

## **Organizational culture, person–culture fit, and turnover: a replication in the health care industry**

**CHRISTIAN VANDENBERGHE\***

*Unité de psychologie du travail et des organisations, Faculté de psychologie et des sciences de l'éducation, Université Catholique de Louvain, 10 Place du Cardinal Mercier, B-1348 Louvain-la-Neuve, Belgium*

---

### **Summary**

This study replicates an earlier study of O'Reilly, Chatman and Caldwell (1991) demonstrating that the level of congruence between an organization's culture and its new employees' value preferences is a predictor of turnover. This replication research was conducted in the health care industry in Belgium. As expected, the congruence between the values of the hospital and nursing recruits' preferred values was predictive of nurses staying with their organization 1 year after congruence was measured. The significance of this replication is discussed. Copyright © 1999 John Wiley & Sons, Ltd.

### **Introduction**

Since the early eighties, the construct of organizational culture has attracted much attention from both academics and practitioners. Evidence has been reported that culture dimensions vary significantly across organizations, be they captured by behavioral norms and expectations (e.g. Cooke and Rousseau, 1988), perceived practices (e.g. Hofstede, Neuijen, Ohayv and Sanders, 1990), or organizational values (e.g. Chatman and Jehn, 1994; O'Reilly, Chatman and Caldwell, 1991; Sheridan, 1992). Research also provides evidence for the role of organizational culture in predicting organizational effectiveness (e.g. Calori and Sarnin, 1991; Denison, 1984, 1990) and individual responses (e.g. Sheridan, 1992).

A meaningful way to conceptualize how culture influences the behavior of employees can be found in the tenets of the congruence perspective. This perspective is based on the notion that employees adapt and adjust better to their work environment when the organization's characteristics match their personal orientations (e.g. Bretz and Judge, 1994). To test this idea, O'Reilly *et al.* (1991) devised a measure of values that can define the value system of any organization or person. This measure, the Organizational Culture Profile (OCP), is composed of 54 values and can be used to provide overall value profiles of organizations or individuals. O'Reilly *et al.* (1991)

---

\* Correspondence to: Christian Vandenberghe, Unité de psychologie du travail et des organisations, Faculté de psychologie et des sciences de l'éducation, Université Catholique de Louvain, 10 Place du Cardinal Mercier, B-1348 Louvain-la-Neuve, Belgium. Tel: 32 10 474 388. Fax: 32 10 473 774.

showed that when newcomers exhibit a profile of values close to that of their organization, their subsequent organizational commitment, job satisfaction, and likelihood to stay with the company tend to be higher.

O'Reilly *et al.*'s (1991) study took place in the accounting industry. Although additional research conducted among household goods carriers, consulting, and the postal services industries, supports the validity of the OCP (Chatman and Jehn, 1994), there is no guarantee that its predictive validity would be confirmed outside the United States and/or in other industries. The purpose of the present study was to replicate the findings of O'Reilly *et al.* (1991) in Belgium and in a specific industry, i.e. health care, using a single criterion, i.e. 1-year turnover.

## Organizational Culture in the Health Care Industry

Conducting this replication study in the health care industry can be considered as an interesting test of O'Reilly *et al.*'s (1991) congruence hypothesis. Indeed, the very existence of a global corporate culture in any particular hospital may be counterbalanced by other sources of culture. One of these alternative sources lies in the professional nature of most employees in hospitals. Professionals have long been described as more prone to commit themselves to external reference groups (e.g. professional associations), a phenomenon depicted as a cosmopolitan inclination (Gouldner, 1957, 1958). As Raelin (1986) argued, values of professionals and managers conflict in several ways. A professional culture basically values autonomy, expertise, sense of ethics, meaningful and challenging work, and dedication to service delivery. On the contrary, corporate cultures usually emphasize control, close supervision, work standardization, and productivity (Raelin, 1986). In brief, these competing sources of culture may be detrimental to the emergence of an homogeneous culture in hospitals.

The fragmentation perspective of culture in hospitals (Martin, 1992) may also be reinforced by value divergences among professionals themselves. As the work of Meir in the field of nursing showed (e.g. Hener and Meir, 1981; Meir, 1989; Meir and Yaari, 1988), there are important differences between medical specialties. Using Holland's (1973) classification of occupational fields, Meir and Yaari (1988) showed for example that pediatrics, psychiatry, and geriatrics pertained to the 'social' type, while obstetrics and surgery belonged to the 'investigative' type. In other words, a nurse working in a surgery unit may prefer technical tasks (e.g. working with tools), while another working in geriatrics may value social relationships. So, health professionals may not be an homogeneous group from the standpoint of value orientations.

Another case for the heterogeneity of values among hospitals is provided by organizational research that examined how contingency variables affect the structure of health care units. In this regard, Leatt and Schneck (1982) showed that technology, size, and environment interact in complex ways to influence the structure of nursing units. In a related vein, Argote (1982) showed that input uncertainty, a major environmental characteristic, moderates the relationships between means of coordination within units and effectiveness. In sum, hospital units tend to be strongly differentiated, and, as a result, develop specific subcultures to sustain their work (Shortell, Rousseau, Gillies, Devers and Simons, 1991).

On the other hand, hospitals face changing environments and there is an increased demand for efficiency and productivity emanating from third-party financing organizations and the government (at least in Belgium). One way for hospitals to achieve a better productivity is to improve the

coordination of work between units or departments. For example, units may learn to share costly equipment, rather than buying twice the same material when it is not fully utilized. Such within-hospital coordination may benefit from promoting a common set of core values that can enhance the collective sense of mission of hospital members. Testing how important congruence with these values is for predicting responses of newcomers is an indirect way to empirically measure the pervasiveness of organizational culture among hospitals.

## The Present Study

In this study, a selection of hospitals was assessed with regard to organizational culture, using the OCP. Although Chatman and Jehn (1994) reported OCP factors to be reasonably similar between their assessments conducted in North America and others conducted in Europe (e.g. Hofstede *et al.*, 1990), the influence of the national culture (i.e. Belgium) should be acknowledged. Indeed, any corporate culture party reflects the values of the country in which the organization is located. These values are incorporated through the hiring process (Hofstede *et al.*, 1990). Thus, using the OCP in a different national culture is a way to test its validity as a measure of culture that is truly 'organizational'.

The sample of newcomers used for the study was composed of nurses and the criterion measure was 1-year turnover. The major interest in examining the nursing occupation resides in its high turnover rate and chronic shortage. Consequently, identifying factors associated with nursing turnover corresponds to a major concern for health care executives. The main prediction of this study was: the higher the initial congruence between personal and organizational values, the less probable recruits' subsequent departure.

## Method

### *Samples and procedure*

#### **Sample 1**

A convenience sample of 28 Belgian health care organizations was selected for participation in the study. All professionals and managers from the middle to the upper echelons of the hospital ladders (medical, nursing, or administrative) were surveyed about the culture of their organization. Usable returns were obtained from 630 respondents, for a response rate of 64 per cent.

Among these data, several organizations were dropped because (a) the aggregate description of the organizational culture, as derived from the responses of insiders, was unreliable (i.e.  $< 0.70$ , using the Spearman–Brown formula), or (b) the number of responses was too small ( $< 5$ ). In fact, given that the Spearman–Brown formula depends on the number of raters, the OCP description was often unreliable when there were few respondents for a particular hospital. Calculated this way, reliability represents the 'stability of the score produced when individual ratings are averaged' (Jones, Johnson, Butler and Main, 1983; p. 511), an important criterion when average measures are used for other predictions (Jones *et al.*, 1983). The exclusion of unreliable profiles thus reduced the effective sample size to 565 individuals belonging to 19 hospitals. The factor analysis of culture data conducted on this reduced sample yielded a structure fairly similar to that

found with the whole sample. Consequently, all subsequent analyses were based on the reduced sample.

The number of responses by organization varied from a low of 5 to a high of 56, with a mean of 29.7. Of the respondents, 56.4 per cent were female, 25.8 per cent were in an administrative position, 17.9 per cent belonged to the medical staff, 49.8 per cent were staff or head nurses, and 6.5 per cent were attached to paramedical or ancillary services. Respondents' average age was 42.1 years, and their average tenure was 15.3 years.

### Sample 2

All nurses ( $N = 683$ ) recruited since the beginning of January 1993 were surveyed about their value preferences (none of them was included in sample 1). To maintain the confidentiality of responses, each questionnaire was assigned an identification number and only the researcher knew which questionnaire belonged to whom. Respondents mailed their completed survey directly to the researcher using a stamped envelope furnished with the survey packet. Of the questionnaires delivered, 492 were returned with usable data, for a response rate of 72 per cent. However, the effective sample size was limited to 433 individuals, since several hospitals were dropped from sample 1. Again, the factor analyses conducted on the full and reduced samples yielded a highly similar solution. Consequently, all analyses were conducted using the reduced sample.

At the time of the survey, nursing recruits had been working in their organization for an average period of 5.31 months. Their average age was 26.1 years. Eighty-seven per cent of the respondents were female, 34.5 per cent were married and 58.9 per cent unmarried, 74 per cent had no children, and 69.6 per cent worked full-time.

### Measures

The OCP (O'Reilly *et al.*, 1991) was used to assess organizational culture as well as the value preferences of nursing recruits. The OCP is based on the Q-sort methodology (Block, 1978; Stephenson, 1953). Typically, a Q-sort provides respondents with a set of ordered categories in which they have to classify items according to some target question. The Q-sort format of the OCP is composed of nine response categories that follow a symmetrical distribution (a forced 2-4-6-9-12-9-6-4-2 pattern). Respondents sorted the items into categories ranging from the least (1) to the most characteristic (9) either of their hospital or of their preferences, depending on whether they were asked to describe the value system of their organization or their individual preferences. For purpose of this study, the OCP value set was translated into French by two bilingual French-English management scholars. Minor discrepancies between the two translations occurred for only five of the 54 value statements. For these five statements, a translation decision was reached after some discussion between the researcher and the translators. Examples of OCP items include 'an emphasis on quality', 'fairness', and 'decisiveness', translated respectively as 'accent mis sur la qualité', 'impartialité', and 'sens de la décision'.

To obtain the organizational culture profile of a given hospital, responses of raters from that hospital were averaged. More precisely, a mean score was calculated for each item (or value), and the 54 items were then 're-Q'd' so that the two items with the highest means were placed in the first column of the Q-sort, the next four items with the highest means were placed in the second column, etc. This procedure, as recommended by Block (1978) and followed by O'Reilly *et al.* (1991), allowed each hospital to be assigned a single Q-sort profile. As mentioned in the preceding subsection, the reliability of the aggregate profile was calculated using the Spearman-Brown

formula (Block, 1978, p. 37). In their study, O'Reilly *et al.* (1991) reported an average reliability coefficient for firm-level profiles of 0.88. In this study, the average reliability of hospital culture profiles was 0.86.

Person–organization fit was calculated by correlating the profile of preferences of any focal individual with the profile of the hospital s/he worked in. In this study, fit scores ranged from a low of  $-0.09$  to a high of  $+0.76$ .

Turnover data were collected 1 year after the value survey. The turnover rate in the sample was 28 per cent: 121 participants, out of 432, left their organization during the observation period of the study. It was not possible to distinguish between voluntary and involuntary causes of departure. Nevertheless, *post-hoc* interviews with the hospitals' human resource managers revealed that more than 90 per cent of turnovers could be considered as voluntary leavers. This may be explained by the oversupply of jobs in the nursing occupation at the time of the study. Consequently, global turnover, as measured in the current sample, was a reasonable approximation of voluntary leaving.

### *Data analysis*

Prior to testing the main hypothesis, several analyses were conducted. First, principal components analyses with varimax rotation of organizational and individual value descriptions were conducted.<sup>1</sup> To analyze between-group variation on values, analyses of variance (ANOVAs) of factor scores on OCP dimensions were computed. Averaged factor scores on culture dimensions were further compared using Tukey's studentized range test (Meyers and Well, 1991, pp. 184–186), a multiple comparison of means procedure that controls for Type 1 error rate ( $\alpha = 0.05$ ). Within-group agreement on culture dimensions was assessed by the eta-squared values ( $\eta^2$ ) provided by the ANOVAs.

The main hypothesis of the study was tested using a logistic regression procedure with person–culture fit as the main predictor and individual value dimensions included as controls, and turnover as the dependent variable. Individual preferences were incorporated as predictors because prior work has shown that some characteristics that individuals bring in when joining an organization (e.g. a team orientation) may account for some variance in early turnover (e.g. Mael and Ashforth, 1995). Unlike the ordinary-least-squares and discriminant analysis techniques, the logistic regression procedure is a nonlinear technique and, as such, is more suitable to handle dichotomous dependent variables (Huselid and Day, 1991)<sup>2</sup>. Compared with least squares estimation procedures, its strength resides in the fact that it (a) can accommodate binary dependent variables with probabilities of response categories (0,1) roughly different from 0.5, (b) does not assume homoscedasticity and normality of errors, and (c) provides unbiased estimates of the marginal effects of independent variables (Huselid and Day, 1991; pp. 381–382).

<sup>1</sup> The ipsative nature of the OCP usually precludes using conventional item analysis like factor analysis, because items are not strictly independent of each other. However, Chatman and Jehn (1994) showed that this effect was sufficiently weak to authorize such procedure.

<sup>2</sup> O'Reilly *et al.* (1991) used survival analysis to determine the effect of person–culture fit on staying. Survival analysis is suitable for the study of time-dependent variables, like turnover. This technique was not used here because most departures occurred at the end of the first year of employment, reducing the occurrence of the target event to a single point in time. This may be due to the fact that nursing recruits in Belgium usually start their employment with a 1-year labor contract.

## Results

As mentioned in the Method section, value data from the two samples were factor-analyzed. Based on an inspection of the scree plot of eigenvalues, seven interpretable factors were extracted from the data pertaining to the culture of institutions (sample 1). These factors were labelled respectively, individualism, results orientation, innovation, decisiveness, easygoingness, attention to detail, and emphasis on rewards. These factors were defined respectively by 8, 6, 4, 5, 3, 3 and 3 items<sup>3</sup>. These dimensions refer to common themes of organizational culture (e.g. Chatman and Jehn, 1994). It is worthy of note however that the results orientation dimension is bipolar, with humanistic values (e.g. tolerance, being supportive) loading negatively on the factor, hence meaning that a results-oriented hospital tends to undermine people-centered values.

Using a similar procedure, the structure of individual preferences (sample 2) was found to be composed of eight interpretable factors with eigenvalues greater than unity. These dimensions were labelled: emphasis on rewards, easygoingness, attention to detail, decisiveness, risk taking, analytical orientation, passiveness, and conscientiousness, and were defined by 6, 5, 4, 4, 3, 4, 4, and 2 items, respectively.

The ANOVAs for culture factors (sample 1) using the organization as the criterion were highly significant (individualism,  $F(27,596) = 2.16$ ,  $p = 0.0007$ ; results orientation,  $F(27,596) = 5.29$ ,  $p = 0.0001$ ; innovation,  $F(27, 596) = 2.14$ ,  $p = 0.0008$ ; decisiveness,  $F(27,596) = 2.99$ ,  $p = 0.0001$ ; easygoingness,  $F(27,596) = 2.34$ ,  $p = 0.0002$ ; attention to detail,  $F(27,596) = 1.62$ ,  $p = 0.0260$ ; emphasis on rewards,  $F(27,596) = 1.91$ ,  $p = 0.0040$ ). To analyze further these variations, pairwise comparisons of factor scores averaged by hospital were conducted, using Tukey's procedure. Of the multiple contrasts, 35 were significant for results orientation, 10 for decisiveness, six for easygoingness, three for individualism, two for innovation, one for emphasis on rewards, and none for attention to detail. Overall, these findings suggest that there is a significant variation on cultural dimensions within this sample of organizations.

To examine alternative sources of variation among OCP dimensions, ANOVAs were conducted using professional grouping ( $N = 5$ ) and unit ( $N = 11$ ) as criteria. When professional grouping was considered, ANOVA results were significant for some dimensions (individualism,  $F(10,598) = 2.95$ ,  $p = 0.0198$ ; results orientation,  $F(10,598) = 2.20$ ;  $p = 0.0681$ ; innovation,  $F(10,598) = 0.56$ ,  $p = 0.6887$ ; decisiveness,  $F(10,598) = 3.19$ ,  $p = 0.0130$ ; easygoingness,  $F(10,598) = 3.16$ ,  $p = 0.0137$ ; attention to detail,  $F(10,598) = 2.67$ ,  $p = 0.0313$ ; emphasis on rewards,  $F(10,598) = 8.93$ ,  $p = 0.0001$ ). However, using Tukey's procedure, few contrasts among professional groupings were significant: one contrast was significant for individualism, one for easygoingness, and one for rewards.

When the unit was used as the criterion for the ANOVAs, variation on cultural dimensions was nonsignificant for five dimensions (individualism,  $F(4,613) = 3.32$ ,  $p = 0.0003$ ; results orientation,  $F(4,613) = 1.31$ ,  $p = 0.2204$ ; innovation,  $F(4,613) = 1.07$ ,  $p = 0.3823$ ; decisiveness,  $F(4,613) = 0.78$ ,  $p = 0.6472$ , easygoingness,  $F(4,613) = 2.72$ ,  $p = 0.0028$ ; attention to detail,  $F(4,613) = 1.65$ ,  $p = 0.0886$ ; emphasis on rewards,  $F(4,613) = 1.38$ ,  $p = 0.1863$ ). Once more, when means on culture dimensions were examined, few contrasts across units were significant: one was significant for individualism, and two for easygoingness. On the whole, the ANOVA results show that while significant variation on OCP dimensions was observed at the three levels considered, the most important source of variance was obviously the organization.

<sup>3</sup> The full results of principal components analyses are available upon request.

As Rousseau (1990) noted, however, a valid operationalization of unit-level constructs requires not only between-unit variation but also within-unit agreement. The latter can be analyzed by means of the  $\eta^2$  coefficient, as calculated on the basis of the ANOVA results. These values were all superior at the level of the organization than at the other two levels. For individualism,  $\eta^2$  was 0.09 at the organization level, 0.02 at the professional grouping level, and 0.05 at the unit level. For results orientation, these values were respectively 0.19, 0.01, and 0.02, for innovation, 0.09, 0.00, and 0.02, for decisiveness, 0.12, 0.02, and 0.01, for easygoingness, 0.10, 0.02, and 0.04, for attention to detail, 0.07, 0.02, and 0.03, and for emphasis on rewards, 0.08, 0.06, and 0.02.

According to Glick (1985), average within-unit agreement in research on related topics is 0.12. Using this criterion, only two factors, results orientation and decisiveness, demonstrated an acceptable level of agreement at the level of the hospital. However, agreement was below Glick's criterion for all dimensions at the other two levels. To summarize, although some variety among ratings within hospitals was detected, agreement was better and variance larger at the organization level. Therefore, it appears legitimate to test the main hypothesis of the study using the hospital level to compute the fit scores.

Table 1 presents the mean fit scores of recruits across the 19 hospitals of the study, along with standard deviations, and the number of recruits per hospital. The ANOVA contrasting fit scores across hospitals was highly significant,  $F(18,413) = 17.34$ ,  $p < 0.0001$ . Moreover, the  $R^2$  of the model was quite high (0.43). This suggests that some hospitals were more successful than others in attracting recruits with a good value fit<sup>4</sup>.

Table 1. Means and standard deviations of fit scores, and number of recruits per organization

Organization	Number of recruits	Person-culture fit	
		<i>M</i>	<i>S.D.</i>
1.	15	0.393	0.159
2.	15	0.416	0.178
3.	33	0.446	0.138
4.	26	0.455	0.096
5.	7	0.190	0.109
6.	13	0.261	0.100
7.	50	0.455	0.122
8.	30	0.296	0.132
9.	69	0.350	0.116
10.	19	0.156	0.154
11.	34	0.222	0.124
12.	14	0.523	0.096
13.	22	0.510	0.116
14.	10	0.448	0.097
15.	15	0.323	0.106
16.	14	0.581	0.101
17.	10	0.316	0.129
18.	17	0.272	0.109
19.	19	0.456	0.125

$N = 432$ .

<sup>4</sup> To examine the confounding influence of some variables on fit at entry, fit scores were regressed on age, gender, organizational tenure at the time of the survey, and tenure in the health care industry. No variable in the equation significantly predicted fit,  $F_{\text{model}}(4,270) = 0.538$ ,  $p = 0.7081$ . Note, however, that this test could be conducted only on a subsample of respondents, from which the data were available ( $N = 274$ ).

Finally, as a test of the main hypothesis, a logistic regression equation was estimated to predict 1-year turnover. Person–organization fit was the main predictor, with the eight individual preferences factors included as controls<sup>5</sup> and turnover as the dependent variable. As Huselid and Day (1991) commented, the  $-2 \log$  likelihood chi-square statistic represents a test of the model fit under the null hypothesis of perfect fit. The nonsignificant value for this statistic indicates that the probability of obtaining the observed results from the estimated parameters does not significantly differ from 1. By contrast, the model chi-square compares the estimated model with a ‘null’ model where all parameters are fixed at zero (Huselid and Day, 1991). As shown in Table 2, the chi-square value for this test is highly significant ( $p = 0.0071$ ), indicating that the estimated model is a significant improvement over a ‘null’ model.

Table 2. Estimation of logistic regression parameters to predict turnover\*

Variable	Parameter estimate	Standard error	Wald chi-square	$p$	Standardized estimate
Intercept	0.2059	0.2902	0.5034	0.4780	–
Fit	2.1158	0.7518	7.9212	0.0049	0.1869
Emphasis on rewards	–0.0030	0.1098	0.0007	0.9783	–0.0016
Easygoingness	0.1549	0.1082	2.0497	0.1522	0.0854
Attention to detail	–0.1197	0.1086	1.2143	0.2705	–0.0660
Decisiveness	–0.0043	0.1106	0.0015	0.9689	–0.0023
Risk taking	0.0716	0.1121	0.4078	0.5231	0.0395
Analytical orientation	–0.2055	0.1076	3.6462	0.0562	–0.1133
Passiveness	–0.1938	0.1095	3.1297	0.0769	–0.1068
Conscientiousness	–0.1516	0.1130	1.8008	0.1796	–0.0836
-2 log likelihood chi-square	489.769				
Model chi-square	22.619†				

\* Departure was coded as 0, and staying as 1.

$N = 432$ .

†  $p < 0.01$ .

The significance of individual parameters can be assessed by the Wald statistic, an analogue of the  $t$ -tests used in ordinary-least-squares regressions (Huselid and Day, 1991). As can be seen in Table 2, person–organization fit was the single variable that significantly predicted turnover ( $p = 0.0049$ ). However, two value preferences factors, analytical orientation and passiveness, approached significance ( $p = 0.0562$  and  $0.0769$ , respectively). Overall, these results suggest that person–culture fit has a significant effect on turnover over a 1-year period, with individuals scoring higher on fit being more likely to stay.

## Discussion

This study replicates O’Reilly *et al.*’s (1991) finding that recruits whose value profile is close to that of their employing organization are more likely to stay with it during the early employment

<sup>5</sup> Note that value scores of recruits provided only a subpart (i.e. a maximum of six values) of the information upon which fit scores were calculated (the latter were based on the 54 value statements). Moreover, the value orientations of recruits correlated weakly with the fit measure ( $<0.25$ ), so that one cannot suspect a multicollinearity effect among the independent variables entered in the regression equation.



period. More precisely, based on a sample of Belgian health care organizations, it is demonstrated that a major outcome of the work adjustment process of nursing recruits, turnover versus staying, is linked to person–culture fit. As hospitals are traditionally viewed as fragmented organizations characterized by a variety of foci of allegiance (e.g. units or professional groups), finding support for O'Reilly *et al.*'s (1991) congruence hypothesis is noteworthy. Health care administrators are thus encouraged to incorporate value congruence between nursing applicants and the whole hospital as a criterion in hiring decisions. In an era of increased pressure toward efficiency and cost containment, promoting value congruence might foster commitment and loyalty among professionals (Mercer, 1988). Professionals who are in line with the values of their hospital may develop a greater awareness of the whole hospital's needs and may thus want to fulfil them. On the other hand, promoting person–culture fit may benefit professionals as well because early termination is often experienced as a failure.

A major issue of this study concerns the cross-cultural generalizability of the structure of the OCP. Organizational culture measures are rarely used outside the national context where they are developed, and therefore their generalizability to other nations is often questionable. The present study provides preliminary evidence that the OCP can be used in another country using a different language and yet maintain its capability of predicting turnover, a major criterion variable in organizational behavior research. However, additional work is needed on the structure of the OCP across nations and industries. The data reported herein do not allow the separation of what is attributable to industry versus country. One may only speculate that some dimensions are specific to hospitals. For instance, the finding of a bipolar results versus humanistic orientation dimension may represent (a) a fundamental assumption of health care professionals that productivity values are detrimental to human values or (b) a national value system where people view productivity as a threat to the quality of human relations.

Finally, questions regarding the relevance of the OCP to depict hospitals' culture can also be raised. In fact, the present study shows that (a) the organization is the main source of variance of OCP factors, and (b) despite a weak interrater agreement on some OCP factors, agreement is always better at the organization level. Maybe a way to improve culture measurement in hospitals is to collect data simultaneously on unit, profession, and organization cultures. These profiles could then be used for prediction purposes. In fact, to the extent that respondents are given different foci on which to base their culture descriptions, they might be more capable of disentangling value systems pertaining to their workgroup, their profession, or their organization. In contrast, if respondents have to depict a single focus or level (e.g. the organization), they might confound to some extent unit, professional, and hospital value systems when describing culture. Future research should address this issue and test if higher levels of consensus could be reached for the different culture foci, using the proposed strategy.

## References

- Argote, L. (1982). 'Input uncertainty and organizational coordination in hospital emergency units', *Administrative Science Quarterly*, **27**, 420–434.
- Block, J. (1978). *The Q-sort Method in Personality Assessment and Psychiatric Research*, Consulting Psychologists Press, Palo Alto, CA.
- Bretz, R. D. and Judge, T. A. (1994). 'Person–organization fit and the theory of work adjustment: Implications for satisfaction, tenure, and career success', *Journal of Vocational Behavior*, **44**, 32–54.

- Calori, R. and Sarnin, P. (1991). 'Corporate culture and economic performance: A French study', *Organization Studies*, **12**, 49–74.
- Chatman, J. A. and Jehn, K. A. (1994). 'Assessing the relationship between industry characteristics and organizational culture: How different can you be?' *Academy of Management Journal*, **37**, 522–553.
- Cooke, R. A. and Rousseau, D. M. (1988). 'Behavioral norms and expectations: A quantitative approach to the assessment of organizational culture', *Group and Organization Studies*, **13**, 245–273.
- Denison, D. R. (1984). 'Bringing corporate culture to the bottom line', *Organizational Dynamics*, **13**(2), 5–22.
- Denison, D. R. (1990). *Corporate Culture and Organizational Effectiveness*, Wiley & Sons, New York.
- Glick, W. H. (1985). 'Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research', *Academy of Management Review*, **10**, 601–616.
- Gouldner, A. W. (1957). 'Cosmopolitans and locals—Toward an analysis of latent social roles—I', *Administrative Science Quarterly*, **2**, 281–306.
- Gouldner, A. W. (1958). 'Cosmopolitans and locals—Toward an analysis of latent social roles—II', *Administrative Science Quarterly*, **2**, 444–480.
- Hener, T. and Meir, E. I. (1981). 'Congruency, consistency and differentiation as predictors of job satisfaction within the nursing occupation', *Journal of Vocational Behavior*, **18**, 304–309.
- Hofstede, G., Neuijen, B., Ohayv, D. D. and Sanders, G. (1990). 'Measuring organizational cultures: A qualitative and quantitative study across twenty cases', *Administrative Science Quarterly*, **35**, 286–316.
- Holland, J. L. (1973). *Making Vocational Choices: A Theory of Careers*, Prentice-Hall, Englewood Cliffs, NJ.
- Huselid, M. A. and Day, N. E. (1991). 'Organizational commitment, job involvement, and turnover: A substantive and methodological analysis', *Journal of Applied Psychology*, **76**, 380–391.
- Jones, A. P., Johnson, L. A., Butler, M. C. and Main, D. S. (1983). 'Apples and oranges: An empirical comparison of commonly used indices of interrater agreement', *Academy of Management Journal*, **26**, 507–519.
- Leatt, P. and Schneck, R. (1982). 'Technology, size, environment, and structure in nursing subunits', *Organization Studies*, **3**, 221–242.
- Mael, F. A. and Ashforth, B. E. (1995). 'Loyal from day one: Biodata, organizational identification, and turnover among newcomers', *Personnel Psychology*, **48**, 309–333.
- Martin, J. (1992). *Cultures in Organizations: Three Perspectives*, Oxford University Press, New York.
- Meir, E. I. (1989). 'Integrative elaboration of the congruence theory', *Journal of Vocational Behavior*, **35**, 219–230.
- Meir, E. I. and Yaari, Y. (1988). 'The relationship between congruent specialty choice with occupations and satisfaction', *Journal of Vocational Behavior*, **33**, 99–117.
- Mercer, A. A. (1988). 'Commitment and motivation of professionals'. In: Fottler, M. D., Hernandez, S. R. and Joiner, C. L. (Eds) *Strategic Management of Human Resources in Health Services Organizations*, Delmar, Albany, NY.
- Meyers, J. L. and Well, A. D. (1991). *Research Design and Statistical Analysis*, Harper-Collins Publisher, New York.
- O'Reilly, C. A., Chatman, J. A. and Caldwell, D. F. (1991). 'People and organizational culture: A profile comparison approach to assessing person–organization fit', *Academy of Management Journal*, **34**, 487–516.
- Raelin, J. A. (1986). *The Clash of Cultures: Managers and Professionals*, Harvard Business School Press, Boston, MA.
- Rousseau, D. M. (1990). 'Normative beliefs in fund-raising organizations: Linking culture to organizational performance and individual responses', *Group and Organization Studies*, **15**, 448–460.
- Sheridan, J. E. (1992). 'Organizational culture and employee retention', *Academy of Management Journal*, **35**, 1036–1056.
- Shortell, S. M., Rousseau, D. M., Gillies, R. R., Devers, K. J. and Simons, T. L. (1991). 'Organizational assessment in intensive care units (ICUs): Construct development, reliability, and validity of the ICU nurse-physician questionnaire', *Medical Care*, **29**, 709–726.
- Stephenson, W. (1953). *The Study of Behavior: Q-technique and its Methodology*, University of Chicago Press, Chicago, IL.