Organizational change and job satisfaction among voluntary and paid workers in a Dutch voluntary organization

Roel Schouteten
(Radboud University Nijmegen, Institute for Management Research, r.schouteten@fm.ru.nl)

Tanja van der Vleuten
(Capgemini Consulting, tanja.vander.vleuten@capgemini.com)

Abstract
This article addresses the effects of organizational changes brought about by New Public Management (NPM) on job satisfaction in a Dutch voluntary association employing paid and voluntary workers. In this organization the strong focus on increased efficiency and accountability resulted in changes including organizational growth and job redesign. Based on quantitative (job satisfaction surveys before and after the changes) and qualitative data (documents and in-depth interviews) we conclude that the organizational changes have negative effects on voluntary and paid workers’ job satisfaction. The introduction of business-like management practices is at odds with the altruistic motivations of the workers and their commitment to the cause of the organization. However, our study also shows that these effects differ for voluntary and paid workers, because of their different roles in the organization and different attitudes towards these roles.

Key words: Work characteristics, Motivation, Mixed methods, The Netherlands

Introduction
Voluntary associations and non-profit organizations are increasingly being faced with organizational changes as a result of a stronger focus on the quality of their services. Stemming from changes in legislation and funding, they are being asked and required to be more business-like in their operations and attitude (Baines, 2010; Cunningham, 2001; Dart, 2004; Hay, Beattie, Livingstone & Munro, 2001; Shoham, Ruvio, Vigoda-Gadot & Schwabsky, 2006). These developments have caused most non-profit organizations to change their strategy, organization, attitude and way of working. According to Wilson (1996), “a common response in voluntary organizations to managing organizational change has been the adoption of managerial practices
and recipes from the commercial business sector” (p. 80), thus adopting a more market-oriented and business-like operation model with a strong focus on effectiveness, efficiency and accountability (Liu & Ko, 2011). Results-oriented private sector strategies in public sector organizations are often referred to as New Public Management (NPM) strategies. The aim for increased management control over the labor process has resulted in major changes in work organization (Baines, 2004).

The effects of this kind of organizational changes on paid workers’ job satisfaction in for-profit organizations have been widely studied (e.g. Mack, Nelson & Quick, 1998; Svensen, Neset & Eriksen, 2007). However, studies on job satisfaction in voluntary associations are mostly aimed at volunteer retention (e.g. Boezeman & Ellemers, 2009; Hustinx, 2010; Garner & Garner, 2011) and less on the relation with organizational change. An exception is Noblet, Rodwell and Williams (2006), who studied the effects of using NPM strategies on volunteers in public sector organizations. They conclude that these strategies caused structural, procedural and cultural changes that resulted in decreased job satisfaction among volunteers.

In addition, Field and Johnson (1993) found that commercialization of voluntary associations results in conflicting feelings among volunteers, particularly when they were made more responsible for and focused on fund raising as this focus conflicted with their intrinsic motivation to serve community in general and especially people in need. Similarly, Baines (2004) found that NPM leads to a ‘thinning’ of caring in the voluntary sector.

These studies show that not all for-profit business concepts translate smoothly to the non-profit sector (Beck, Lengnick-Hall & Lengnick-Hall, 2008), however, they only focus on volunteers. There is little research on the effects of organizational change in voluntary associations on the job satisfaction of paid as well as voluntary staff. In an attempt to fill this gap we study the effects of organizational change on voluntary and paid workers’ job satisfaction in a voluntary association: a regional department of the Dutch Council for Refugees and Immigrants (SVMG). Due to changing ‘market’ conditions (e.g. changes in government policy on refugees and provisions for funding the Council), organizational change was seen as necessary in order to become an effective, efficient and flexible market party. The changes consisted of organizational growth (by merging with other regional departments), organizational downsizing (by closing some of the local offices), and organizational redesign (new job structure).
By studying the effects of organizational changes brought about by NPM on voluntary as well as paid workers’ job satisfaction in the same organization we aim to enhance understanding of relationships between organizational change and job satisfaction in voluntary associations. In the next section, we present a literature overview on the relationship between organizational change and job satisfaction for voluntary and paid workers, as well as a short overview of NPM in the Dutch voluntary sector. This will be followed by the methodology, the results and discussion and conclusions.

Organizational change and job satisfaction

Being one of the most frequently studied concepts, there is an abundance of literature about job satisfaction (Judge, Bono, Thoresen & Patton, 2001; Locke, 1976). There is general consensus that job satisfaction is influenced by a combination of job characteristics (role ambiguity, skill variety), individual (age, work values) and organizational characteristics (leadership, organizational age) (e.g. Glisson & Durick, 1988; Kalleberg, 1977). Organizational changes influence job and organizational characteristics and, therefore, job satisfaction. Based on their research, Mack et al. (1998) conclude that, in general, organizational changes result in increasing levels of job dissatisfaction, mainly as a result of increased uncertainty during the process of change. However, many scholars present different relationships between organizational change and job satisfaction. Main reason for this is the wide variety of organizational changes being studied. Moreover, hardly any studies have been conducted on the relation between organizational change and job satisfaction in voluntary associations. As a result, we build on more general literature and apply this to the specific context.

Organizational change can take different forms and, while some changes affect the entire organization, other affect only specific divisions, teams or jobs. The organizational change in our study is very complex as it involved organizational downsizing, growth, job redesign and a change in organizational strategy. These different changes often affect job satisfaction differently. For example, the effect of organizational downsizing is argued to depend on workers’ previous experiences with similar changes. According to Svensen et al. (2007) job satisfaction will decrease if previous experiences with downsizing are negative. On the other hand, if previous experiences are positive decrease in job satisfaction will not occur. Cross and Travaglione (2004) argue that organizational downsizing will result in higher levels of job sat-
satisfaction as the remaining employees will be happier than those who left. An important as-
sumption here is that the least satisfied employees (have to) leave the organization, which is
not necessarily true in all organizational downsizing processes.

With regard to work characteristics, organizational downsizing results in increasing
levels of work load when the same work has to be carried out by fewer employees. Following
Karasek’s model (1979), increasing workloads (job demands) with the same amount of deci-
sion latitude will result in lower levels of job satisfaction.

Organizational growth (resulting in growing numbers of employees) is generally
thought to result in decreasing levels of job satisfaction (Beer, 1964). Organizational growth
often results in other (organizational) changes, for example changes in leadership styles, organ-
izational structure and employees’ attitudes. Based on an extensive literature review Beer
(1964) concludes that larger organizations report lower levels of job satisfaction mainly due to
higher levels of formalization and a larger distance towards colleagues and superiors. Field and
Johnson (1993) studied the effects of organizational growth in a voluntary association that
grew from a single location small firm to a large organization operating from several different
locations. The growth process involved incorporating more bureaucratic processes to manage
the work processes and employees, resulting in demotivation and lower levels of commitment.
Another important finding in Field and Johnson’s case was that the changes heavily affected
the volunteers’ work. The volunteers’ lack of involvement in decision making around changes
and service provision was found to result in reduced commitment among the volunteers.

Job design is one of the main determinants of job satisfaction (Humphrey, Nahrgang &
Morgeson, 2007). Important models indicating this relationship include the Job Demand – De-
cision Latitude Model (Karasek, 1979), the Job Characteristics Model (Hackman & Oldham,
1980), and the Job Demands Resources Model (Demerouti, Bakker, Nachreiner & Schaufeli,
2001). Common denominator in these models is that characteristics of the work determine sev-
eral outcomes for workers, such as stress (Karesek, 1979), satisfaction, motivation (Hackman
& Oldham, 1980), burnout and work engagement (Demerouti et al., 2001). Work characteris-
tics can be divided into job demands, such as work load, and job resources (or decision lati-
tude), such as autonomy and social support. Every job can be characterized in terms of a bal-
ance between job demands and job resources (Demerouti et al., 2001). As a result, job
(re)design determines this balance and, therefore, the outcomes for workers. In the Job Charac-
teristics Model (Hackman & Oldham, 1980), this relation between job characteristics and outcomes is mediated by employees’ perceptions that are influenced by employee needs. Based on this model, Salancik and Pfeffer (1978) and Griffin (1991) show that job redesign results in improved job satisfaction when the job redesign results in an improved fit between job characteristics and employee needs or expectations.

In conclusion, the relation between organizational change and job satisfaction is miscellaneous. Different kinds of organizational change seem to have different effects on job satisfaction. However, it is clear that work characteristics (work content and context) and the perception of these characteristics or the change mediate the relationship between organizational change and job satisfaction. Moreover, organizational changes such as downsizing, growth and a change in organizational strategy most probably change the design of the jobs. Therefore, although not entirely conclusive, based on the literature mentioned above, we expect that job redesign will influence job satisfaction. Job satisfaction increases when the job characteristics fit employee needs or expectations (Salancik & Pfeffer, 1978; Griffin, 1991) or when the redesign process is aimed at improving dissatisfying work characteristics.

**Voluntary and paid workers**

Workers’ perception of organizational changes of work characteristics differ with the worker’s attitudes and work motivation. There is evidence that voluntary and paid workers have different motivations for working (Hwang et al., 2005), resulting in different work experiences (Boezeman & Ellemers, 2009) or perception of organizational identity, even resulting in conflicts between paid and voluntary staff in voluntary associations (Kreutzer & Jäger, 2011). Voluntary workers are driven by a diversity of benefits to be achieved: “making a contribution, a sense of achievement, spending time in a constructive way, getting out of the house, and seeing things from another perspective” (Field & Johnson, 1993, p. 1626; see also Gage & Thapa, 2011; Garner & Garner, 2011). In contrast, paid workers are dependent on their employer and the organization for their income. Yet, according to Garner and Garner (2011), the distinction between intrinsic and extrinsic motivation as distinctive difference between volunteers and paid workers maybe too simplistic. Paid workers in voluntary associations can be strongly attracted to the cause of the organization (e.g. helping people in need), resulting in high levels of intrinsic motivation, even outweighing the extrinsic motivators. According to Cunningham
(2001), it is generally accepted that staff in voluntary organizations, paid as well as voluntary staff, are highly committed to the cause of the organization.

In addition to differences in work motivation, paid and voluntary workers also differ regarding job content and job contract (number of working hours). In voluntary associations volunteers are often responsible for conducting the core tasks or processes (such as helping people in need) while paid workers are more often responsible for managing and coordinating tasks (e.g. Kreutzer & Jäger, 2011; Van Puyvelde, Caers, Du Bois & Jegers, 2011).

The number of hours worked is another important variable. Paid workers, who are generally dependent on the organization for their income and have more responsible tasks than volunteers, often work more hours per week. As a result, changes in work characteristics have a stronger impact on paid workers’ job satisfaction than on voluntary workers.

Based on the kind of organizational changes in this voluntary association, we expect that the organizational changes affect the job design (work characteristics) of paid and voluntary workers. These work characteristics determine job satisfaction, however we expect that these differ for paid and voluntary workers. Our expectations are visualized in figure 1.

[FIGURE 1 HERE]

NPM in the Dutch voluntary sector

In the Netherlands, very little research has been devoted to NPM in the voluntary sector. Most research on the voluntary sector focuses on the supply side of volunteer work (e.g. Dekker & De Hart, 2009), rather than the demand side. Exceptions are Meijs (1997) and Meijs and Ten Hoorn (2008) who focus on the management of volunteers. Dekker (2004) summarizes his description of the very large Dutch non-profit sector as follows: “It has long been difficult to tell whether providers are public or private non-profits, but in recent years the situation has become increasingly complicated and opaque. Former state agencies develop into non-profits, for profits penetrate the homelands of non-profits, non-profits commence commercial activities and hybrid organizations develop all over the place” (p. 162). According to Statistics Netherlands (van Herten, 2008) 5.6 million Dutch (44% of the Dutch adults) were involved in voluntary work in 2007. Dutch volunteers’ contribution to the GDP was 4.7% in 2002. The Johns Hop-
kins Comparative Nonprofit Sector Project reports that this is the relatively largest contribution in their comparative study among 35 countries.

With regard to management reform in the Dutch public sector\(^1\) Pollit and Bouckaert (2004) present an accurate picture. During the 1980s, business-origin management ideas penetrated the public sector in a drive for efficiency and savings, as in many other countries. HR policies in the public sector were brought in line with private sector labor conditions. However, the pace and implementation of these reforms were more incremental and selective in the Netherlands, in contrast to the series of dramatic waves of restructuring seen in the UK or New Zealand.

Being largely dependent on governmental funding, results-oriented budgeting was also introduced in large parts of the non-profit sector. The stronger market orientation resulted in an increasingly bureaucratized and commercialized non-profit sector. In this context we tested our expectations that the changes in work and work organization affect paid and voluntary workers’ job satisfaction. The next section presents a description of the voluntary association we studied.

**Case description**

The regional department of the Dutch Council for Refugees and Immigrants (SVMG) addresses the needs and rights of refugees and immigrants in 25 Municipalities in the central-eastern part of the Netherlands by facilitating and providing direct professional services (e.g. help with asylum procedures), and promoting the full participation of migrants in community life. Due to changes in legislation and funding, SVMG had to change its strategy in order to remain solvent. Formerly, municipalities were the main sponsors. They agreed on yearly contracts for all services regarding all refugees and immigrants. However, the number of immigrants dropped significantly over the last couple of years, and the funding changed. In the new situation, SVMG needed to compete with other (cheaper) providers, such as schools (Dutch language courses) or labor integration companies (job application trainings) providing tailor-made and/or specific services. These environmental changes resulted in a drop in income, necessitating SVMG to reorganize its services.

By mergers with other departments of the Dutch Council for Refugees and Immigrants, SVMG increased its geographical service area. The old and newly acquired offices were reor-
ganized into four regions. Communication between the central office and the regions took place through four regional offices, rather than all local offices reporting to the central office. In terms of staffing of the regional and local offices, all employees in each region were expected to be employable at all offices. As a result, the number of offices and the number of voluntary workers in SVMG increased, but the number of managers and support staff (mainly paid workers) decreased (see also Table 1). Therefore, organizational growth and downsizing occurred simultaneously.

A second feature of the reorganization was the changed focus on the employees’ accountability, efficiency and business-like attitude. To meet market demands, SVMG had to compete with other suppliers and actively acquire assignments and funding. Moreover, services needed to be customized for specific assignments, rather than supplying standard services to large groups of immigrants. In order to create specialized jobs that would enhance product development and to manage the growing organization, SVMG decided to change its job structure, particularly for the paid workers. Paid workers are responsible for most of the managerial and supporting positions. The previously eleven local managers were replaced by four regional managers with a larger span of control and more responsibilities. The integrated tasks of the previous job of ‘work supervisor’ were divided over two more specialized jobs: ‘supervisor of volunteers’ and ‘integration consultant’.

Method
To test the effects of the organizational changes in SVMG on volunteers’ and paid workers’ job satisfaction we used a combination of qualitative and quantitative methods. First, using the results of job satisfaction surveys, we tested our model (see figure 1) before (in 2004) and after (in 2007) the changes that occurred in the period from 2005 to 2006. Next, we conducted document analyses and interviews to interpret the questionnaire results.

Response
In 2004, SVMG employed 69 paid and 359 voluntary workers. In 2007, 67 paid and 573 voluntary workers were employed. For both measurements the questionnaires were sent to all paid and voluntary workers. Confidentiality was assured by promising that no-one but the researchers would be able to see the completed questionnaires, and that in the report only the results of
groups of more than five would be discussed. As a result, no individual results were available to anyone in the organization. To realize this, the respondents sent the completed questionnaires in a prepaid envelope directly to the researchers.

In 2004 the total response rate was 46.7% (200 respondents: 142 voluntary and 58 paid workers). In 2007 the response was only 24.7% (158 respondents: 116 voluntary and 39 paid workers; see Table 2). The difference in response rates between paid and voluntary workers can be explained by the relatively small amount of working hours per week among voluntary workers which likely resulted in a lower motivation to participate in this kind of research.

Another explanation for the drop in response rates is that the workers did not or hardly benefit from the first questionnaire, and subsequently refused to fill out the questionnaire again. As one of the respondents put it, the questionnaire could be viewed as another attempt by management to hinder the primary process of helping people in need. A final reason for the low response rate in 2007 was that the questionnaire was set out in a holiday period, although we sent e-mail reminders and extended the term for returning the questionnaires.

Organizational change

Information about the characteristics of the organizational changes was gathered in a qualitative way. We studied several documents, such as the 2005 annual report (SVMG, 2006a), the reorganization plan (SVMG, 2006b), and an evaluation report (Loenen, 2007). We also joined an evaluation meeting of paid and voluntary workers in June 2007. Finally, we interviewed two key HRM staff members about the various changes in the organization and job characteristics. From these diverse sources, management as well as paid and unpaid employees, we got a balanced picture of the actual changes in the period between 2004 and 2007.

Job characteristics, job satisfaction and motivation

For the quantitative measuring of the job characteristics and job satisfaction at both moments, we used the same questionnaire consisting of scales from existing and frequently used validated Dutch questionnaires. For this study we used scales from the NOVA-WEB\textsuperscript{2} (Dhondt & Houtman, 1996), VBBA\textsuperscript{3} (Van Veldhoven, Meijman, Broersen & Fortuin, 2002) and VAG\textsuperscript{4} (Gründemann, Smulders & de Winter, 1993) on job characteristics and job satisfaction. Table 1 presents an overview of the scales and some descriptive statistics.
Additionally we used the questionnaire results as input for interviews with paid and voluntary workers in order to generate valid interpretations. We conducted semi-structured interviews at three different locations with two volunteers, two paid staff members and two paid supervisors per location (stratified sampling). Main goal of the interviews was to get a deeper understanding of the quantitative results and their underlying causes. The interview protocol contained some general questions (e.g. “Do you think that job satisfaction changed as a result of the organizational changes? How? Why?”) and more specific questions per job (e.g. “Can you indicate to what extent your job description has changed in the past few years?”). The interviews were transcribed and summarized, and then the results were used to interpret the quantitative results.

[TABLE 1 HERE]

*Job characteristics.* Following the JD-R model, job characteristics can be divided into two broad categories: job demands and job resources. “Job demands refer to those physical, social, or organizational aspects of the job that require sustained physical or mental effort” (Demerouti et al., 2001: 501). Job resources, on the other hand, refer to those physical, psychological, social, or organizational aspects that may be functional in achieving work goals, reduce the effects of job demands and/or stimulate personal growth and development (Demerouti et al., 2001). These categories represent job content and work relations aspects of jobs.

Job content was based on Karasek’s model (1979) and was measured as the balance between job demands and decision latitude. Job demands included job complexity, task changes, workload, and physical strain (similar to job demands according to Demerouti et al., 2001). Decision latitude included autonomy and organizing tasks (job resources in the JD-R model). Furthermore, measuring work variety and job completeness, we used Hacker’s concept of complete tasks (Hacker, 1989) as a dimension of job content, which can be considered job resources in the JD-R model (Demerouti et al., 2001). Work organization and information provision as job resources are also considered important aspects of job content (see Table 1).

Work relations were measured as interaction potential and the respondents’ relationships with colleagues and superiors (executives). These are considered important resources to deal with stressful jobs (Demerouti et al., 2001; Karasek & Theorell, 1990).
All job characteristics scales consisted of two-scale items (yes or no) measuring whether a certain job condition was applicable or not. Scale scores were calculated by summing the scores of the items and dividing them by the number of items in the scale, resulting in scores between 0 and 1. Cronbach’s alphas, a statistical indicator for scale reliability, yielded acceptable scores (> .7)\(^5\) for most scales, in at least one of the two measurements. Two scales, job complexity and task changes, do not meet this criterion, but as the original scales when constructed initially yielded acceptable levels (.74 and .86, respectively), we still included them in our analyses (see Table 1).

**Job satisfaction.** Most scholars recognize that job satisfaction is a global concept that also comprises various facets which generally include pay, promotions, co-workers, supervision, the work itself, recognition, working conditions, and company and management (Judge et al., 2001). For this study a measure for overall job satisfaction (global concept) was used, as well as facetted measures for satisfaction with job content and satisfaction with work relations, because these coincide with job characteristics we measured. For overall job satisfaction we used a validated scale from the frequently used and elaborately tested Dutch questionnaire VBBA (Van Veldhoven et al., 2002) measuring at a 2-point scale the extent to which workers experience pleasure during the work. The wording of the items in this scale is quite general (for example: “I enjoy my work” or “I still find my work stimulating, each and every day”) and applicable to paid as well as voluntary work. For satisfaction with job content and satisfaction with work relations we used scales from a questionnaire aimed at measuring workers’ needs and satisfaction with different job aspects (Van der Parre, 1996; see also Schouteten, 2001). These aspects were measured at 7-point Likert scales. Scale scores are calculated as the mean of all items in the scale.

**Motivation.** Although motivation is an important variable in the relation between job characteristics and job satisfaction (see e.g. Hwang et al., 2005; Kreutzer & Jäger, 2011), we can use only one question from the questionnaire that measures an aspect of motivation: “Is the idealistic cause of the organization an important motivator to work for this organization?” (yes/no). Therefore, information about motivation was mainly gathered through the interviews with vol-
unteers and paid workers. This information is being used for interpreting the quantitative re-

Results
Table 2 presents descriptive statistics from the employee surveys in 2004 and 2007 for the en-
tire organization and for voluntary and paid workers separately. All scores, except the faceted
satisfaction scores, range from 0 to 1. Faceted satisfaction scores range from 1 to 7. The higher
the score the more of the job characteristic or satisfaction is present in the job.

[TABLE 2 HERE]

The mean age of the respondents is approximately 50, but volunteers are slightly older than
paid employees. The biggest difference, however, is the amount of working hours per week:
volunteers are employed for approximately 8 hours per week, whereas paid employees work
almost 25 hours per week.

The job satisfaction in this organization is very high. Overall job satisfaction scores of
around .90 suggest that the respondents have very positive feelings about their work. Facetted
satisfaction scores above 5 (out of 7) indicate that the respondents are satisfied about job con-
tent and work relations. However, the scores in 2007 are lower than 2004. In 2007, the re-
spondents are especially less satisfied about the their relationships with supervisors and col-
leagues.

Regarding work characteristics, Table 2 shows that the work is quite complex (job de-
mand), but the work is varied and complete (job resources), meaning that the jobs contain a
coherent variety of tasks that demand different capabilities from the employees. The other job
demands (task changes, work load and physical strain) are moderate or low. The job resources,
except “organizing tasks” are rather high, meaning that the respondents have a lot of possibili-
ties to deal with job demands on their own account (autonomy), or by involving others (e.g.
interaction potential, information provision, executives and colleagues).

Comparing the work characteristics in 2004 and 2007 shows that most job demands in-
creased, whereas most job resources decreased, some even significantly. The significant differ-
ences between 2004 and 2007 indicate less well interaction potential, decreased work organiza-
tion, less organizing tasks (less voice), deteriorated information provision, more hindrance from task changes, more workload, and less well relationships with colleagues and executives. Explanatory information from the interviews suggests that the growth of the organization (more offices and more voluntary workers) and the changed management structure resulted in a greater distance between colleagues and supervisors. This resulted in problems regarding the work organization and possibilities to confer with colleagues and supervisors (in case of problems or queries). The longer communication lines also result in more problems regarding information provision. Another problem arising after the changes was that workers work at a number of different locations. The employees feel that the flexibility of work location and the lack of a solid base were the main causes of the current communication problems. After the changes there were fewer employees present, and the workers (paid and voluntary) that were present in a workplace differed daily. Employees did not know each other anymore, especially those working in different regions. Opportunities for organized interaction between volunteers, paid employees and management were infrequent, which resulted in difficulties, particularly in terms of fine-tuning important decisions about services for clients. Given the fact that voluntary workers only work for a couple of hours per week, this enhanced communication problems, resulting in the poorer results on interaction potential, work organization, information provision and the relationships with colleagues and executives.

However, these changes are different for paid and voluntary employees. The changes in interaction potential, work organization and workload are similar for voluntary and paid workers. But volunteers report less organizing tasks (less voice) after the changes, whereas paid workers report more problems regarding information provision, more task changes and less well relationships with executives and colleagues. This indicates that the changes affect volunteers and paid workers differently. In the interviews, all respondents agreed that the organizational changes affected the paid workers more than the volunteers as the latter’s job content hardly changed. Paid workers, however, felt more pressure to acquire funding and to conduct sales activities. Especially in some of the newly created paid jobs an imbalance seemed to exist between job demands and decision latitude around funding and commercial activities, resulting in higher levels of job dissatisfaction. The paid workers emphasized that they did not yet have any knowledge, skills or experience necessary to undertake this work and yet they felt strong pressure to perform assertively in this area. Paid workers also indicated that their responsibili-
ties required them to confer more with colleagues and executives and to spend more time on commercial activities, rather than engaging in helping people in need. The changing work characteristics involved changes in how communications and interactions took place, particularly for those in more responsible positions. Thus, the communications problems as a result of the changes are more strongly felt by paid workers than by volunteers.

In order to find out what are the most important changing job characteristics as potential causes of job satisfaction, we conducted correlation and regression analyses. Tables 3 and 4 present correlation matrices for volunteers (Table 3) and paid workers (Table 4), containing correlation coefficients for 2004 and 2007.

For volunteers, Table 3 shows that there are quite some correlations between work characteristics. But for our study the correlations of work characteristics with satisfaction are most important. First, most work characteristics are significantly related to one or more of the three satisfaction scales. Only job complexity and physical strain are not related to any satisfaction scale in 2004 and 2007. Second, the significant correlations in 2004 and 2007 are different. Interaction potential and organizing tasks were not correlated to satisfaction in 2004, but in 2007 they were correlated to satisfaction with job content and satisfaction with work relations. Similarly, in 2004 work organization was related to satisfaction with work relations, but in 2007 it was related to all three satisfaction scales. On the other hand, autonomy, in 2004 related to two satisfaction scales, was not significantly related to satisfaction in 2007. And workload was related to all satisfaction scales in 2004, but in 2007 only to satisfaction with work relations. Information provision, together with executives and colleagues, shows the highest correlation coefficients.

Strikingly, some differences between 2004 and 2007 concern the work characteristics that changed significantly between 2004 and 2007 (see Table 2): interaction potential, work organization, organizing tasks and workload. Whereas workload increased between 2004 and 2007, its correlation with satisfaction decreased. On the other hand, the increased problems regarding interaction potential, work organization and organizing tasks became more strongly correlated with satisfaction. This coincides with the results that the organizational changes caused communication problems and resulted in larger distances between colleagues and with
supervisors, and explains why the satisfaction scores decreased because of the organizational changes.

TABLE 3 HERE

For paid workers, Table 4 shows far less significant correlation coefficients than Table 3. The main reason for this is the relatively small number of respondents, resulting in limited statistical power. As for volunteers, there are quite some correlations between work characteristics, but we focus on the correlations between work characteristics and satisfaction.

For paid workers, completeness of the work, interaction potential, and organizing tasks are not related to any of the satisfaction scales in 2004 and 2007. Moreover, the relations of job complexity, work variety, and workload with any of the satisfaction scales are limited, although the correlation between work variety and overall job satisfaction is quite strong in 2004 (but was not significant anymore in 2007). For the significantly related work characteristics with satisfaction, there are large differences between 2004 and 2007. Work organization and information provision were related to all satisfaction scales in 2004, but in 2007 only (strongly) to overall job satisfaction. Autonomy and physical strain were related to satisfaction with job content and satisfaction with work relations in 2004, but not to any satisfaction scale in 2007. Task changes was related to satisfaction with job content and satisfaction with work relations in 2004, but in 2007 it was related to satisfaction with work relations and overall job satisfaction. And the relationship with executives and colleagues was significantly related to all satisfaction scales in 2004, but only very strongly to satisfaction with work relations in 2007.

Regarding the differences between 2004 and 2007 (Table 2) the results are less straightforward than those for volunteers. Some of the significantly changed work characteristics are not or hardly related to satisfaction in both measurements (interaction potential, work load). For work organization, information provision and relationship with executives and colleagues, the number of significant correlations dropped, but they became more strongly associated with only one of the satisfaction scales. For task changes the relation with satisfaction of work relations remained, but the relation with satisfaction with job content decreased and the relation with overall job satisfaction increased.
TABLE 4 HERE

For the regression analyses we tested several models. We controlled for age, gender, amount of working hours per week, and the difference between voluntary and paid workers before testing the influence of the work characteristics. Finally, we entered interaction terms for job type (paid or volunteer) with all work characteristics, because the correlation results showed that the effects for voluntary and paid workers may differ. However, the number of variables became very large (28 variables), dramatically reducing the degrees of freedom for the analyses (resulting in very few significant results). Therefore, we reduced the number of variables in the analyses, by including only those variables in the final analyses that were significant at p<.10 in the analyses with all variables. These results are being presented in Tables 5 (for 2004) and 6 (for 2007).

The regression analyses show that the main determinants for satisfaction in 2007 are different from 2004. In 2004 overall satisfaction was mainly determined by the job resources work variety and autonomy, and the age of the respondents (older respondents being more satisfied). In 2007 the main determinants were task changes (indicating that the changes in the work affect overall satisfaction) and the relationships with executives and colleagues, pinpointing the importance of these for employee satisfaction. Further, in 2007 older employees are more satisfied than younger ones, and paid workers are more satisfied than volunteers.

TABLE 5 HERE

TABLE 6 HERE

In 2004, satisfaction with job content was mainly determined by work variety, autonomy, information provision (job resources), and task changes (job demand). Moreover, there was an interaction effect of job type with physical strain, indicating that physical strain for paid employees affects satisfaction with job content. In 2007, only the job resources work variety, interaction potential and the relationship with executives and colleagues affect satisfaction with job content. This indicates that in 2007 job resources rather than job demands determine satisfaction with job content. As described earlier, these characteristics were most affected by the organizational changes.
Satisfaction with work relations was most determined by information provision (job resource) and task changes (job demand) in 2004. The interaction effect of job type with physical strain approached significance. In 2007, the job resources organizing tasks, information provision, and relationships with executives and colleagues were the most important determinants, again pinpointing the increased importance of the relationships between employees. Moreover, there is a significant interaction effect of job type with information provision, indicating that mainly volunteers suffer from problems in information provision. This can be explained from the interview data that suggest that there are difficulties with organized interaction between flexible and part-time working colleagues.

These results are further corroborated by interview data with paid and voluntary staff members. The overall tendency was for paid and voluntary workers to feel that the communication and choices of management were not optimal and that this sense of bad management decision making affected the workers’ job satisfaction. According to the respondents, the relation between managers and employees required improvement, most felt it had deteriorated since 2004. They also reported a vagueness and ambiguity about their responsibilities at the different locations as standards were not clear and communication was so poor (no or late communication). The overall lack of communication and interaction among and between staff, volunteers and management further exacerbated these problems even when decisions were finally made.

Discussion
Following our model (figure 1), the results show, as expected, that organizational changes brought about by NPM in a voluntary association have an effect on the work characteristics (job design) and job satisfaction of paid and voluntary workers.

In general, the organizational changes resulted in decreased levels of satisfaction with job content and satisfaction with work relations, which is in line with Mack et al.’s (1998) conclusion. However, the diversity and complexity of the organizational changes in our case study require a nuanced interpretation of the results. It is very difficult to disentangle the effects of the different changes that took place. In our model we expected that the different changes are interconnected and affect the work characteristics, more specifically the job design. The growth of the organization and the focus on efficiency and accountability resulted in higher levels of
formalization and a larger distance towards colleagues and supervisors (Beer, 1964; Field & Johnson, 1993), resulting in experienced problems regarding communication and interaction potential.

The results further indicate that the changed job characteristics became more important determinants of satisfaction. In this study, the effects on the changes in work organization and work relations have a strong effect on satisfaction. This indicates that the growth of the organization and the related increased need for coordination affect the work organization and work relations for voluntary and paid workers, resulting in changes in job satisfaction. However, on a more detailed level, the effects for paid and voluntary workers differ. Volunteers seem to be less affected than paid workers. In line with the findings of Kreutzer and Jäger (2011) and Van Puyvelde et al. (2011), in this organization paid workers are responsible for the management tasks, whereas the volunteers are responsible for conducting the core tasks. Moreover, the fact that volunteers work less hours per week in less responsible jobs makes them less vulnerable to the changes. In this case the volunteers were affected by the changing focus on accountability and efficiency – they felt it undermined the primary process of helping people in need – though it barely changed the content of their jobs. However, the feeling that the agency was deviating from its mission or purpose was enough to raise the level of job dissatisfaction among unpaid workers.

Paid workers’ responsibilities required them to adhere more to the organizational particularities. As a result, their job content was more affected by the changes.

**Conclusion**

Although satisfaction levels among voluntary and paid workers remain high, our study shows that organizational changes brought about by NPM in a voluntary association have negative effects on the job satisfaction of voluntary and paid workers, mainly through changes in work relations. And although, the introduction of business-like management practices aimed at increased efficiency and accountability is at odds with the altruistic motivations of the workers and their commitment to the cause of the organization, job satisfaction is mainly influenced by the effects of organizational growth on work organization and work relations. However, our study also shows that these effects differ for voluntary and paid workers, because of their different roles in the organization and attitude towards these roles.
In regard to the question of how organizational change brought about by NPM impacts on job satisfaction, our study shows that the kind of change and the way change is introduced and pursued strongly impacts on whether job satisfaction will increase or not. However, our study and the changes in the organization are too complex to draw generic conclusions. Moreover, there are some limitations that require further research into this kind of longitudinal research in the effects of organizational change on job satisfaction.

First, we were unable to link the results from 2004 and 2007 at the individual level. Therefore, the study lacks a proper longitudinal design. Further longitudinal research in voluntary associations with paid and voluntary workers is necessary to found our results. It would further be interesting to isolate the different organizational changes and determine their impact on job satisfaction and its determinants.

Secondly, we used a self-report questionnaire for measuring job characteristics (at organizational level) and link them to individual level job satisfaction. Howeverusual in this kind of research, we need to be careful when interpreting the results. The use of mixed methods, as in this research, or e.g. expert analysis of job characteristics at job or organizational level improves the quality of the interpretations.
End note

1 In Dutch literature, the public and non-profit sectors make up to the so-called fourth sector. The first is the agrarian sector, second is the industrial sector (for profit), and third is the for profit services sector.

2 NOVA-WEB (NIPG Onderzoeksvragenlijst Arbeidsinhoud – Welzijn bij de Arbeid) is a questionnaire on well-being at work, especially designed to measure the concept as included in the Dutch Occupational Health and Safety Act.

3 VBBA (Vragenlijst Beleving en Beoordeling van de Arbeid) is the Questionnaire Experience and Evaluation of the Work (QEEW).

4 VAG (Vragenlijst Arbeid en gezondheid) is the Questionnaire on Work and Health.

5 There is no sacred level of acceptable or unacceptable level of alpha (Schmitt, 1996), however, in social science a widely-accepted cut-off is .8, but some use .7 (Garson, n.d.). Gliem & Gliem (2003) refer to George and Mallory’s SPSS handbook that provides the following rules of thumb: > .9 – excellent; > .8 – good; > .7 – acceptable; > .6 – questionable; > .5 – poor; and < .5 – unacceptable.
References


Figure 1: Visualization of the expectations in the study

Organizational change:
- Growth
- Downsizing
- Job redesign
- Organizational strategy
Table 2: Descriptives for total organization, volunteers and paid employees in 2004 and 2007

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total score</th>
<th>Volunteers</th>
<th>Paid Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td>428</td>
<td>640</td>
<td>359</td>
</tr>
<tr>
<td>Number of respondents (percentage)</td>
<td>200</td>
<td>158</td>
<td>142</td>
</tr>
<tr>
<td>Age</td>
<td>49.1</td>
<td>51.1</td>
<td>51.5</td>
</tr>
<tr>
<td>Amount of working hours per week</td>
<td>12.8</td>
<td>12.7</td>
<td>8.4</td>
</tr>
</tbody>
</table>

**Job satisfaction**

- Overall Job satisfaction: .92 | .89 | .93 | .91 | .89 | .85
- Satisfaction with job content: 5.23 | 5.08 | 5.28 | 5.12 | 5.14 | 4.97
- Satisfaction with work relations: 5.61 | 5.03* | 5.71 | 5.26* | 5.41 | 4.34*

**Characteristics of the work**

- Job complexity: .53 | .56 | .49 | .51 | .65 | .70
- Work variety: .62 | .64 | .62 | .65 | .62 | .64
- Completeness of the work: .74 | .77 | .69 | .74 | .82 | .85
- Interaction potential: .82 | .73* | .82 | .74* | .84 | .73*
- Work Organization: .83 | .72* | .85 | .77* | .77 | .56*
- Autonomy: .85 | .83 | .84 | .82 | .87 | .88
- Organizing tasks: .68 | .50* | .62 | .42* | .83 | .73
- Information: .81 | .75* | .81 | .79 | .83 | .63*
- Task changes: .24 | .28* | .20 | .24 | .31 | .40*
- Workload: .24 | .31* | .16 | .22* | .46 | .58*
- Executives and colleagues: .88 | .78* | .89 | .84 | .88 | .59*
- Physical strain: .07 | .08 | .06 | .07 | .10 | .11

* There is a significant difference found between the scores of 2004 and 2007 from the same group (t-test, p < .05).
### Table 5: Regression analyses with satisfaction as dependent variables (2004) (Standardized coefficient Beta)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Overall job satisfaction</th>
<th>Satisfaction with job content</th>
<th>Satisfaction with work relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volunteer / paid (1=paid)</td>
<td></td>
<td>.010</td>
<td>.006</td>
</tr>
<tr>
<td>Age</td>
<td>.165*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of working hours /week</td>
<td>-.155</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work variety</td>
<td>.256***</td>
<td>.139*</td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>.251**</td>
<td>.235**</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td></td>
<td>.261**</td>
<td>.344***</td>
</tr>
<tr>
<td>Task changes</td>
<td>-.266**</td>
<td>-.277***</td>
<td></td>
</tr>
<tr>
<td>Physical strain</td>
<td>.088</td>
<td>.058</td>
<td></td>
</tr>
<tr>
<td>Volunteer / paid * Physical strain</td>
<td>.232*</td>
<td>.170(*)</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.199***</td>
<td>.303***</td>
<td>.300***</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>.179</td>
<td>.272</td>
<td>.280</td>
</tr>
</tbody>
</table>

* Beta is significant at p<.05; ** Beta is significant at p<.01; *** Beta is significant at p<.001; (*) p=.051

### Table 6: Regression analyses with satisfaction as dependent variables (2007) (Standardized coefficient Beta)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Overall job satisfaction</th>
<th>Satisfaction with job content</th>
<th>Satisfaction with work relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volunteer / paid (1=paid)</td>
<td>.183(*)</td>
<td></td>
<td>-.169*</td>
</tr>
<tr>
<td>Age</td>
<td>.235**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work variety</td>
<td>.103</td>
<td>.259**</td>
<td></td>
</tr>
<tr>
<td>Interaction potential</td>
<td></td>
<td>.191*</td>
<td></td>
</tr>
<tr>
<td>Organizing tasks</td>
<td></td>
<td></td>
<td>.174*</td>
</tr>
<tr>
<td>Information</td>
<td></td>
<td></td>
<td>.469***</td>
</tr>
<tr>
<td>Task changes</td>
<td>-.335**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executives and colleagues</td>
<td>.403***</td>
<td>.362***</td>
<td>.369***</td>
</tr>
<tr>
<td>Volunteer / paid * Work variety</td>
<td>-.172**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteer / paid * Information</td>
<td></td>
<td></td>
<td>.281**</td>
</tr>
<tr>
<td>Volunteer / paid * Exec. &amp; Coll.</td>
<td>.113</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.387****</td>
<td>.263***</td>
<td>.513***</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>.349</td>
<td>.245</td>
<td>.493</td>
</tr>
</tbody>
</table>

* Beta is significant at p<.05; ** Beta is significant at p<.01; *** Beta is significant at p<.001; (*) p=.056
### Table 1: Description and descriptive statistics of the variables in the study

<table>
<thead>
<tr>
<th>Variable/ scale</th>
<th>Scale origin*</th>
<th>Description (and example question)</th>
<th>Min-max</th>
<th>Number of items in the scale</th>
<th>Cronbach’s alpha 2004 / 2007</th>
<th>Initial Cronbach’s Alpha*</th>
<th>Mean (SD) 2004 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Job satisfaction</td>
<td>VBBA</td>
<td>The worker has an overall positive feeling about the work (e.g. “I enjoy my work”)</td>
<td>0-1; the higher the score, the more job satisfaction</td>
<td>9</td>
<td>.63 / .73</td>
<td>.79</td>
<td>.92 (.13) .89 (.17)</td>
</tr>
<tr>
<td>Satisfaction with job content</td>
<td>VdP</td>
<td>The worker is satisfied about the job content (e.g. “How satisfied are you about the extent to which you can decide on the work pace yourself?”)</td>
<td>1-7; the higher the score, the more satisfaction about job content</td>
<td>15</td>
<td>.90 / .91</td>
<td>new</td>
<td>5.24 (.96) 5.08 (1.01)</td>
</tr>
<tr>
<td>Satisfaction with work relations</td>
<td>VdP</td>
<td>The worker is satisfied about the work relations with superiors and colleagues (e.g. “How satisfied are you about your supervisor?”)</td>
<td>1-7; the higher the score, the more satisfaction about work relations</td>
<td>6</td>
<td>.91 / .90</td>
<td>new</td>
<td>5.61 (1.18) 5.03 (1.39)</td>
</tr>
<tr>
<td><strong>Characteristics of the work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job complexity</td>
<td>NOVA-WEBA</td>
<td>The job comprises a variety of difficult and easy tasks (e.g. can you do your job routine-ly?)</td>
<td>0-1; the higher the score, the more difficult the job (job demand)</td>
<td>6</td>
<td>.60 / .55</td>
<td>.74</td>
<td>.53 (.28) .56 (.27)</td>
</tr>
<tr>
<td>Work variety</td>
<td>VBBA</td>
<td>The job offers a variety of tasks and challenges the worker’s creativity (e.g. “In your work, do you repeatedly have to do the same things?”)</td>
<td>0-1; the higher the score, the more opportunities to vary ones tasks (job resource)</td>
<td>5</td>
<td>.67 / .76</td>
<td>.82</td>
<td>.62 (.15) .64 (.17)</td>
</tr>
<tr>
<td>Completeness of the work</td>
<td>NOVA-WEBA</td>
<td>The job comprises executing, as well as preparing and supporting tasks (e.g. “Do you judge the quality of your work yourself?”)</td>
<td>0-1; the higher the score, the more complete the job (job resource)</td>
<td>10</td>
<td>.69 / .73</td>
<td>.76</td>
<td>.74 (.20) .77 (.19)</td>
</tr>
<tr>
<td>Interaction potential</td>
<td>NOVA-WEBA</td>
<td>When necessary, it is possible to ask for help from colleagues (e.g. when having difficulties finishing a task, do colleagues help?)</td>
<td>0-1; the higher the score, the better the opportunities to ask others for help (job resource)</td>
<td>6</td>
<td>.72 / .67</td>
<td>.63</td>
<td>.82 (.24) .73 (.27)</td>
</tr>
<tr>
<td>Work Organization</td>
<td>VAG</td>
<td>The work is well-organized and not hindered by others or unexpected situations (e.g. “In general, is the work well-organized in your company?”)</td>
<td>0-1; the higher the score, better organized the work (job resource)</td>
<td>5</td>
<td>.67 / .72</td>
<td>.60</td>
<td>.83 (.25) .72 (.31)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>NOVA-WEBA</td>
<td>The worker can decide on work pace, work order etc. (e.g. “Can you decide for yourself how to conduct your work?”)</td>
<td>0-1; the higher the score, the more job autonomy (job resource)</td>
<td>9</td>
<td>.65 / .78</td>
<td>.77</td>
<td>.85 (.18) .83 (.22)</td>
</tr>
<tr>
<td>Category</td>
<td>Survey</td>
<td>Description</td>
<td>Scale</td>
<td>Metric 1</td>
<td>Metric 2</td>
<td>Metric 3</td>
<td>Metric 4</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Organizing tasks</td>
<td>NOVA-WEBA</td>
<td>The worker has opportunities to influence decisions about the work (e.g. “do you discuss with others how to plan tasks?”)</td>
<td>0-1; the higher the score, the more influence on work decisions (job resource)</td>
<td>5</td>
<td>.69 / .74</td>
<td>.76</td>
<td>.68 (.31)</td>
</tr>
<tr>
<td>Information</td>
<td>NOVA-WEBA</td>
<td>The worker receives sufficient and timely information about the work (e.g. “Do you usually receive the necessary information in time?”)</td>
<td>0-1; the higher the score, the better the information provision (job resource)</td>
<td>12</td>
<td>.71 / .78</td>
<td>.75</td>
<td>.81 (.18)</td>
</tr>
<tr>
<td>Task changes</td>
<td>VBBA</td>
<td>Changes in the work cause difficulties for conducting the work properly (e.g. “Do the changes in your tasks cause you problems?”)</td>
<td>0-1; the higher the score, the more problems are being caused by changes in the work (job demand)</td>
<td>5</td>
<td>.62 / .69</td>
<td>.86</td>
<td>.24 (.13)</td>
</tr>
<tr>
<td>Workload</td>
<td>NOVA-WEBA</td>
<td>The work is demanding (e.g. “In general, do you have enough time to complete your appointed tasks?”)</td>
<td>0-1; the higher the score, the more workload (job demand)</td>
<td>12</td>
<td>.80 / .86</td>
<td>.81</td>
<td>.24 (.23)</td>
</tr>
<tr>
<td>Executives and colleagues</td>
<td>VAG</td>
<td>The (social) relationship with superiors and colleagues is good (e.g. “Is there a good atmosphere between you and your colleagues?”)</td>
<td>0-1; the higher the score, the better the relationship with executives and colleagues (job resource)</td>
<td>5</td>
<td>.69 / .76</td>
<td>.73</td>
<td>.88 (.21)</td>
</tr>
<tr>
<td>Physical strain</td>
<td>VBBA</td>
<td>The work requires physical strain (e.g. “Does the work require a lot of physical strength?”)</td>
<td>0-1; the higher the score, the more physical strain (job demand)</td>
<td>7</td>
<td>.79 / .81</td>
<td>.90</td>
<td>.07 (.10)</td>
</tr>
</tbody>
</table>

* VBBA (Van Veldhoven et al., 2002), VdP (Van der Parre, 1996), NOVA-WEBA (Dhondt & Houtman, 1996), VAG (Gründemann et al., 1993)
Table 3: Correlations between the variables for volunteers in 2004 and 2007 (only significant correlation coefficients)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Job complexity</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Work variety</td>
<td>.370**</td>
<td>.262**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Completeness</td>
<td>.236*</td>
<td>.234*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Interaction potential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Work organization</td>
<td>-.273**</td>
<td>-.260**</td>
<td>.232*</td>
<td>.215**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Autonomy</td>
<td>.307**</td>
<td>.316**</td>
<td>-.191*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Organizing tasks</td>
<td>.224**</td>
<td>.435**</td>
<td>.539**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Information</td>
<td>-.183*</td>
<td>.246*</td>
<td>.236**</td>
<td>.502**</td>
<td>.552**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Task changes</td>
<td>.258**</td>
<td>.205*</td>
<td>.221*</td>
<td>-.357**</td>
<td>-.393**</td>
<td>-.464**</td>
<td>-.291**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Workload</td>
<td>.440**</td>
<td>.425**</td>
<td>.345**</td>
<td>-.498**</td>
<td>-.567**</td>
<td>-.484**</td>
<td>-.426**</td>
<td>.339**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Executives and colleagues</td>
<td>.433**</td>
<td>.462**</td>
<td>.569**</td>
<td>.249**</td>
<td>.561**</td>
<td>-.353**</td>
<td>-.239**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Physical strain</td>
<td>.283**</td>
<td>.239*</td>
<td>.369**</td>
<td>.230**</td>
<td>.313**</td>
<td>.457**</td>
<td>-.313**</td>
<td>-.183*</td>
<td>-.170*</td>
<td>-.424**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Satisfaction job content</td>
<td>.243**</td>
<td>.254**</td>
<td>.227*</td>
<td>.219*</td>
<td>.236*</td>
<td>.313**</td>
<td>-.313**</td>
<td>-.183*</td>
<td>-.170*</td>
<td>-.424**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Satisfaction work relations</td>
<td></td>
<td></td>
<td>.261**</td>
<td>.369**</td>
<td>.394**</td>
<td>.239*</td>
<td>.477**</td>
<td>-.379**</td>
<td>-.325**</td>
<td>-.333**</td>
<td>.751**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Overall job satisfaction</td>
<td>.189*</td>
<td>.232*</td>
<td>.283**</td>
<td>.321**</td>
<td>.299**</td>
<td>.475**</td>
<td>-.189*</td>
<td>-.283**</td>
<td>-.520**</td>
<td>.280**</td>
<td>.343**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Correlation is significant at the .05 level (two-tailed); ** Correlation is significant at the .01 level (two-tailed)
In each cell, the upper value represents the regression coefficient for 2004, the value in italics is for 2007
### Table 4: Correlations between the variables for paid workers in 2004 and 2007 (only significant correlation coefficients)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Job complexity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Work variety</td>
<td>-.506**</td>
<td>-.388*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Completeness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Interaction potential</td>
<td>.284*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Work organization</td>
<td>-.270*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Autonomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Organizing tasks</td>
<td>.482**</td>
<td>.299*</td>
<td>.575**</td>
<td>.690**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Information</td>
<td>.440**</td>
<td>.653**</td>
<td>.364**</td>
<td>.402*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Task changes</td>
<td>.351*</td>
<td>.420*</td>
<td></td>
<td>.536**</td>
<td>.562**</td>
<td></td>
<td></td>
<td>.468**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Workload</td>
<td>.478**</td>
<td>.530**</td>
<td></td>
<td>.621**</td>
<td>.356*</td>
<td>.381**</td>
<td>.510**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Executives and colleagues</td>
<td>.449**</td>
<td>.467**</td>
<td>.399*</td>
<td></td>
<td>.564**</td>
<td>.337*</td>
<td>.567**</td>
<td>.406**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Physical strain</td>
<td>-.333*</td>
<td></td>
<td></td>
<td>-.429**</td>
<td>-.371**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Satisfaction job content</td>
<td>-.293*</td>
<td>.331*</td>
<td>.383**</td>
<td>.364**</td>
<td>.493**</td>
<td>-.312*</td>
<td>-.294*</td>
<td>-.295*</td>
<td>-.363**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Satisfaction work relations</td>
<td></td>
<td>.317*</td>
<td>.319*</td>
<td>.506**</td>
<td>-.337*</td>
<td>.472**</td>
<td>.361**</td>
<td>-.371**</td>
<td>.872**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Overall job satisfaction</td>
<td>.517**</td>
<td>.420**</td>
<td>.374**</td>
<td>.545**</td>
<td>-.384*</td>
<td>.283*</td>
<td>.348*</td>
<td>.350*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Correlation is significant at the .05 level (two-tailed); ** Correlation is significant at the .01 level (two-tailed)

In each cell, the upper value represents the regression coefficient for 2004, the value in italics is for 2007.