of KWs was largely comprised of males, young in age, junior and middle level knowledge workers. Due to the limited data on females and senior level KWs, inferences about the findings must also be made with caution. For example, the results and implications of the study may be different in organizations with higher proportions of females in the workforce. Another limitation of the study is that there is a lack of randomization in terms of sample selection, as we employed purposive sampling by contacting organizations and following up with those that were willing to participate in the study. However, the questions were randomized in administration and the data was also tested for normality. Lastly, as with any new measure, further research is required to refine and test the measure of work alienation as scale development is an iterative process.

The focus of this study has been the predictors or antecedents of work alienation among KWs. An exploration of the consequences of work alienation was outside the scope of this study. It has been argued that behaviors such as deviance and burnout or stress are potential consequences of alienation from work. Future research could examine the link between alienation and these outcomes or in other

words focus on an exploration of the consequences of work alienation. As mentioned, the study has been based on a sample of KWs from one kind of industry, namely information technology. Knowledge workers from other industries such as consulting or finance could also be sampled for increasing the generalizability of this research. Similarly, a cross cultural examination of work alienation could also be undertaken in future studies. The developed measure of work alienation could also be validated in a cross cultural research. Our study has primarily examined structural, work characteristics, relational and justice perceptions of workers as predictors of alienation. Dispositional or individual difference in tendency to experience alienation was not a focus area. Future studies could also examine individual level differences in the experience of alienation. Further, the methodology of the present study has been quantitative analysis. It would be useful to do a qualitative analysis of alienated employees in future studies to gather deeper insights into the nature of alienation among KWs as well as validate the findings of this study.

Conclusion

The study draws attention to the under researched domain of work alienation in the context of knowledge workers. It demonstrates that there is a critical number of knowledge workers who are alienated. The results of the survey indicate one in every five knowledge workers is likely to be alienated. This is definitely not a desirable condition for both the individual as well as the organization. The factors likely to predict alienation were explored and some key predictors of alienation were identified. The results indicate that in order to ensure knowledge workers are not alienated, it is essential that their work is meaningful while allowing for self expression and underscores the importance of good work relationships for a non-alienated workforce.

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Appendix I

Items of the Alienation Measure

1. I don't enjoy work; I just put in my time to get paid
2. Facing my daily tasks is a painful and boring experience
3. Work to me is more like a chore or a burden
4. I feel estranged/disconnected from myself
5. I often wish I were doing something else
6. Over the years I have become disillusioned about my work
7. I do not feel like putting my best effort at work
8. I do not feel connected to the events in my workplace