

Job Satisfaction and/or Job Stress

The Psychological Consequences of Working in 'High Performance Work Organizations'

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abstract: The rapid diffusion of high performance work organizations (HPWO) has attracted the attention of many scholars in sociology and psychology over the last three decades. One area in which ongoing debates and evidence are inconclusive is the linkage between HPWO and the 'psychological functioning' of employees, specifically the issues of job satisfaction and job stress. This study examines, and thereby extends our understanding of, associations between workplace restructuring – adopting an 'internalization strategy' within HPWO – with job satisfaction and job stress. The findings reveal that the implementation of an internalization strategy has raised job satisfaction both directly *and* indirectly, through affecting job characteristics – while *indirectly* increasing job stress as well. The latter occurred because an internalization strategy speeds up work pace, develops conflicting demands and intensifies conflicts between work and family. The article concludes with a short discussion on the theoretical significance of the findings and their policy implications for human resource management.

keywords: externalization ♦ internalization ♦ job satisfaction ♦ job stress

Over the last three decades, there have been an increasing number of studies analyzing the restructuring and/or transformation of workplace organizations. The newly developed work organizations have been alternatively called the 'high performance workplace' (Appelbaum, 2002; Osterman, 2000), 'post-Fordism' (Vallas, 1999), the 'functionally flexible' workplace (Kalleberg, 2001, 2003), 'post-hierarchical' organizations (Zuboff, 1988), the 'high-performance paradigm' (Godard, 2001, 2004) and so forth. Given the lack of consensus regarding labels and explanations, the new organizations,

contrasted with Fordism or individualized work organizations, reveal several characteristics in the sphere of work processes, featuring the opportunity for participative decision-making, greater skills requirement (multiple skills) and involvement in 'team-work', on the one hand, and recruiting 'conditional' or 'non-standard employment', on the other (Appelbaum and Batt, 1994; Kalleberg, 2001; Osterman, 1994; Smith, 1994; Zuboff, 1988).¹

These features are both intentions and products of two prevailing, complementary but dissimilar, if not contradictory, labor management strategies that have been adopted in the newly developed work organizations – 'internalization' and 'externalization'. The former is basically designed to enhance workers' organizational attachment and thereby increase productivity levels (Belanger et al., 2002a). According to an internalization strategy, a significant proportion of workers ('internalized' or standard workers) have, or at least are expected to have, opportunities to participate in decision-making, to earn new required skills and to engage in self-directed work teams (Appelbaum, 2002; Atkinson and Meager, 1986; Kalleberg, 2001; Smith, 2001). Along with an internalization strategy, managements have adopted an externalization policy as well, in which organizational attachment is discouraged for those workers ('externalized' or non-standard employees) whose employment is only needed for a limited period of time (Kalleberg, 2003; Smith, 1994, 2001).

Most organizational experts agree that high performance work organizations (HPWO) have been growing significantly in the US over the last three decades. Osterman (1994), for example, reported that in 1992 nearly 37 percent of a sample of 694 US manufacturing firms with more than 50 employees had adopted the new workplace system for at least 50 percent of their core employees. Lawler et al. (1992) found that the percentage of Fortune 1000 firms' employees covered by the new work system increased from 20 to 43 percent between 1987 and 1993. Vallas (1999), after reviewing the corresponding studies, concluded that there seems little doubt concerning the increasing diffusion of corporate effort to restructure workplace organizations. A broad consensus thus exists among most scholars that organizational restructuring is growing, not only in the US but in other industrialized nations as well (Godard, 2001, 2004; Olsen and Kalleberg, 2004).

Disagreement, however, has emerged with regard to the behavioral and psychological outcomes of the newly established organizations, especially job satisfaction vs job stress. One major disagreement, which is the core of this study, is whether internalization strategies have caused more job satisfaction for the employees by creating opportunities for participative decision-making, upgrading workers' required skills and promoting team-work (optimistic views); or whether they have produced higher job stress by increasing workloads, intensifying the work pace, producing

conflicting demands and multiplying workers' responsibilities (pessimistic views). Of course, some scholars refuse to make generalizations and argue that the internalization outcomes, including job satisfaction/stress, are contingent on other structural contexts within which the strategy is adopted, such as the political economy, the implementation costs and the labor/product market (Godard, 1998, 2004). For example, within 'the liberal market economy' of the US, unlike Germany's 'co-determination' system or the stronger labor union movement in Europe, constraints are imposed on 'internalized' workers, especially through a growing implementation of externalization, such as recruiting independent contractors and part-time workers (Kashefi, 2007). Or, because of the costs associated with an internalization strategy, some employers have adopted it along with 'labor intensification' to increase productivity and to compensate for its higher costs (Godard, 2004). Kochan and Osterman (1994) also reported that financial markets place pressures on management to use high performance practices for cutting costs and maximizing short-term performance rather than building commitment over the long term. Regardless of these arguments among optimists, pessimists or contingents, the variations of job stress and job satisfaction are key factors in the workplace, affecting significantly a range of personal and organizational related outcomes, including work and organizational commitment, the turnover rate, absenteeism and work performance (Halbesleben and Bowler, 2007; Hall, 1994; Hodson and Sullivan, 2002; Wright and Cropanzano, 1998). This study is exclusively designed to examine the disagreement as to whether internalization strategies function as a source of job satisfaction or job stress, or both, in the US.

Theoretical and Empirical Background

Job satisfaction and job stress have been studied exhaustively. Literally thousands of studies have been published in sociology and social psychology to explore their substantive roles in the workplace. The development of HPWO has recently motivated more scholars to study the subjects from new perspectives. One recently developed popular view in social psychology that links job satisfaction and job stress to personal and organizational outcomes is the 'conservation of resources' perspective (Hobfoll, 1989). Such resources include social support, opportunities to participate in decision-making, higher autonomy, learning multiple skills and so on (Wright and Cropanzano, 1998). These resources, in turn, 'motivate' workers to develop positive work attitudes, to increase organizational commitment and to improve their work performance. Any 'threats or perceived threat' to the resources (such as workload, role conflicts, relationship with supervisors and co-workers and so on) are expected to

produce higher job stress, while any 'support or perceived support' of the resources (relationship with supervisors and co-workers, full-time jobs and so on) is expected to bring higher job satisfaction, which in turn is associated with work and organizational commitment as well as with work performance and the productivity level.

Within this theoretical context, for some scholars, internalization is a strategy to 'make an investment in resources'. It is a significant strategy toward upgrading jobs, empowering employees and thereby enhancing job satisfaction in the workplace – an optimistic view that provides valuable insights into the positive outcomes of internalization in creating and supporting 'resources' within HPWO. For example, Chaykowski and Gunderson (2002) argue that under the new system, jobs have become multi-tasking and multi-skilling, team-work has blurred the traditional demarcation across jobs and organizational structures have become flatter. A few survey studies in Britain (Gallie, 1996; Gallie and White, 1993) reveal that new work organizations offer more discretion in the workplace. The employees who are engaged in doing team-work personally feel that they have quite a lot of say over decisions in the workplace. Gallie's survey shows that the percentages of employees who have a major say over the work pace are significantly higher than in the traditional organizations. Appelbaum and Batt's (1994) survey study in a sewing industry with a new work organization reports that between two-thirds and three-quarters of operators participate in setting production goals, selecting the work method and scheduling time to solve problems. The study adds that 88 percent of the respondents reported having the authority to stop production, to make decisions about problems and to resolve them. Adler's (1992) study in GM's assembly plant suggests that under the new system, management dismantled almost the entire engineering staff and delegated their responsibilities of task analysis and job design to production workers; thereby shifting the locus of control from mid-management to the shopfloor. Wright (2000), following the neo-Marxists' perspective, suggests a new workplace organization within which a 'positive class compromise' has emerged. Wright adds that contrary to the logic of traditional Marxists, relations between labor and capital are no longer a zero-sum game; rather, both the employers and workers have improved their rewards. 'On the one hand, capitalists have interests in being able to unilaterally control the labor process . . . and on the other hand, they have interest in being able to reliably elicit cooperation, initiative, and responsibility from employees' (Wright, 2000: 981). He concludes that the more workers are involved in decision-making, initiative and cooperation (internalization strategy), the less they worry about organizational or technological changes that will cost them their jobs. Briefly, the new system produces and supports 'resources' by creating

opportunities to learn and execute multiple skills, participate in the decision-making processes and engage in self-directed team-work, which are, in fact, sources of higher job satisfaction.

Other scholars argue that internalization is mostly adopted to meet the needs of management without much concern for the employees' needs – a pessimistic view that provides valuable insights into the threats to 'resources' within HPWO. They feel that the new system is a device to manipulate employees into collaborating in the intensification of the workload, which, in turn, elevates job stress. Within the new system the employers have the ability to deploy or redeploy workers from one task to another with minimal interruption in the work process and without any actual gains for the employees. They believe that internalization is, in fact, a new mechanism to increase organizational control. When administrations realized that previous control systems – simple, technical and bureaucratic (Edwards, 1978) – were no longer efficient, they turned to an internalization strategy in HPWO, where the control mechanisms are embedded in work commitment. Graham's (1995) study reveals that team-work arrangements served as a workplace control mechanism, rather than as an instrument to enhance employees' autonomy. Baker's (1993) research in a small electronics company confirms Graham's findings that self-directed work teams impose a 'concertive control' system in which employees internalized their obligations to managers and would even 'police each other'. Lincoln and Kalleberg (1990), who studied Japanese quality circles (HPWO), claim that 'when an organization finds the means to elicit the commitment of its members, it has at its disposal a very powerful mechanism of control. Indeed, the new interest in organizational commitment . . . appears to stem from realization that the problem of control in organizations in large measure is solved when the commitment of its members is high' (Lincoln and Kalleberg, 1990: 23). Vallas and Beck's (1996) study in automated paper mills revealed that their organizational redesign did not empower ordinary employees. Rather, the engineers' analytical functions and responsibilities, which they claimed 'naturally' belonged to them, had been increased and thus they enjoyed greater control over production processes than before. Higher job stress was also reported in Turnbull's (1988) study. He reports that workloads and responsibilities have been increased in the newly developed flexible organizations and workers are required to maintain an excessively fast pace of work, which, in turn, results in higher levels of job stress. Overall, the preceding discussions suggest that internalization has been, in fact, a 'threat' to the workplace 'resources'. It has intensified expectations and responsibilities, increased workloads and escalated conflicting demands in the workplace, which in turn has created more job stress, rather than enhancing the opportunity for higher job satisfaction.

This study argues that both perspectives underestimate the complexity of the internalization strategy. The implementation of the strategy includes a cluster of practices that have both improved employee positions and rewarded them through various forms of active and mutual cooperation (supports to resources), and simultaneously created more challenges (threats to resources) and thereby more job stress. It is theoretically justifiable and empirically evident that the improved opportunities for the internalized employees have enhanced the quality of their jobs and thereby enhanced their job satisfaction. On the other hand, however, the upgraded jobs have increased both the responsibilities of workers and the expectations of management, which are sources of job stress (Brough and Williams, 2007). Appelbaum implies such contradictory consequences of internalization policy when she discusses the tensions emerging in the 'newly developed' workplace. Her discussion of the second tension confirms the theoretical basis of this article and reflects the complexity of an internalization strategy. Workers 'in restructured workplaces report both higher levels of intrinsic rewards [job satisfaction] from work and, at the same time, higher levels of stress and anxiety than do those in traditionally organized jobs' (Appelbaum, 2002: 133). She adds that job discretion would be limited if *teams* served to increase conflicts among workers or are used as a social control mechanism rather than as a means of increasing workers' autonomy. Berggren (1993) also makes the same remark on the contradictory nature of new workplace organizations. While workers support team-work, they also see *teams* as a way to get workers to pressure each other to work harder. He also adds that team members usually realize that their newly assigned supervisory or maintenance responsibilities are without enough time and resources to conduct them, which, in turn, leads to more pressure and job stress. Dawson and Webb (1989: 236) make a similar assertion that job stress may result from the *expectations* that employees are 'to identify the process problems, intervene in production to rectify them, and suggest changes in the production organization'. Godard (2001, 2004) concludes that 'moderate levels of AWP [alternative work practices] adoption were associated with increased "belongingness", empowerment, . . . and ultimately job satisfaction' while at 'higher level adaptation . . . these associations declined in magnitude and even become negative' because of 'increased workload, stressfulness, and fatigue' (Godard, 2001: 776, 783).

Finally, a careful review of the theoretical discussions and empirical analyses discloses both *direct* and *indirect* associations – through the redesigned jobs – between an internalization strategy with job stress and job satisfaction. For example, the multi-skilling of employees, as a major component of the internalization strategy, enhances workers' ability to solve problems and thereby increases their job satisfaction while 'intensifying'

their workload and creating conflict between work and family, which, in turn, increases their job stress (Godard, 2001). Forth and Millward (2004) also reported both direct and indirect outcomes of internalization when they noted that the strategy is associated with higher job satisfaction (direct effect), on the one hand, and with higher payment and job security, which, in turn, are sources of job satisfaction (indirect effect), on the other hand. White et al. (2003: 192), studying HPWO and its 'negative job-to-home spillover', reported that the internalization strategy had led to a greater workload and work intensification, which, in turn, created 'severe pressures on home life' and thereby caused higher job stress. Their study also reveals that team-work, another component of an internalization strategy, significantly increased 'work and family conflicts', which, in turn, intensified job stress. Finally, Godard (2004) reported that internalization practices create opportunities for 'advancement', 'above-the-market pay and benefits' and 'job security', which, in turn, significantly enhance job satisfaction. Godard's (2001) study in Canada, using telephone survey data from the Canadian labor force, also concludes that team-work, 'positively associated with work overload, role stress and after-work fatigue', reflects both direct and indirect consequences of internalization on job stress.

Given the preceding theoretical discussions and the outcomes of empirical studies, some hypotheses, reflecting the associations between an internalization strategy with job satisfaction and job stress, are proposed:

Hypothesis 1: If the internalization strategy is only a source of higher job satisfaction, a positive and significant correlation between the measures of internalization and job satisfaction are anticipated, net of other factors including background variables.

Hypothesis 2: On the other hand, if the internalization strategy is merely a new mechanism to 'intensify' responsibilities and expectations of employees without any psychological gains, a significant positive correlation between the measures of internalization and job stress is expected, net of other factors including background variables.

Hypothesis 3: If internalization, as a cluster of complex practices, offers opportunities to 'invest' in various 'resources' of job satisfaction, on the one hand, and 'intensify' expectations and challenges as the sources of job stress, on the other, significantly direct and positive associations between the measures of internalization and job satisfaction and job stress are simultaneously anticipated, net of other factors including background variables.

Hypothesis 4: Finally, in addition to the direct associations between internalization and job satisfaction and job stress discussed previously, indirect correlations between them are also anticipated, though changing job

characteristics, such as higher payment, fringe benefits, job security, workloads and work–family conflicts. These indirect paths suggest a set of hypotheses *showing significant associations between the measures of internalization, through a set of job characteristics, and job satisfaction and job stress, net of other factors including background variables.*

Data, Measurement and Methodology

The data used in this research were taken from the 2002 General Social Survey (GSS), conducted by the National Opinion Research Center (NORC). The 2002 GSS contains all the variables needed to measure the concepts related to the hypotheses. The 2002 GSS is a representative sample of 2765 respondents, between 18 and 89 years of age (average 46 years), from the US. The sample covers workers from manufacturing (14.5 percent), construction (5.9 percent), transportation (8.4 percent), services (51 percent) and sales (18.4 percent) industries. For more information on GSS data, see Davis and Smith (1992). For other information, including the sampling techniques, definition of the variables, the coding system, etc. see: www.norc.org/GSS+Website/

The 2002 GSS is a data source with the individual worker and his/her job as the units of analyses. Identification of an appropriate unit of analysis depends on the aims of the research (Kashefi, 2007). For example, Godard (2001) used individual Canadian job-holders to explore the impacts of HPWO on ‘belongingness’, ‘job satisfaction’ and other individual outcomes. White et al. (2003) also utilized ‘employed and self-employed British workers’ as the unit of their analysis to explore the effects of HPWO on ‘work–life balance’. For Davis-Blake and Uzzi (1993), both job and establishment are the units of analysis to explain the purpose of recruiting temporary and independent contractors. Kalleberg (2001) prefers the *network*, defined by the relationships between the organizations and subcontractors, as the appropriate unit of analysis for analyzing employee flexibility. This study is designed to examine job satisfaction and job stress, which are psychological attributes of individual workers. Therefore, an individual worker is the appropriate unit of analysis for analyzing the dependent variables. The explanatory variable (internalization), however, is a structural feature of the workplace organization. The lack of a structural measure of internalization in the 2002 GSS compels the study to reduce the unit of analysis for the explanatory variable to *respondents’ perception* of internalization practices. Such a reduction in the unit of analysis is justifiable in social psychology of the workplace since it is the perception of workplace opportunities, rather than the workplace itself, that affects workers’ attitudes and behaviors (Hall, 1994). Furthermore, organizational scholars have often made such a reduction and used

employee perception to measure human management strategy (see, for example, Godard, 2001; Kashefi, 2007; White et al., 2003). Despite its justification, more cautious interpretations and conclusions are imperative.²

The 2002 GSS data contain several questions that directly measure the dependent and independent variables. Job satisfaction is operationalized by a scale ranging from 'completely satisfied' (code = 1) to 'very dissatisfied' (code = 6); job stress is also measured by a scale from 'strongly agree' (code = 1) to 'strongly disagree' (code = 5). The data also contain several questions that tap respondents' perception of their organization's internalization strategy. It has already been noted that most scholars in the field of workplace organization agree that the new *system* has brought more decision-making opportunities, greater skills requirement (multiple skills) and involvement in team-work. After a careful examination of the questions measuring internalization perception, 10 items were selected and subjected to exploratory factor analysis with oblique rotation – which assumes that the resulting factors are correlated with one another.³ Three constructs were extracted. Four items, reflecting organizational opportunities for learning and multi-skilling, exhibited high loadings (.63 or higher) on what was theoretically referred to as the 'multiple skill opportunity' factor. Three items, showing the organizational opportunities for decision-making, indicated high loadings (.63 and higher) on what was theoretically labeled the 'decision-making opportunity' factor. And the last three items, reflecting the organizational opportunities for involvement in team-work, showed high loadings (.71 and higher) on what was theoretically identified as the 'team-work opportunity' factor. Finally, to develop a multidimensional measure of internalization, the three sets of variables that measure the three constructs were combined.

In addition to the measures of dependent and explanatory variables, several job characteristics, which theoretically and/or empirically suggest having significant effects on job satisfaction and job stress and are also affected by the internalization strategy (e.g. Miller and Travers, 2005; Noor, 2004; Probst, 2003), are included in the models. The variables include: 'How fair is what R [respondent] earns on the job?' (1 = 'much less than you deserve' to 5 = 'much more than you deserve'); 'Fringe benefits are good' (1 = 'very true' to 4 = 'not at all true'); 'Job security is good' (1 = 'very true' to 4 = 'not at all true'). Some measures combine two or more questions: for example, workload/work speed is measured by combining 'Job requires R to work fast', 'R has too much work to do well' and 'R does numerous things on job'. (The answers for all three questions range from 1 = 'strongly agree' to 4 = 'strongly disagree'.) Work and family conflict is also measured by combining two variables: 'How often does job interfere with family life?' and 'How often does family life interfere with job?' (The answers for both questions range from 1 = 'often' to 4 = 'never'.)

Finally, part-time (recode = 0) and full-time (recode = 1) jobs are included. To avoid confusion in the interpretations, all variables are recoded in a way that the higher codes reflect the stronger values.

The analyses were conducted in three stages, zero-order correlations, linear multiple regressions and structural path analyses (using OLS techniques). After a brief discussion on zero-order correlations among the variables, three multiple regression models were designed to analyze the effects of internalization on job satisfaction. The first model explores the effect of the multidimensional measure of internalization on job satisfaction, while controlling for age, gender, race and education. The second model includes several job characteristics that play the role of mediators in the path analyses, theoretically associated with job satisfaction. The last model (model 3) adds job stress to the list of independent/control variables to measure its effect on job satisfaction (Hodson and Sullivan, 2002). The same three models are applied for job stress, with one exception in the third model where job stress is replaced with job satisfaction among the independent/control variables. In the third stage, two structural models (one for job satisfaction and one for job stress) are developed to explore the *direct* and *indirect* effects of internalization on job satisfaction and job stress. All the assumptions required for adopting linear multiple regressions and/or path analyses are confirmed.⁴

Findings and Discussion

Table 1 shows zero-order correlations between dependent, independent and the other variables. There are significant and positive correlations between job satisfaction and job stress with all three measures of internalization and with several job characteristics. These elementary data analyses, thus, substantiate the hypothesis that internalization has simultaneously produced both positive and negative psychological outcomes: *internalization with sets of opportunities for involvement, learning and team-work has increased job satisfaction and job stress as well*. To control the background variables and job characteristics, multivariate analyses were conducted and the results are reported in Tables 2 and 3. Table 2 displays the regression coefficients between internalization and job satisfaction in the three models. In all three models, the coefficients (direct effects) between internalization and job satisfaction remain statistically significant, net of job characteristics, job stress and the respondents' background variables. The table also shows significant coefficients for most of the job characteristics, such as fairness of earnings, fringe benefits, job security and so forth. Finally, model 3 reveals no significant correlation between job stress and job satisfaction when the job characteristics are controlled for. This correlation is discussed in detail later in the section on path analysis. Overall,

Table 1 Zero-Order Correlations Matrix: Measures of Internalization, Job Satisfaction/Stress and Job Characteristics

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	X1
Y1	1											
Y2	.254***	1										
Y3	.284***	.140***	1									
Y4	.267***	-.054	.201***	1								
Y5	.367***	-.08**	.154***	.240***	1							
Y6	.451***	-.103***	.219***	.192***	.375***	1						
Y7	-.058**	.295***	-.117***	-.121***	.036	-.074***	1					
Y8	.502***	-.160***	.265***	.169***	.405***	.550***	-.074**	1				
Y9	.254***	-.270***	.170***	.087***	.205***	.291***	.186***	.364***	1			
Y10	-.085***	.283***	-.166***	-.110***	-.061***	-.061***	.267***	-.133***	-.241***	1		
Y11	.015	.156***	.033	.200***	.190***	.069***	.124***	.100***	-.084***	.107***	1	
X1	.446***	.103***	.166***	.265***	.244***	.385***	.333***	.410***	-.112***	-.111***	.064***	1
Mean	1.67	3.24	2.53	2.07	1.68	5.68	6.31	8.24	2.14	3.25	1.21	22.89
SD	.847	1.192	.871	1.096	.877	1.303	1.495	2.211	.940	1.634	.406	4.700
N	1780	1000	1742	1771	1767	1749	1768	1708	1735	1776	1742	1752

** $p < .05$, *** $p < .01$.

Y1: Job satisfaction; Y2: Job stress; Y3: How fair is what respondent earns; Y4: Fringe benefits; Y5: Job security; Y6: Relationship with co-workers; Y7: Workload and work pace; Y8: Relationship between managers and workers; Y9: Respondent is free from conflicting demands; Y10: Work and family conflict; Y11: Part- and full-time jobs; X1: Multidimensional measure of internalization.

Table 2 Standardized Regression Coefficients (β) for the Association between the Measures of Internalization and Job Satisfaction

	Model 1	Model 2	Model 3
A combined measure of HPWO	.444***	.249***	.186***
Job characteristics			
Fair earnings	–	.094***	.080**
Job security	–	.121***	.148***
Fringe benefits	–	.080***	.101***
Part- or full-time	–	.010	.027
Workload and pace	–	–.078**	.037
Free from conflicting demands	–	.048*	.058*
Relationship with supervisors	–	.223***	.107***
Relationship with co-workers	–	.121***	.107***
Work–family conflict	–	.029	.019
Job stress	–	–	.058
Demographic variables			
Gender	.032	.013	.014
Race	–.002	–.007	–.007
Age	.186***	.130***	.077
Education	.041	.021	.021
R^2	.277***	.408***	.391***
N	1741	1582	668

** $p < .05$, *** $p < .01$.

Table 2 substantiates the theoretical argument that HPWO, by setting opportunities for learning new skills, allowing participation in decision-making and creating opportunities to engage in self-directed work teams, have *directly* improved workers' job satisfaction.⁵

Table 3 shows the regression coefficients for the three models developed for job stress. The first model reveals a significant coefficient between internalization and job stress, net of respondents' background variables.⁶ However, when the job characteristics are included, the coefficients are non-significant, suggesting that internalization does not have a *direct* significant effect on job stress. Its effect, if any, should be indirect, through job characteristics. The second and third models display significant coefficients between some job characteristics and job stress such as workload/work speed, work and family conflicts, part- or full-time jobs and so forth. The third model, similar to the corresponding model for job satisfaction, also reveals no significant correlation between job satisfaction

Table 3 Standardized Regression Coefficients (β) for the Association between the Measures of Internalization and Job Stress

	Model 1	Model 2	Model 3
A combined measure of HPWO	.092**	.051	.064
Job characteristics			
Fair earnings	–	.059	.053
Job security	–	.014	.003
Fringe benefits	–	.060	.067
Part- or full-time	–	–.101***	–.102***
Workload and pace	–	.164***	.160***
Free from conflicting demands	–	.145***	.140***
Relationship with supervisors	–	–.081	.061
Relationship with co-workers	–	.002	.006
Work–family conflict	–	.166***	.164***
Job satisfaction	–	–	.074
Demographic variables			
Gender	.020	.027	.027
Race	–.018	–.003	–.004
Age	.035	.012	.018
Education	.103***	.069	.068
R^2	.024***	.197***	.201***
N	734	668	668

** $p < .05$, *** $p < .01$.

and job stress. Overall, the findings in Table 3 are not consistent with the hypothesis that internalization has *directly* increased job stress. Therefore, its effect can be *indirect*, through its effects on job characteristics.

Finally, the study applies path analyses to explore both *direct and indirect* effects of internalization on job satisfaction and job stress. Figure 1 displays all significant paths, non-significant coefficients are excluded. The figure, in fact, summarizes the major findings of this study. First, internalization has significantly increased job satisfaction among internalized employees. The effects are both direct (.252, $p < .001$) and indirect, through increasing the fairness of income, fringe benefits, job security, relationship with co-workers and relationship with supervisors. Second, as expected, the improved relationship with supervisors not only significantly increases job satisfaction but also decreases job stress. Third, as suggested by some organizational scholars, internalization significantly increases the workload and work pace, which in turn has *reverse* effects on job satisfaction. Despite

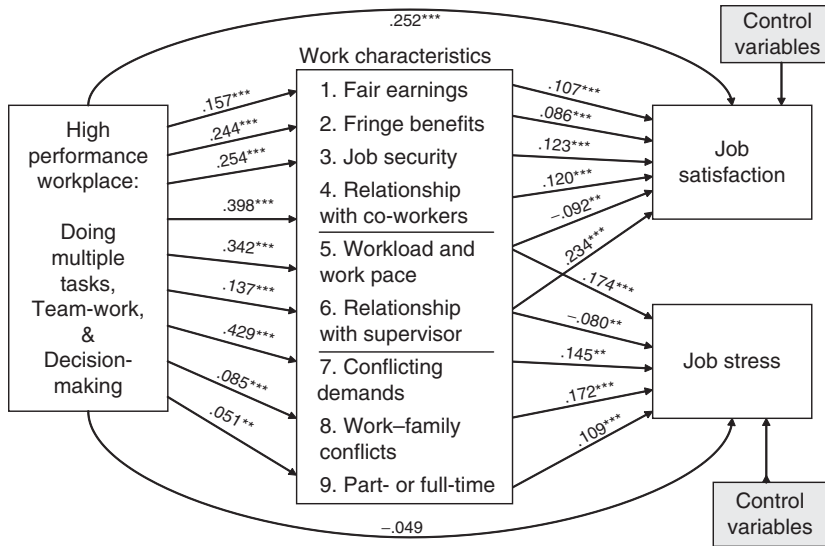


Figure 1 The Path Models: Direct and Indirect Effects of Internalization on Job Satisfaction and Job Stress

this negative outcome, the overall effect of internalization on job satisfaction remains significant and positive. Fourth, while internalization does not reveal a significant direct association with job stress it significantly indirectly affects job stress through intensifying the conflicting demands in the workplace, such as work and family conflict and workload/work pace. Fifth, the indirect effects of internalization on job stress are not limited to the aforementioned conflicts and expectations. Unlike externalization, internalization is a strategy within which opportunity for full-time jobs has been promoted. However, full-time job-holders reported higher job stress: 30.9 percent for full-time employees compared with 47.7 percent of part-time workers 'agree' or 'strongly agree' that their jobs are less stressful. While internalization has intensified job stress through the given four job characteristics, it also reduces job stress by improving the relationships between workers and supervisors. Despite the latter positive outcome, however, the internalization strategy has overall significantly but indirectly intensified job stress for internalized workers.

The path analyses also reveal a few other interesting results. Nine out of a dozen job characteristics display significant intermediate roles between internalization and job satisfaction and/or job stress. Four of them (fairness of earnings, fringe benefits, job security and relationship with co-workers) exclusively affect job satisfaction; three (conflicting demands

on the workplace, work and family conflict and having part- or full-time jobs) are merely correlated with job stress; and the last two (workload/work pace and relationship with supervisors) affect both job satisfaction and job stress, Therefore, with the exception of the last two, the job characteristics that explain the variations of job satisfaction and job stress are, in fact, two *different* sets of variables, offering important indicators for policy-makers who are in charge of reducing job stress and improving job satisfaction. Furthermore, when one controls for the job characteristics, the significant zero-order correlation (.254, $p < .001$) between job satisfaction and job stress turns out to be non-significant, suggesting that their relationship is *spurious* (i.e. both job satisfaction and job stress are affected by other factors, namely workload/work pace and the relationship between worker and supervisor). Finally, that two of the job characteristics affect both job satisfaction and job stress – workload and work pace and relationship with supervisors’ – suggests that a good relationship with supervisors simultaneously reduces job stress while increasing job satisfaction. The opposite holds for intensifying workload and work pace, which significantly increases job stress *while* reducing job satisfaction.

Conclusions

Adoption of an internalization strategy by human resource management within the newly developed work organizations has produced complicated sociopsychological results, simultaneously improving employees’ job satisfaction and intensifying their job stress. Furthermore, the linkages between the internalization strategy and job satisfaction are both *direct and indirect* (via job characteristics) while its effect on job stress is only indirect, through increasing work and family conflict, workload and work pace, and conflicting demands in the workplace. Finally, with a few exceptions, the *indirect* effects of internalization on job satisfaction and job stress basically follow two separate paths – through *different sets* of job characteristics. The findings clearly reveal the mixed results of an internalization strategy on the social psychology of employees. They are also consistent with the discussion of some scholars who suggest that the ‘conflicts embedded in the structure’ of the newly developed workplace substantially limit its effectiveness and ‘render it highly fragile’ (Godard, 2004; White et al., 2003). The conclusion *may* be further confirmed when one takes into account that internalization has been adopted along with an externalization strategy in which work and organizational commitments are mostly discouraged. Therefore, it is imperative to initiate further studies to cover the sociopsychological consequences of externalization along with internalization and especially their interaction, since some externalized employees, such as part-time workers, have expressed lower

levels of job stress (see Table 3). Also, independent contractors, as a growing segment of externalized employees, reveal higher average income and autonomy (sources of job satisfaction) than some of the internalized or standard workers (Kashefi, 2007).

The conclusions have significant theoretical as well as substantive implications for scholars and human resource managers who seek to improve the quality of their organizations and thereby increase the productivity level. The findings substantiate that internalization strategies have simultaneously increased job satisfaction and job stress, producing both supports *and* threats to 'resources' valued by both workers and management. The findings also reveal that the theories of the social psychology of internalization should elaborate on both its direct and indirect outcomes. Lack of a *direct* connection between internalization and job stress should not mislead optimistic scholars and managers into thinking that internalization is not a significant factor affecting employees' stress and thereby productivity levels. Job stress associated with internalization underscores the need for restructuring/reorganization policies within which job stress is kept under control. Otherwise, the increasing levels of job stress may eventually erode the higher job satisfaction and productivity associated with an internalization strategy. Finally, internalized and externalized employees work next to each other in the workplace. During their daily interactions, they play significant roles not only with regard to productivity levels but also in the social psychology of one another. Externalized employees may cause low morale, declining productivity and lower work and organizational commitment among the internalized workers. Thus, a responsible management team should also protect externalized employees, who are mostly involved in routine tasks without opportunities to participate in decision-making, to engage in team-work, to use discretion and to do multi-skilled jobs (Kalleberg, 2001, 2003; Smith, 1994, 2001). Such policies include, but are not limited to, job enlargement, job enrichment, team-work on the demand side, and more on-the-job training on the supply side (Kashefi, 2007).

Notes

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1. HPWO, contrasted with Fordism, are being adopted in three spheres of production processes: production management, employee relations and work organization (Belanger et al., 2002b). In all three spheres the need for flexibility

and speed are reported to be imperative. The last, work organization, is the only subject of this article. The three features of an internalization strategy adopted here are congruent with the key characteristics discussed by most previous studies. For example, Belanger et al. (2002b: 69) reported the emerging characteristics of work organization as greater 'autonomy and discretion in the application of skills and knowledge', 'decreased supervision along with increasing degrees of self-regulation' and the significance of 'multi-disciplinary teams and horizontal coordination'. Some scholars further divided each feature into its detailed components such as 'team autonomy', 'team responsibility' and 'team briefing' (Godard, 2001). For more information see also Smith (2001).

2. In a peripheral empirical analysis, following Forth and Millward's (2004) classification of their sample into 'traditional', 'mixed' and 'high performance' organizations and using the Canonical Discriminant function, the unit of analysis has been aggregated into three organizational categories – traditional work organizations, semi-traditional work organizations and high performance work organizations (HPWO). The average job satisfaction and job stress among the three groups were compared and contrasted. The averages are strongly consistent with findings of this study (see notes 5 and 6).
3. The 10 items used to measure these three dimensions are: a respondent 'does numerous things on the job', 'jobs allow R [respondent] use of skills', 'opportunity to develop my ability', 'job requires R to learn new things', 'how often R was allowed to change schedule', 'R has lot of say in job', 'a lot of freedom to decide how to do job', 'R works as part of a team', 'how often R takes part in decisions' and 'how often R set the way things are done'.
4. To adopt path analysis, the assumption that the residuals should not have high correlations with the independent variables has been confirmed. Tolerance statistics for all independent variables were lower than .4, indicating no multicollinearity (Allison, 1999).
5. This conclusion is confirmed by the average job satisfaction calculated for traditional, semi-traditional and high performance work organizations separately. The average job satisfaction for traditional work organizations is 1.74, contrasted with 2.44 and 2.70 for semi-traditional organizations and for HPWO, respectively. ANOVA ($F = 168.62^{***}$) and the Tukey tests reveal that the differences are statistically significant.
6. This conclusion is also consistent with the average job stress calculated for traditional, semi-traditional and high performance work organizations. The average job stress for HPWO is 3.54, which is significantly higher than the averages for semi-traditional (3.25) and for traditional (2.99) organizations ($F = 7.025^{***}$).

References

- Adler, P. (1992) *Technology and the Future of Work*. New York: Oxford University Press.
- Allison, P. (1999) *Multiple Regression: A Primer*. Thousand Oaks, CA: Pine Forge Press.

- Appelbaum, E. (2002) 'The Impacts of New Forms of Work Organization on Workers', in G. Murray, J. Belanger, A. Giles and P. Lapointe (eds) *Work and Employment Relations in the High Performance Workplace*. London: Continuum.
- Appelbaum, E. and Batt, R. (1994) *The New American Workplace: Transforming Work Systems in the United States*. Ithaca, NY: ILR Press.
- Atkinson, J. and Meager, N. (1986) *Changing Working Patterns: How Companies Achieve Flexibility to Meet New Needs*. London: National Economic Development Office.
- Baker, J. (1993) 'Tightening the Iron Cage: Concertive Control in Self Managing Teams', *Administrative Science Quarterly* 38: 262–81.
- Belanger, J., Edwards, P. and Wright, M. (2002a) 'Commitment at Work and Independence from Management', *Work and Occupations* 30: 234–52.
- Belanger, J., Giles, A. and Murray, G. (2002b) 'Towards a New Production Model', in G. Murray, J. Belanger, A. Giles and P. Lapointe (eds) *Work and Employment Relations in the High Performance Workplace*. London: Continuum.
- Berggren, C. (1993) 'Lean Production: The End of History', *Work, Employment, and Society* 7: 163–88.
- Brough, P. and Williams, J. (2007) 'Managing Occupational Stress in High-Risk Industry', *Criminal Justice and Behavior* 34(4): 555–67.
- Chaykowski, R. and Gunderson, M. (2002) 'North American Labour Policy under a Transformed Economic and Workplace Environment', in G. Murray, J. Belanger, A. Giles and P. Lapointe (eds) *Work and Employment Relations in the High Performance Workplace*, pp. 181–211. London: Continuum.
- Davis, J. and Smith, T. (1992) *The NORC General Social Survey. A User's Guide*. Newbury Park, CA: Sage.
- Davis-Blake, A. and Uzzi, B. (1993) 'Determinants of Employment Externalization: A Study of Temporary Workers and Independent Contractors', *Administrative Science Quarterly* 38: 195–223.
- Dawson, P. and Webb, J. (1989) 'New Production Arrangements: The Totally Flexible Cage?', *Work, Employment, and Society* 3: 221–38.
- Edwards, R. (1979) *Contested Train: The Transformation of the Workplace in the Twentieth Century*. New York: Basic Books.
- Forth, J. and Millward, N. (2004) 'High Involvement Management and Pay in Britain', *Industrial Relations* 43(1): 98–119.
- Gallie, D. (1996) 'Skill, Gender, and the Quality of Employment', in R. Crompton, D. Gallie and K. Purcell (eds) *Changing Forms of Employment*, pp. 133–59. New York: Routledge.
- Gallie, D. and White, M. (1993) *Employment Commitment and the Skills Revolution*. London: PSI Publishing.
- Godard, J. (1998) 'Workplace Reforms, Managerial Objectives, and Managerial Outcomes', *International Journal of Human Resource Management* 19: 18–40.
- Godard, J. (2001) 'High Performance and the Transformation of Work? The Implications of Alternative Work Practices for the Experience and Outcomes of Work', *Industrial and Labor Reviews* 54: 776–805.
- Godard, J. (2004) 'A Critical Assessment of the High Performance Paradigm', *British Journal of Industrial Relations* 42: 349–78.

- Graham, L. (1995) *On the Line at Subaru-Isuzu*. Ithaca, NY: ILR Press.
- Halbesleben, J. and Bowler, W. (2007) 'Emotional Exhaustion and Job Performance: The Mediating Role of Motivation', *Journal of Applied Psychology* 92: 93–106.
- Hall, R. (1994) *Sociology of Work*. Thousand Oaks, CA: Pine Forge Press.
- Hobfoll, S. E. (1989) 'Conservation of Resources: A New Attempt at Conceptualizing Stress', *American Psychologist* 44: 513–24.
- Hodson, R. and Sullivan, T. A. (2002) *The Social Organization of Work*. Wadsworth: Thompson Learning.
- Kalleberg, A. (2001) 'Organizing Flexibility: The Flexible Firm in a New Century', *British Journal of Industrial Relations* 39: 479–504.
- Kalleberg, A. (2003) 'Flexible Firms and Labor Market Segmentation: Effects of Workplace Restructuring on Jobs and Work', *Work and Occupations* 30: 154–75.
- Kashefi, M. (2007) 'Work Flexibility and its Individual Consequences: Examining the Effects of "Functional" and "Numerical" Flexibility on Job Rewards', *Canadian Journal of Sociology* 32(3): 341–69.
- Kochan, T. and Osterman, P. (1994) *The Mutual Gains Enterprise*. Boston, MA: Harvard Business School Press.
- Lawler, E., Mohrman, S. and Ledford, G. (1992) *Employee Involvement and Total Quality Management*. San Francisco: Jossey-Bass.
- Lincoln, J. and Kalleberg, A. (1990) *Culture, Control, and Commitment: A Study of Work Organization and Work Attitudes in the United States and Japan*. Cambridge: Cambridge University Press.
- Miller, G. and Travers, I. (2005) 'Ethnicity and the Experience of Work: Job Stress and Satisfaction of Minority Ethnic Teachers in the UK', *International Review of Psychology* 17: 317–27.
- Noor, N. (2004) 'Work-Family Conflict, Work- and Family-Role Salience, and Women's Well Being', *Journal of Social Psychology* 144: 389–405.
- Olsen, K. and Kalleberg, A. (2004) 'Non-Standard Work in Two Different Employment Regimes: Norway and the United States', *Work, Employment, and Society* 18: 321–48.
- Osterman, P. (1994) 'How Common is Workplace Transformation and Who Adopts it?', *Industrial and Labor Relations Review* 47: 173–88.
- Osterman, P. (2000) 'Work Organization in an Age of Restructuring', *Industrial and Labor Relations Review* 53: 179–96.
- Probst, T. (2003) 'Exploring Employee Outcomes of Organizational Restructuring', *Group and Organization Management* 28: 416–39.
- Smith, V. (1994) 'Institutionalizing Flexibility in a Service Firm: Multiple Contingencies and Hidden Hierarchy', *Work and Occupations* 21: 284–307.
- Smith, V. (2001) 'Teamwork vs Tempwork: Managers and the Dualisms of Workplace Restructuring', in D. Cornfield, K. Campbell and H. McCammon (eds) *Working in Restructured Workplaces*. Thousand Oaks, CA: Sage.
- Turnbull, P. J. (1988) 'The Limits to Japanization: Just-in-Time, Labour Relations and the UK Automotive Industry', *New Technology, Work and Employment* 4: 7–20.
- Vallas, S. (1999) 'Rethinking Post-Fordism: The Meaning of Workplace Flexibility', *Sociological Theory* 68: 68–102.

- Vallas, S. and Beck, J. (1996) 'The Transformation Work Revisited: The Limits of Flexibility in American Manufacturing', *Social Problems* 43: 501–22.
- White, M., Hill, S., McGovern, P., Mills, C. and Smeaton, D. (2003) ' "High Performance" Management Practices, Working Hours and Work–Life Balance', *British Journal of Industrial Relations* 42: 175–95.
- Wright, E. O. (2000) 'Working Class Power, Capitalist-Class Interests, and Class Compromise', *American Journal of Sociology* 105: 957–1002.
- Wright, T. and Cropanzano, R. (1998) 'Emotional Exhaustion as a Predictor of Job Performance and Voluntary Turnover', *Journal of Applied Psychology* 83(3): 486–93.
- Zuboff, S. (1988) *In the Age of the Smart Machine*. New York: Basic Books.

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