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How important is Autonomy to Professional Workers?

Abstract: A common assumption is that autonomy is crucial to professional workers. I examine this using survey data on a sample of public sector welfare professionals, viz. medical doctors, nurses, teachers, social workers. Comparisons are made with general population data from the International Social Survey Programme. Two methods of assessing the importance of work autonomy are employed; respondents' direct ratings and statistical associations between work autonomy (and other job characteristics) on the one hand and job satisfaction and organizational commitment on the other. Findings: Autonomy is not rated as more important among the professionals than in the general population, and neither is it more strongly related to job satisfaction. Interesting work and workplace social support appear to be more central.

Keywords: professions; autonomy; work values; job satisfaction; organizational commitment

Concerns with threats to the autonomy of professional workers have a long history in research on professional work. In the 1960's and 1970's the major challenge was seen to be the increasing extent to which professionals were employed in non-professional, bureaucratic organizational settings, thus being exposed to stronger non-professional control (Haug, 1973; Toren, 1975; Scott, 1965). More recently, the main threat to the autonomy of professional practitioners has been seen to come from extensive public sector reforms in most Western countries. Central features of the *New Public Management* (NPM), are 'devolved management, the application of commercial management techniques, emphasis on outcomes, targets, performance measurement, shorter hierarchies with strong line management control, increased service-user involvement and ... a proliferation and strengthening of quality auditing' (Taylor & Kelly, 2006, p. 633; also see Noblet, McWilliams, & Rodwell, 2005; Lane, 2000). NPM has been widely regarded as a threat to the professions, to professional work, and in particular to the autonomy or discretion professionals have in their work (see e.g. Cooke, 2006; Lymbery, 2000; Taylor & Kelly, 2006) – although some have also argued that NPM type reforms have in fact increased autonomy (Diller, 2000).

Some level of autonomy is likely to be important in any job. It should, however, be particularly important to professional workers. In the first place, it can be argued that the character of professional work is such that a high degree of autonomy or discretion is essential to the quality of the work. Secondly, this link between autonomy and quality (or the belief that such a link exists) provides crucial

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justification for the professions' claims to economic and social advantages and privileges, and autonomy is thus an important part of professional ideologies (Freidson 1988 [1970], 368ff.).

The importance of autonomy to practitioners in specific professions (particularly nursing) has been addressed in a number of studies. However, few studies provide systematic comparisons of autonomy with other job characteristics (like interesting work tasks or social support in the work place), and studies comparing professional and non-professional workers seem to be lacking entirely. This paper contributes to the literature by providing results for several Norwegian professions (doctors, nurses, teachers and social workers), and by comparing these with a general population sample.

All of the professional groups included in the present study may be broadly considered as welfare professions, i.e. professions providing health, education and social services. In a so-called 'welfare state' like Norway, most practitioners in these professions are public employees, with a partial exception for doctors who are often self-employed, but in that case practicing within the limits of contractual relationships with local (municipal) authorities.

An intuitively appealing way of assessing the importance of job characteristics is simply to ask people directly about their opinions on this issue. This approach is potentially subject to serious biases, however (see below). I therefore supplement it by a second approach and analyse how strongly the autonomy people experience in their work affects the degree to which they are satisfied with their jobs and committed to their organizations.

Theoretical and conceptual issues

Work autonomy and professional autonomy

The focus in this paper is on the importance workers in various professions and in the population in general attach to *work autonomy*. Hackman and Oldham (1975, p. 162) define work autonomy as 'the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out' (cf. Spenner, 1990, p. 403). In studies of professions and professionalism, and in professions' self-concepts, the related concept of *professional autonomy* has been central. This concept has, however, been used in a variety of different ways.

In the first place, professional autonomy is commonly defined to include both the autonomy of the individual practitioner and that of the profession as a collectivity, for instance its power to define performance standards or ethical codes for its members (Engel, 1970). Even at the individual level, which is the focus of the present paper, a variety of different understandings of autonomy are found in the literature. For instance, some authors do not see autonomy as a characteristic of the work situation, but rather as an attitude (e.g. Hall, 1968), or they define it in terms of workers' occupational behaviour (e.g. Schutzenhofer, 1987). A more important question perhaps is whether the term should be restricted to specific parts or aspects of the work that are considered to be of special professional relevance. Thus, Engel (1970, p. 8) differentiates between freedom to practice one's profession in accordance with one's training ('work-related autonomy') on the one hand and 'freedom to conduct tangential work activities in a normative manner in accordance with one's own discretion' ('personal autonomy') on the

other. Another example is Evetts (2002), who seems to treat professional autonomy (and even 'professional discretion') as relevant only to the professional's decisions with regard to the individual client, and not to the professional's work situation more generally.

The professional autonomy concept is, however, also often used more or less synonymously with work autonomy as defined above (see e.g. Meiksins and Watson, 1989; Wallace and Kay, 2008).¹ This usage also seems consistent with Freidson (1988[1970], p. 368, 1994, p. 73-74): 'The freedom [professionals] ask for is the same as others: they ask to determine their own working hours, work load, compensation, the kind of work they do, and the way they do it.' (Freidson, 1988[1970], p. 368). What is special for professionals is not the autonomy as such, but in stead the type of *justification* that can be given for a high level of autonomy: '... that their esoteric expertise is such that only they are able to determine what is wrong with humanity, how it may best be served, and at what price. This claim is what makes professions special, and it is what justifies the autonomy distinguishing them from other occupations.' (Freidson, 1988[1970], p. 368).

Why should professionals be expected to care about autonomy?

Sidestepping for a moment the question of the relationship between work autonomy and professional autonomy, let us first consider in more detail why autonomy should be expected to be particularly important to professional workers. As noted above, the crucial characteristic of professional work is that it is based on a specific body of knowledge and skills that is not mastered by people outside the profession. If this is the case, a need for autonomy is likely to emanate from the work situation itself. Professionals may find, for instance, that organizational rules or goals limit their freedom to take care of their clients (or patients or students) in the way they want or feel that they should.

A second way in which autonomy may come to be seen as particularly important among professional workers is through professional socialization, either through training or through interaction with colleagues or with their professional organizations. Third, a profession may be expected to recruit individuals who share to a considerable extent its central values (Weeden & Grusky, 2005; Freidson, 2001, pp. 101-102).

But there are also reasons to expect a less than perfect fit between the profession's and the individual professional worker's values and priorities. Challenges experienced in the work situation may perhaps lead to a demand for *less* rather than more autonomy. If the practitioner experiences strong and conflicting expectations, autonomy may be a source of stress and a demand for clear rules may develop. Likewise, the efficiency of professional socialization should not be taken for granted. And with regard to recruitment, the value a profession attaches to autonomy may not be very visible to those who choose to enter the profession, who may in stead be attracted primarily on the basis of other,

¹ Although Wallace and Kay (2008) seems to conceptualize autonomy in terms of the actual work situation, one may note that she measures the concept using items taken from Hall's professionalism scale, which may seem strange since Hall (1968) defines autonomy as an attitude. These items, like most items in Hall's scale, refer quite clearly to the actual work situation, however, so what is strange here is really Hall's inclusion of these items in a scale purportedly designed to measure an attitude.

more visible characteristics, such as opportunities for public service or for interesting work tasks.

Returning now to the issue of work autonomy versus professional autonomy, the question could be asked whether the mechanisms contributing to a high valuation of autonomy are only relevant to particular aspects of the work situation. Following Engel (1970) one might e.g. suggest that this would apply only to those issues for which the professional training is relevant. An argument against this view is that it may be very difficult to draw a boundary between professionally relevant and non-relevant aspects of the work. Medical expertise, e.g., will obviously be relevant to the treatment of individual patients, but doctors may also regard it as relevant to such issues as what medical equipment to purchase or whether or not they should be allowed to attend medical conferences as part of their jobs. At any rate a differentiation between professionally relevant and irrelevant aspects of the work situation would not undermine the basic hypothesis suggested above, viz. that work autonomy should be more important to professionals than to other workers; with such differentiation, the importance attached to work autonomy in general could be conceived of simply as a weighted average of the importance attached to the professional and the non-professional aspects.

Conceptualization and measurement of the importance of autonomy

The question of the importance of various job characteristics can be interpreted as a question about *work values* or *preferences*: When evaluating a job or choosing between different jobs, how much weight would a practitioner feel should be given to autonomy (relative to other job characteristics like pay or varied work)? A slightly different conceptualization of importance is to ask how much autonomy contributes (in a causal sense) to an individual's overall evaluation of her job. Under some conditions, these two conceptualizations should be congruent. Probably the most important precondition for such congruence is that individuals are fully aware of how various job characteristics affect their evaluations and feelings; that is, a relatively high level of introspection is assumed (cf. Mumford, Connelly, Helton, Van Doorn, & Osburn, 2002). A large body of work in cognitive psychology suggests that people's knowledge of their own decision processes is often not very impressive, however (see, e.g., Wilson & Dunn, 2004).

A similar distinction can be made between two different ways of *measuring* the importance of various job characteristics. In the *direct* approach, individuals are asked to rate (or rank) the importance of each job characteristic. In the *indirect* approach, importance is inferred from the strength of the statistical relationship between the individual's perception of some job characteristic (e.g., the degree to which she experiences autonomy in her job) and a criterion variable (Hatrup, Mueller, & Aguirre, 2007). Typically, linear regression is used and overall job satisfaction is regressed on a set of measures of perceived job characteristics (often referred to in this literature as *job rewards*). Thus, the indirect approach could also be labelled a *regression approach*. Empirical research has provided somewhat mixed findings, but the general impression is that the degree of congruence between the direct and the indirect measures is at best only modest (Hatrup et al., 2007; Mastekaasa, 1984; Quinn & Mangione, 1973), which is consistent with an assumption of limited introspective abilities.

A large body of research has examined how much various job rewards contribute to overall job satisfaction. Other criterion measures have also been used,

such as organizational commitment (Meyer, Irving & Allen, 1998). Job satisfaction and organizational commitment are related but distinct concepts, the former referring to the individual's evaluation of her immediate job situation and the latter to the broader relationship between the individual and the organization (Kalleberg & Mastekaasa, 2001). Also, the commitment concept includes behavioural aspects like willingness to expend effort on behalf of the organization and intention to stay in the organization. Both measures are therefore included in this paper.

Previous research

A number of studies have examined the importance of autonomy (and other job characteristics) in single professional groups. In a review of studies of American physicians, Scheurer, McKean, Miller, & Wetterneck (2009) found various measures of autonomy or job control to be strongly associated with job or career satisfaction. Associations with job demands and relationships with colleagues appeared to be on the whole to be somewhat weaker. A review study of the nursing literature found autonomy to be moderately correlated with job satisfaction; slightly stronger correlations with job satisfaction were found for work stress and nurse–physician collaboration (Zangaro & Soeken, 2007). In a Norwegian study using direct ratings of importance, autonomy was found to be slightly less important than social interaction in the workplace and pay, but clearly more important than task requirements, professional status and organizational policies (Bjørk, Samdal, Hansen, Tørstad, & Hamilton, 2007). A study of a large sample of American teachers found autonomy and co-worker support to be about equally strongly related to job satisfaction, with a weaker relationship found for job security (Renzulli, Parrott, & Beattie, 2011).

There are also a number of studies employing general population samples or other samples that are not occupationally specific. These studies typically find autonomy to be moderately related to job satisfaction, but job rewards like interesting work, varied work tasks and good social relations in the workplace are often found to be considerably more important (Souza-Poza & Souza-Poza, 2000; Roelen, Koopmans, & Groothoff, 2008; Noblet, Teo, McWilliams, & Rodwell, 2005).

A superficial impression from reading the above studies is that autonomy could be somewhat more important in the professional than in the non-professional samples. Very different sets of job characteristics are considered in various studies, however, and the results are difficult to compare. In studies of relationships with job satisfaction in particular, the estimated impact of any given job characteristic is likely to depend strongly on the extent to which the impact of other job characteristics has been controlled for.

Methods

Samples

Data on the professional workers are taken from a survey programme (called *StudData*, abbreviated to SD in the following) comprising graduates from professional programmes at several Norwegian university colleges (polytechnics) and universities. With regard to the profession of medicine, even Norwegian graduates from foreign universities are included. With the exception of medicine (where the studies take six years to complete in Norway), the educational

programmes are all at the Bachelor level and of three or four years duration. The analyses below are based on data collected three years after graduation.

The gross sample of professional workers consists of all graduates from these programmes in 2001 and 2003 in the included educational institutions, with data collected in 2004 and 2006, respectively.² The sampled individuals received and returned the questionnaires by mail. Data were obtained from 2141 respondents, giving a response rate of 57 per cent. 201 respondents were not employed and are not included in the analyses. Non-response on individual variables brings the effective sample size down to about 1870 in most analyses.

To obtain comparative data on non-professional workers I use data from the Norwegian part of the International Social Survey Programme (ISSP) Work Orientations surveys. Since the sample of professionals consists of quite recent and accordingly young graduates, I included only ISSP respondents between 21 and 40 years of age. To provide a reasonably large sample it was therefore advantageous to pool the data from the Work Orientations II and III surveys, which were carried out in 1997 and 2005, respectively.

Both Work Orientations surveys are based on probability samples of the population between 18 and 79 years of age. The total net sample size was 2199 in 1997 and 1322 in 2005. The response rate was 63 per cent in 1997 and 50 per cent in 2005. The number of respondents in the present subsample of individuals aged 21 to 40 is 2008. 279 respondents were not employed. The effective sample size is 1593 in the main analysis. Data were collected by use of self-administered questionnaires. More information on these data is available at the ISSP website (<http://www.issp.org/data.shtml>).

Measures

Perceived job rewards. The SD data set contains two sets of items measuring perceptions of job characteristics. One set consisting of 18 items is based on Karasek's (1979) Demand-Control model.³ These items are used to construct scales for *job demands* (five items), *autonomy* (three items), *work complexity* (six items), and *social support* in the workplace (four items). The items measuring autonomy are: 'My job allows me to make a lot of decisions on my own', 'On my job, I have very little freedom to decide how I do my work', and 'I have a lot of say about what happens on my job'. Each item was scored on a four-point Likert scale. The measure of autonomy is the arithmetic average of the respondent's ratings of the three items (with item 2 reversed). Cronbach's alpha is .62.

Examples of items included in the other scales are: 'My job involves a lot of repetitive work', 'My job requires a high level of skill', 'My job requires that I learn new things' (work complexity); 'My job requires working very fast', 'My job requires working very hard', 'My job requires lots of physical effort' (job demands); and 'I work together with people who take an interest in me as a person',

² More information (in Norwegian) on these data is available at http://www.hio.no/enheter/senter_for_profesjonsstudier_sps/studdata

³ Fourteen of the items used here are taken from the U.S. Quality of Employment Surveys, see Schnall, Landsbergis, and Baker (1994, p. 383), and these are intended to measure demands, autonomy and skill utilization. Four items are added in order to measure the social support dimension that has been added in later versions of Karasek's model (Karasek and Theorell 1990).

‘My supervisor is helpful’ (support)⁴. Cronbach’s alpha is .72 for complexity, .71 for demands, and .80 for support.

The Demand-Control items are not included in the ISSP data. These data contain another set of items measuring perceived job rewards (see Hatstrup et al., 2007), and these items are also included in the SD data. Methodologically the main difference from the Demand-Control measures is that only one item is used to measure each job reward. The respondent rates the extent to which the job provides *job security, high income, advancement opportunities, interesting work, and opportunity to work independently*⁵, *help other people* and *be useful to society*, using a five point scale. I refer to these as the ISSP measures (irrespective of whether I talk about the ISSP data or the SD data).

There is some overlap between the Demand-Control and ISSP items, in particular between autonomy and opportunity to work independently and between complexity and interesting work. In analyses where both sets of items are used, the work independently and interesting work are therefore dropped (since the multi-item Demand-Control scales are likely to be more valid and reliable).

Direct measures of work values. The respondents are presented with the same list of job dimensions as that used in ISSP to measure perceived job rewards, but are now asked to rate the *importance* of each reward on a five point scale. These items are also included in both the ISSP surveys and the SD data.

Organizational commitment is measured by four items taken from the Porter scale (Porter, Steers, Mowday, & Boulian, 1974). Examples of the statements are: ‘I am proud to work for this organization’ and ‘I would accept almost any work task to be able to continue working for this organization’. A four-point response format (one to four) was used, and the measure used here is each person’s mean across the four items. Cronbach’s alpha is .74. This measure is only available in the SD data.⁶

Job satisfaction is a single-item measure. In the SD data ratings are made on a five-point scale ranging from very dissatisfied to very satisfied. In ISSP a seven-point response format is used, with values ranging from ‘completely dissatisfied’ to ‘completely satisfied’.

Since the various measures often use different response formats, standardized variables (z-scores) are used in the regression analyses.

Analytic approach and statistical methods

The theoretical discussion above relates to the overall difference between professional and non-professional workers. In line with this, doctors, nurses,

⁴ Two of the items are concerned with support from colleagues and two from supervisors. It is common practice to combine these into a single scale, and preliminary analyses indicate that this also makes sense empirically as these two separate sources of support do indeed have very similar effects.

⁵ The term ‘independently’ used in English version of the ISSP questionnaire may be slightly unfortunate as it can refer both to autonomy and to being separate from or unconnected to others. The term used in the Norwegian ISSP and SD questionnaires (‘selvstendig’) refers less ambiguously to autonomy.

⁶ A set of three similar items are included in the ISSP. Since a scale based on these items would not be comparable to that used in the SD data, they are not analysed here.

teachers and social workers are treated as a single group in the analyses below. Questions have been raised about the professional status of the three latter groups, however, and they have sometimes been referred to as semi-professions. In line with this one could also think more generally of professionalism as a continuous dimension along which different occupations can be ordered. Separate analyses of the four professional groups are therefore also included. The number of cases in each group is, however, not very large and comparisons of the individual groups must be made with care. This applies also to comparisons of the group specific results with the results for the pooled group of professional workers; since the standard errors are related to the size of the samples, it is easier to get statistically significant coefficients in the pooled data set.

Simple arithmetic means and multiple regression (OLS) are used. In some analyses regressions with job satisfaction and organizational commitment as dependent variables are estimated simultaneously (so-called *seemingly unrelated regressions*) in order to be able to test for equality of coefficients across equations. The Stata package was used.

Table 1. Direct ratings of the importance of job characteristics. Group specific arithmetic means.

	Populat. sample	All pro- fessions	Phy- sicians	Nurses	Teachers	Social workers
Security	4.41	4.25	4.11	4.35	4.28	4.27
Income	3.75	3.73	3.76	<u>3.87</u>	3.54	3.71
Promotion	3.54	<u>3.61</u>	<u>3.62</u>	<u>3.85</u>	3.36	3.59
Interesting	4.50	<u>4.71</u>	<u>4.72</u>	<u>4.67</u>	<u>4.70</u>	<u>4.73</u>
Independent	4.01	3.85	3.94	3.89	3.71	3.85
Help	3.72	<u>4.21</u>	<u>4.15</u>	<u>4.23</u>	<u>4.22</u>	<u>4.27</u>
Useful	3.59	<u>4.10</u>	<u>3.99</u>	<u>4.05</u>	<u>4.22</u>	<u>4.16</u>
N (minimum)	1694	1913	515	513	465	415

Note: Means significantly ($p < .05$) lower than the general population sample in bold types, higher underlined.

Results

Direct ratings of importance

Mean ratings for the various job characteristics in each profession and in the general population sample are given in Table 1. Keeping in mind that the scores may range from one to five, the general level of the means is high. This is a familiar phenomenon with this kind of ratings, however, and for our purposes it is the *differences* between the groups and between the job characteristics that are of primary interest.

There are significant differences between the general population sample and the profession sample on all items except income. The professionals attach much more importance to helping others and social usefulness, and they are also more concerned with interesting work and promotion opportunities. Contrary to expectations, however, independence is rated lower among the professionals than in the general population sample. The same holds true for job security.

Table 2. Regression of Job Satisfaction on selected job dimensions as conceptualized in the ISSP approach. All variables standardized.

	ISSP																	
	1997+2003, age 21-40			All professions			Physicians			Nurses			Teachers			Social workers		
	b	s.e.		b	s.e.		b	s.e.		b	s.e.		b	s.e.		b	s.e.	
Constant	-0.019	0.021		-0.022	0.019		0.066	0.058		0.021	0.040		0.078	0.046		-0.063	0.048	
Security	0.048 *	0.021		0.027	0.020		0.118 *	0.049		0.031	0.044		0.039	0.033		-0.036	0.045	
Income	0.117 ***	0.023		0.064 **	0.021		-0.06	0.044		0.110 *	0.043		0.081	0.049		0.121 *	0.050	
Promotion	0.088 ***	0.024		0.041	0.023		-0.051	0.046		0.008	0.044		0.141 **	0.047		0.110 *	0.054	
Interesting	0.446 ***	0.025		0.500 ***	0.024		0.531 ***	0.052		0.513 ***	0.045		0.471 **	0.050		0.486 ***	0.050	
Independent	0.088 ***	0.022		0.027	0.022		0.063	0.054		-0.009	0.040		0.009	0.041		0.062	0.047	
Help	-0.017	0.026		0.029	0.026		-0.008	0.060		0.002	0.049		0.065	0.049		0.099	0.056	
Useful	0.016	0.025		0.008	0.026		-0.012	0.056		0.003	0.047		0.030	0.052		0.018	0.058	
R ²	0.319			0.307			0.286			0.294			0.338			0.245		
N	1593			1875			500			512			457			406		

Note: Coefficients significantly different from zero are marked with * for p<.05, ** for p<.01, and *** for p<.001

The findings for helping others, useful work and interesting work also hold when each individual profession is compared with the general population sample. The mean ratings for independent work are significantly lower for all professions than in the population. With regard to promotions and income, there are large differences between the professions, with nurses rating these job characteristics higher and teachers rating them lower than does the general population.

***Indirect measures –
comparing the professions and the general population***

Results from regressing overall job satisfaction on the job reward measures found both in the SD and the ISSP data are presented in Table 2. We compare first the general population sample and the pooled sample of the four professions. The overall ability of the model to explain variation in job satisfaction displays is nearly identical in both samples with an R^2 of about .31. The coefficients in the two samples are also quite similar. Interesting work seems to be by far the most important job reward in both samples. The estimated coefficient for independent work is higher in the general population sample, but the difference is not quite significant at the .05 level (the t-value is 1.93, which gives a significance probability of .054). Opportunities for helping others and for being useful to society appear to be unrelated to job satisfaction, not only in the general population sample, but also in the sample of welfare professionals.

There is some variation in coefficients across the individual professions. The very strong relationship between interesting work and job satisfaction is, however, a very consistent finding. The same applies to the findings for autonomy; the coefficient is low and not significantly different from zero in all four professions. The lack of a relationship between opportunities to help and being useful on the one hand and job satisfaction on the other is likewise replicated in all groups.

It may be added that the low coefficients for many of the job rewards are to some extent due the inclusion of interesting work in the regression equation. The main result with regard to autonomy is, however, upheld even if interesting work is taken out of the regression or if only bivariate relationships between job rewards and job satisfaction are considered: autonomy is if anything less strongly related to job satisfaction in the sample of professionals than in the general population sample.⁷

Comparing the coefficients in Table 2 with the results from analyses of the direct ratings of importance in Table 1, the differences are perhaps more striking than the similarities. In particular, there are many more significant group differences in Table 1. For present purposes, however, the main finding is that neither of these analyses provides any support for the hypothesis that autonomy is particularly important to professional workers. The generally high importance of interesting work is also a quite consistent finding.

The most striking difference between the two ways of assessing importance comes for opportunity to help others and for being useful to society. In their direct

⁷ When not controlling for interesting work, the coefficient for independent work is .16 in the profession sample and .27 in the general population sample. One may note that the coefficients for most of the other variables show similar increases; the coefficient for promotion is, e.g., .17 in the profession sample and .16 in the general population sample.

Table 3. Regression of Job Satisfaction and Organizational Commitment on an extended set of job rewards. All variables are standardized.

	All professions		Physicians		Nurses		Teachers		Social workers	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Panel A. Job Satisfaction										
Constant	0.006	0.020	0.031	0.056	0.056	0.042	0.129**	0.045	-0.079	0.050
Security	0.010	0.021	0.100*	0.049	0.026	0.045	0.041	0.034	-0.086	0.046
Income	0.031	0.021	-0.046	0.044	0.094*	0.044	0.019	0.050	0.025	0.052
Promotion	0.104 ***	0.022	0.055	0.045	0.092*	0.043	0.173***	0.048	0.155**	0.055
Help	0.085**	0.026	0.085	0.058	0.046	0.050	0.137**	0.048	0.097	0.056
Useful	0.078**	0.026	0.048	0.054	0.026	0.049	0.139**	0.052	0.075	0.058
Demands	0.182 ***	0.021	0.170 ***	0.042	0.198***	0.039	0.190***	0.045	0.182 ***	0.042
Complexity	0.214 ***	0.023	0.203***	0.046	0.208***	0.043	0.151**	0.048	0.270***	0.054
Autonomy	0.107***	0.022	0.093*	0.043	0.062	0.043	0.084	0.046	0.179 ***	0.047
Social support	0.228***	0.022	0.295***	0.044	0.242 ***	0.043	0.180***	0.042	0.202***	0.047
R ²	0.300		0.311		0.269		0.326		0.358	
N	1872		501		512		455		404	
Panel B. Organizational Commitment										
Constant	-0.033	0.021	-0.248***	0.060	-0.064	0.048	0.346***	0.045	0.098	0.051
Security	-0.065 **	0.022	0.020	0.053	0.068	0.051	-0.024	0.034	-0.111*	0.047
Income	0.085 ***	0.023	0.009	0.047	0.261 ***	0.049	0.056	0.050	0.140 **	0.053
Promotion	0.003	0.024	-0.004	0.048	0.037	0.049	0.155**	0.047	0.166**	0.055
Help	0.067*	0.028	0.054	0.062	-0.077	0.057	0.189***	0.047	0.099	0.057
Useful	0.105***	0.028	0.030	0.058	0.093	0.055	0.091	0.051	0.073	0.058
Demands	0.124 ***	0.023	0.035	0.045	0.210***	0.044	0.138	0.044	0.095*	0.042
Complexity	0.116 ***	0.025	0.132**	0.050	0.118*	0.049	0.082	0.047	0.177**	0.055
Autonomy	0.128***	0.024	0.110*	0.046	0.143**	0.048	0.052	0.045	0.072	0.047
Social support	0.204***	0.024	0.281***	0.047	0.126 **	0.048	0.241***	0.041	0.122*	0.047
R ²	0.184		0.185		0.197		0.310		0.233	
N	1878		501		514		458		405	

Note: Coefficients significantly different from zero are marked with * for p<.05, ** for p<.01, and *** for p<.001. Coefficients significantly different in the job satisfaction and organizational commitment equations are in bold types (p=.05).

ratings, all the welfare professions profess to attach much weight to these values and much more so than the general population. When importance is assessed by analysing contributions to overall job satisfaction, however, helping others and being useful to society lose their importance.

Indirect measures – extended analyses

Table 3 extends the analyses in Table 2 by including a broader set of both measures of job rewards (adding the Demand–Control items) and dependent variables (adding organizational commitment). The single item measures of independent and interesting work are dropped since they overlap to a great extent with the presumably more valid and reliable autonomy and complexity scales.

In the pooled analysis of all four welfare professions, three job rewards stand out as clearly more important than the rest, viz. support, complexity and (not too high) demands. This also holds true for physicians and nurses analysed separately. Support, complexity and demands are highly important even to teachers and social workers, but here they stand out less clearly from the rest. For the welfare professions as a whole, the estimated impact of work autonomy is clearly smaller than that of support, complexity and demands, and of about the same magnitude as that of promotion opportune-ties, usefulness, and opportunities to help. The estimated impact of autonomy is slightly higher for social workers, but there is no significant difference between this group and any of the others (tests not shown in table).

In the analyses of organizational commitment (Panel B, Table 3) the most striking difference is that the overall explanatory power of the model is lower – .18 versus .30. Thus, organizational commitment seems to depend to a lesser extent on perceived job rewards or working conditions than what is the case for job satisfaction. In particular, the estimated coefficients for complexity and demands are considerably and significantly smaller. The estimated impact of promotion opportunities is also smaller for occupational commitment, whereas the opposite is the case for high income. The coefficient for job security has opposite signs in the two regressions, but it is small. For the welfare professions taken together, social support keeps its position as the most important job reward. The coefficient for autonomy is also of about the same size as in the analysis of job satisfaction. There is some variation among the welfare professions, with weak and not significant coefficients for autonomy in the teacher and social worker groups and the strongest coefficient for nurses. Again, however, there are no significant group differences in the estimated coefficients for autonomy (tests not shown).

Discussion and conclusion

Conclusions about the importance of the various job rewards depend to some extent on whether direct questions or the more indirect regression approach is employed. This is in line with the assumption that answers to direct questions are not only or even primarily based on introspective access to the mental processes underlying ratings of job satisfaction, but may also reflect popular and conventional ideas. In particular, the professionals tend to rate opportunities for helping others and social usefulness as highly important, whereas these job rewards appear to have little impact on how satisfied they are with their jobs. With regard to autonomy, however, the direct and the indirect approach give similar results:

Autonomy is if anything less important to the professionals than to the general population.

In the regression analyses of the ISSP items, the relationship between autonomy and job satisfaction is not significantly different from zero in the sample of professional workers. In the extended analyses (Table 3), a significant relationship is found. The difference between these two analyses is primarily due to the fact that I control for *interesting work* in the analyses of the ISSP items as opposed to *work complexity* in the extended analysis. The interesting work item is very broad and not very distinct conceptually, and some respondents may not distinguish clearly between responding to this item and to questions about overall job satisfaction. In a technical sense this could be considered as a case of correlated measurement errors. In that case inclusion of the interesting work item in the regression equation is problematic and may have led to an underestimation of the impact of the other job rewards items. As noted above, however, the finding that the effect of autonomy on job satisfaction is if anything weaker among the professionals than in the general working population is upheld, even when interesting work is taken out of the model (see note 7).⁸ Also, even in Table 3 autonomy is much less strongly related to job satisfaction than are social support, work complexity and job demands.

On the whole, organizational commitment is less strongly related to job rewards than is job satisfaction. A possible interpretation is that organizational commitment is a more stable attitude, whereas job satisfaction is primarily determined by an individual's current job situation (Porter et al., 1974). Autonomy is, however, very similarly related to organizational commitment and to job satisfaction.

The overall picture to emerge from the analyses above is that autonomy is not particularly important to practitioners in the professions studied here. At least, it is not more important to these professionals than to the working population in general, and it is less important than several other job rewards.

An obvious limitation of the present work is that only relatively young and recently graduated practitioners are included. The possibility that the importance of autonomy changes over time can not be ruled out. One reason to expect some increase in the importance of autonomy is that fresh practitioners may feel relatively insecure in their professional judgment, and thus be more willing to accept limits to their autonomy than are the older and more experienced ones. If an appreciation of autonomy is primarily learnt through professional practice (and not in professional education), that would work in the same direction.

Due to methodological differences it is difficult to make detailed comparisons between the present findings and previous research. The findings (both for the general population and the professional workers) nevertheless seem to be quite well in line with previous research on general population data; autonomy is of importance, but interesting work, varied work tasks and good social support are more crucial to the employees (Souza-Poza & Souza-Poza, 2000; Roelen, Koopmans, & Groothoff, 2008; Noblet et al., 2005). The same applies to some extent when specific professions here are compared with previous results on the

⁸ Of course, it is also problematic not to control for *interesting work*, as this is the only measure of the intrinsic quality of the work that is available both in the SD and the ISSP data, and lack of such control is likely to lead to an *overestimation* of the impact of other variables.

same professions; this is particularly the case for nurses (Bjørk et al., 2007; Zangaro & Soeken, 2007). With regard to physicians, however, the present study seems to provide somewhat lower estimates of the importance of autonomy than the typical findings in earlier (American) studies. This could be due to methodological differences, but it could also reflect quite different employment and working conditions for physicians in the US and in Norway.

The present analyses can not tell *why* autonomy is not more important to these professional workers. Some speculations about the underlying causes may nevertheless be of interest. I noted above that a concern with autonomy may not be very salient to young people going into the welfare professions. An individual may choose to go to medical school because she wants to help other people or because she would like a high prestige occupation, but perhaps not because she is particularly concerned with autonomy. Other welfare professions, like nursing or social work, may be even less clearly associated with autonomy in the minds of young people and can thus to an even lesser extent be expected to attract those who give high priority to this value.

If students in the welfare professions are not selected on the basis of a concern for autonomy, they might learn to value professional autonomy during their education. The weight given to autonomy is likely to vary between professions as well as between different programmes within the same profession. It is not difficult to imagine that professional programmes may often focus heavily on learning particular knowledge elements and skills, and that relatively little attention may be given to fostering independent professional judgment.

In the Introduction I noted the quite widespread concern that New Public Management policies diminish professional autonomy. As noted there, the extent to which this has actually occurred is not clear. The analyses presented here suggest, however, that even if autonomy does decline, this change may not be a very important source of dissatisfaction and resentment among welfare professionals. In this respect, policies that lead to a decline in social support or in the degree of complexity or variety of the work tasks are probably more consequential.

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