Measuring ethical competence of organizations

Iordanis Kavathatzopoulos, Agata Kostrzewa and Karin Berg

Uppsala University

Corresponding author: Iordanis Kavathatzopoulos
Uppsala University
Department of IT-HCI
Box 337
751 05 Uppsala
Sweden
+46184716894 & +46704250383
iordanis@it.uu.se
Abstract

In a fast changing world and with increasing demands on organizations and institutions for ethical actions and behaviour there is a great need for satisfactory handling of moral issues. It is therefore very important for employees as well as for organizations to show a high level of ethical competence in handling moral problems. Ethical competence is defined as a problem-solving and decision making skill for the person, and as special processes and roles for the organization. Based on this theoretical position a questionnaire was constructed and tested in two different organizations with the aim to assess ethical competence on personal and organizational levels. The instrument had satisfactory reliability and validity, and the results showed that it assessed differences between organizations and between employees in accordance with our hypotheses. It is, however, necessary to further develop the questionnaire and test it in a bigger and more variable sample of organizations.

Introduction

Organizations have to be effective in achieving their goals. Ethics plays an important role here. There are many examples of negative nature showing that organizations that have failed in ethics have paid a very high price or even have gone into bankruptcy. The opposite is also true even if this is usually bypassed in media. Organizations that satisfy ethical demands are probably harmonious inside and trustworthy outside, increasing the possibility for higher profits and effectiveness.

It is necessary then for organizations to manage this issue. Organizations have to be able to handle relevant ethical problems that may arise in everyday business activities: They need ethical competence and they need to know if they have it and at what level. However, it may be difficult to proceed to some action supporting or describing organizational ethical competence before a clear definition of this competence has been given.

Ethical competence is here defined as the ability of a person to use a suitable problem-solving and decision-making method when facing a moral problem, and the ability of an organization to build, maintain and use suitable processes, tools and mechanisms in handling relevant moral issues. Focus is on the processes themselves, either they are psychological or social, and not on their results, avoiding in that way any normative issue. Ethical competence is not
the ability to apply this or that moral philosophical principle but the ability to use the suitable thought or organizational method during the effort to handle a real life moral problem.

This position is clearly supported in philosophy since the days of Socrates (Plato, 1992) and later by Kant and others (Kant, 2004; Nelson, 1949). In this study, however, we are interested in describing ethical competence at personal and organizational levels. In that sense the study of the parameters of ethical competence belongs to social science rather than to moral philosophy.

Indeed, psychological research has shown that people use different ways to handle moral problems. According to the theories of Piaget (1932) and Kohlberg (1985) people take a position on the heteronomy-autonomy dimension when confronted with a moral problem. Heteronomous thinking is automatic, emotional and uncontrolled thinking or reflexes that are fixed dogmatically on general moral principles. There is no place for doubting the thoughts and beliefs coming up to mind or any effort to create a holistic picture of all relevant and conflicting values in the moral problem at hand. Awareness of own personal responsibility for the results of the decision is missing. On the other hand autonomous thinking focuses on the actual moral problem situation and looks for all relevant aspects. Consideration and investigation of all stakeholders’ moral feelings, duties and interests as well as all possible alternative ways of action are the content of autonomous thinking. To sum up, autonomy is a systematic, holistic and self-critical way of handling a moral problem.

Ethical competence, then, is a person’s ability to think in the most suitable way along the heteronomy-autonomy dimension that is demanded by the moral problem at hand. It is important, nevertheless, to underline the fact that since heteronomy is the default method the difficulty lies with learning to use autonomy (Sunstein 2005; Kavathatzopoulos, 1993, 1994, 2004; see also De Martino et al., 2006; Galinsky et al., 2008; Greene et al., 2004; Koenings & Tranel, 2007). There are, however, people who have learnt to use autonomy more often, usually people at higher organizational levels or people with higher responsibility (Kavathatzopoulos & Rigas, 1998, 2006). Accordingly, an instrument with the aim to assess decision-makers’ ethical competence has to be based on the description of the parameters of the autonomy-heteronomy dimension of ethical thinking.
Like individuals, organizations have also their ways in handling moral issues that can be described in a similar way. An organization’s “to be or not to be” is described by its productivity, being a performance measure including achievement of goals (effectiveness) and the ratio of effective output to the input required to achieve it (efficiency) (Robbins, 1998). Naturally, the goals mentioned above, differ for different organizations, from manufacturing companies to schools, which should, and certainly does, affect the way those organizations are structured. Since the middle 1960’s researchers have given attention to the role of the environment for an organization’s behaviour and structure. A set of theories were established that came to be known under the composite name of contingency theory. According to it, there is no one best way of organizing and leading a company. The design of the organization has to be in accordance with its environment and change accordingly to the changes there. Moreover, another matter of grave importance is how well the different subunits of the organization work together. (Laurence & Lorch, 1986)

Mintzberg (1983) discerns five basic parts, present in almost every organization, though in different proportions: the strategic apex (persons in charge of the overall operating, the CEO and/or top managers), the middle line (a chain of middle managers, from senior managers to for instance shop foremen), the operating core (persons performing the basic work related directly to the production of products and services), the technostructure (analysts and their supporting clerical staff, who affect the work of others by planning or designing it, but do not perform it themselves) and last but not least, the support staff (units existing to provide support to the organization outside its operating work flow, such for example printing or janitorial service).

In the functioning of the above parts we distinguish two opposite processes: one of job specialization and one of job enlargement, both of which govern the work flow within and between the parts. The work flow is understood in terms of who does what and how much as well as the work cooperation between the parts. The more specialized the work flow is the more distinct the hierarchical levels in the organization are. Recent decades, however, have seen a trend towards flatter configurations where the level of middle managers has been eliminated, and the organization tend to do more with less means. The trend has led to a broader span of responsibility for the remaining managers and also a wider variety of tasks for the workers. (Bratton, 2007)
The five organizational parts mentioned above can be configured in specific ways, forming, according to Mintzberg (1983), five basic types of organizations. The organizational forms are: the simple structure, the machine bureaucracy, the professional bureaucracy, the divisional organization and the adhocracy. Universities fit the professional bureaucracy configuration. The professional bureaucracy works in a stable environment, which results in a predictable and standardized behaviour. Furthermore, as the work performed is complex, it is controlled directly by the operating core. In order to perform efficiently, the skills of employees within the operating core have to be standardized in accordance with requirements of the positions in question, which are achieved by suitable training and indoctrination. The professionals gain a considerable amount of control over their work, and thus can perform it without being dependent on their colleagues. On the other hand, the work is carried out closely with the clients (here, the students, research peers etc.) they serve.

The stress on the importance of their training and the control they have over their jobs with little use of behavior formalization imply that the operating core constitutes the key part of the organization. The only other structure part that is sufficiently developed is the support staff, whose central task, nonetheless, is to serve the operating core and do the routine job for them. The main reason for that is economic, as the cost of the professionals is high. Other parts of this configuration, the technostructure and the middle line of management are not highly developed. In other organization designs, they coordinate the work of the operating staff; in the professional bureaucracy, however, there is little need for planning and formalizing the work of the professionals. Thus, only small units of technostructure can be found, e.g. finance and budget units. Similarly, there is little need for direct control over the operators, which makes the work of the middle line management fairly unnecessary. As a consequence, the structure of the professional bureaucracy is flat, with a thin middle line, an undeveloped technostructure, and a fully elaborated support staff.

A manufacturing company, on the other hand, can be in Mintzberg’s terms described as a machine bureaucracy. Like professional bureaucracy, it often operates in a stable environment, which enables work processes to be standardized and specialized. All the five structure parts are developed. The operating core’s work is usually highly specialized but simple and repetitive. That calls for the elaborated middle line management to control the work process and take care of emerging disturbances there. Another task of the middle line is to co-operate with the technostructure and communicate their standards to the operating core.
The technostructure (work study analysts, job-description designers, quality control staff etc), in turn, who account for the standardization of the work, is the key part of the organization. The emphasis is on standardization, formalization and control: of work flows, communication as well as decision making. The strategic apex possesses formal as well as informal power within the organization. Nonetheless, since informal power comes with knowledge, the strategic apex shares it with the technostructure due to the latter’s influence on the operating of the organization. Consequently, the configuration of the machine bureaucracy is a hierarchical structure with fully elaborated parts.

One of the structure components that needs further discussing as for its role in an organization’s productivity is the leadership. The traditional view on leadership (Mintzberg, 1979) emphasizes following elements of their work: supervising, planning, organizing, decision making, representing, commanding, coordinating and controlling. Those are the duties and responsibilities that focus mainly on the behavioral aspects of a leader’s work as well as his affecting the work and achievements of his employees. Modern research, on the other hand, stresses the cultural features of leadership. Leadership is referred to as management of meaning (Smirchic & Morgan, 1982) or symbolic action (Pfeffer, 1982) as it affects the organizational culture. The goal is to persuade the employee to act right instead of pushing them to do that. At this point, a concept of transformational leadership has to be introduced (Burns 1978 as referred to in Yukl, 2006). The key role of a transformational leader is to appeal to the moral values of his employees in order to make them aware of the ethical issues and help them resolve conflicting values. Further, the goal is to motivate them to reform the organization. Trying to achieve this, the leader uses often the innate potential of a conflict, shaping and mediating it among people and thus using its energy to provoke a change. Another interesting aspect of Burn’s leadership theory is that anyone within the organization, despite their position, can perform a function of a transforming leader; furthermore, influencing can and should be directed towards peers and superiors as well as subordinates. Transforming leadership is a continuous process during which the leader and his follower influence each other over time. Both parties undergo change in the meantime. Their focus will shift from the individual to the collective benefit.

According to this, leaders themselves have to use more autonomous ways of thinking and acting whereas other employees use heteronomous methods. Good leadership may cause and maintain heteronomy in employees since employees learn to trust and follow their leaders if
they provide satisfactory guidance and support. Leaders themselves, on the other hand, usually do not have access to any guidance and have to take more responsibility themselves, and, as a result, have to learn to use autonomy (Kavathatzopoulos & Rigas, 1998, 2006).

The aim of the present study is to develop and to test a new assessment instrument to describe persons’ and organizations’ ability to handle moral problems. Our approach draws on the theories and research named above. With this instrument we attempt to describe the parameters of the heteronomy-autonomy ethical function, i.e., the psychological and organizational processes in handling moral issues. In the following section we present the Ethical Index (ETHIX) that was constructed to describe ethical competence in organizations, both at personal and organizational levels.

**Ethical Index, ETHIX**

ETHIX focuses on two levels, personal and organizational. Personal ethical competence is a necessary condition for organizational ethical competence. Employees, officers, decision makers etc., have to be able to use the right ethical problem-solving method in handling moral problems. They need to have high ethical awareness, ethical problem-solving abilities, ethical argumentation skills, and ethical confidence. Organizational structures and procedures, independently of how well adapted they are to the demands of ethical competence, cannot work properly without ethically skillful people. Given that the condition of personal ethical competence is satisfied organizational ethical competence needs suitable processes and roles that can handle moral issues and problems, and that can provide satisfactory support to employees confronting moral problems. Both these two levels, personal and organizational, are mutually dependent on each other regarding ethical competence. Ethically competent persons can keep and heighten their ethical skills in an organization which demands it from them, and an organization can function ethically only if the persons working there are able to run it in an ethically competent way. ETHIX’s aim is to describe the level of ethical competence for employees and organizational processes. This is here done through subjective reports by employees; how employees themselves feel and understand the presence or absence of significant parameters of ethical competence, according to the previously presented theories.
At personal level, parameters of ethical competence include awareness, problem-solving and decision-making skills, argumentation skills, training, and confidence. At organizational level important parameters are organizational profile and concern in ethical issues, adoption of special processes and roles, and support to employees. Another important aspect are ethical guidelines, the way they are constructed, revised and applied as well as what impact they have on organizational effectiveness, employee support, work environment, and customer/stakeholder satisfaction. ETHIX attempts to provide a reliable tool to describe the level of all these different parameters as measure of organizational ethical competence, through employees’ subjective reports (Appendix).

**Method**

*Participants*

The questionnaire has been available for the employees at the Department of Business Studies at Uppsala University and at a private construction company in Uppsala, Sweden. At the university department, the number of responses was 77 (66% out of 115). The division between sexes among the respondents was 40% females and 60% males; 19% were younger than 30 years, 54% were between 30 and 50; 61% held a PhD exam or more and 73% had some kind of responsibility (Administration, Personnel or Both) beyond their regular tasks.

At the construction company, the questionnaire was filled in by 75 respondents (68% out of 110). Regarding their organizational status, 63 were lower-level employees and 12 higher-level employees.

Correlation and homogeneity tests as well as factor analysis were based on data gathered from a sample of 161 participants. These participants were from the University Department and the construction company with the addition of nine more participants working in another construction company.

*Material*

In order to answer the ETHIX questions two web based versions of the same questionnaire have been used, aiming to survey different organizations’ level of ethical competence, one for the university department and one for the construction company. The questionnaire consisted of 37 questions of Likert-type with six alternatives (1 = low; 6 = high). It addressed different
aspects of the respondents’ perception of how they and their organization handle ethical problems. The individual was the proposed unit of analysis. In this form, it contained two subscales, Personal Competence and Organizational Processes.

At the university, the whole questionnaire was available on a single web page, the different question subscales not separated from one another. At the construction company, on the other hand, several web pages were used. Participants could see one page and a limited number of questions at a time. Although there was no “I don’t know/No answer” alternative in any of the two technical solutions, participants could leave one or more questions unanswered and proceed to the next one.

**Procedure**

At the university, the questionnaire was available for answering during a period of three weeks, whereas at the construction company the answering period lasted for three months. Information and instructions as to how to fill in the questionnaire were sent to the participants by e-mail. Two reminder messages were e-mailed in order to increase the number of responses. The participants had opportunity to ask questions and make suggestions and comments. All the data received were registered anonymously in two databases.

**Results**

**Reliability**

Internal consistency reliability of the questionnaire was measured by Cronbach’s alpha coefficients. Criterion for minimum performance was set at .7 or greater, which a generally accepted standard (Hair et al., 2006). Reliability for the total scale was .87 (Table 1). The two question groups Personal and Organizational displayed Cronbach’s Alpha of .80 and .84 respectively, which is a satisfactory result, especially considering the low response rate.

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Cronbach's Alpha</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>.87</td>
<td>161</td>
</tr>
<tr>
<td>Personal</td>
<td>.80</td>
<td>161</td>
</tr>
<tr>
<td>Organization</td>
<td>.84</td>
<td>161</td>
</tr>
</tbody>
</table>

Table 1. Reliability Analysis for Internal Consistency Reliability both for University Department and Construction Company
For further evaluation of the reliability of the scale, a correlation test between the question groups Personal and Organization was conducted, using Pearson product-moment correlation coefficient. There was a strong positive correlation between the two variables, \( r = .5, n = 161, p < .01 \).

Last but not least, an exploratory factor analysis was performed to determine the strongest configuration and to substantiate the measurement model. Criterion for factor loadings was set at .45 or greater which is satisfactory for a number of respondents between 150 and 200 (Hair et al., 2006). Fourteen items were subjected to the analysis, constituting the Personal and Organization subscale of the questionnaire.

Prior to the analysis, the sustainability of the data was assessed. Inspection of the correlation matrix revealed that there are many coefficients of .45 and more. The Kaiser-Meyer-Olkin value was .78, exceeding the recommended value of .6, and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix (Hair et al., 2006).

Principal components analysis revealed the presence of four components with eigenvalues exceeding 1, explaining 38.2%, 13.5%, 9.4% and 8.4% of the variance respectively. Results of Parallel Analysis, however, pointed rather at another direction, showing three components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (14 variables x 161 respondents). Considering that the three components accounted for 61% altogether, with the criterion of over 60% of total percentage of variance explained in social studies (Hair et al., 2006), it was decided to retain only three components. To aid in the interpretation of these three components, oblimin rotation was performed. The rotated solution presented a number of strong loadings and the variables loaded substantially on only one component (Table 2). In the few cases when there were cross-loadings (Table 3), the cross-loading variables displayed highest correlation with the variables belonging to the same component. The interpretation of the three components showed Personal items loading strongly Component 2 and Organization items loading strongly on Components 1 and 3 respectively. There were weak correlations between
Components 2 and 3 as well as 1 and 2, $r = .25$ and $r = .29$ respectively. The correlation between the Components 1 and 3 was naturally larger, $r = .45$.

Table 2. Pattern Matrix

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>org7</td>
<td>.865</td>
<td>-.064</td>
<td>.034</td>
</tr>
<tr>
<td>org5</td>
<td>.838</td>
<td>-.099</td>
<td>.073</td>
</tr>
<tr>
<td>org6</td>
<td>.794</td>
<td>.086</td>
<td>.034</td>
</tr>
<tr>
<td>org4</td>
<td>.708</td>
<td>.093</td>
<td>.170</td>
</tr>
<tr>
<td>pers5</td>
<td>-.104</td>
<td>.869</td>
<td>.085</td>
</tr>
<tr>
<td>pers4</td>
<td>-.002</td>
<td>.809</td>
<td>.129</td>
</tr>
<tr>
<td>pers2</td>
<td>.147</td>
<td>.725</td>
<td>-.191</td>
</tr>
<tr>
<td>pers3</td>
<td>-.080</td>
<td>.598</td>
<td>.455</td>
</tr>
<tr>
<td>pers1</td>
<td>.422</td>
<td>.461</td>
<td>-.062</td>
</tr>
<tr>
<td>pers2</td>
<td>-.032</td>
<td>.049</td>
<td>.803</td>
</tr>
<tr>
<td>pers4</td>
<td>.060</td>
<td>.018</td>
<td>.744</td>
</tr>
<tr>
<td>pers8</td>
<td>.065</td>
<td>.023</td>
<td>.701</td>
</tr>
<tr>
<td>pers3</td>
<td>.122</td>
<td>-.185</td>
<td>.677</td>
</tr>
<tr>
<td>pers1</td>
<td>.422</td>
<td>.461</td>
<td>-.062</td>
</tr>
</tbody>
</table>

*Extraction Method:* Principal Component Analysis.

Table 3. Structure Matrix

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>org7</td>
<td>.862</td>
<td>.196</td>
<td>.408</td>
</tr>
<tr>
<td>org5</td>
<td>.842</td>
<td>.163</td>
<td>.426</td>
</tr>
<tr>
<td>org6</td>
<td>.834</td>
<td>.325</td>
<td>.414</td>
</tr>
<tr>
<td>org4</td>
<td>.812</td>
<td>.342</td>
<td>.513</td>
</tr>
<tr>
<td>pers5</td>
<td>.187</td>
<td>.861</td>
<td>.261</td>
</tr>
<tr>
<td>pers4</td>
<td>.291</td>
<td>.841</td>
<td>.335</td>
</tr>
<tr>
<td>pers2</td>
<td>.271</td>
<td>.718</td>
<td>.061</td>
</tr>
<tr>
<td>pers3</td>
<td>.299</td>
<td>.692</td>
<td>.572</td>
</tr>
<tr>
<td>pers1</td>
<td>.527</td>
<td>.567</td>
<td>.246</td>
</tr>
<tr>
<td>org2</td>
<td>.344</td>
<td>.245</td>
<td>.801</td>
</tr>
<tr>
<td>org3</td>
<td>.402</td>
<td>.226</td>
<td>.776</td>
</tr>
<tr>
<td>org8</td>
<td>.388</td>
<td>.221</td>
<td>.736</td>
</tr>
<tr>
<td>org1</td>
<td>.374</td>
<td>.024</td>
<td>.685</td>
</tr>
<tr>
<td>org9</td>
<td>.301</td>
<td>.258</td>
<td>.493</td>
</tr>
</tbody>
</table>

*Extraction Method:* Principal Component Analysis.
*Rotation Method:* Oblimin with Kaiser Normalization.
Scoring
The overall mean score for ETHIX was 2.7 in a scale from 1 to 6. The score for the Organizational subscale was 2.6 and for the Personal subscale 2.9.

The construction company showed significant difference between its two hierarchical groups: Low 2.2 and High 2.9 ($t = -3.23, df = 73$ and $p < .01$). This difference was also obtained for the two subscales. For the Personal subscale the scoring was for the Low level 2.3 and for the High level 3.2, ($t = -3.81, df = 73$, $p < .001$). For the Organizational subscale the Low organizational level scored 2.2 and the High level scored 2.7, ($t = -2.05, df = 73$, $p < .05$) (Table 4).

Regarding the difference in scoring between the two organizations, respondents from the University Department demonstrated substantially higher means, 3.1, than the respondents within the construction company, 2.5, ($t = 6.38, df = 150$, $p < .0001$) (Tables 4 and 5).

Table 4. Scale Variables Displaying Means and Standard Deviations for Construction Company

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Level</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>Low</td>
<td>2.3</td>
<td>***</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.2</td>
<td>***</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.5</td>
<td>1.2</td>
<td>75</td>
</tr>
<tr>
<td>Organizational</td>
<td>Low</td>
<td>2.2</td>
<td>*</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.7</td>
<td>*</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.2</td>
<td>1.4</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>Low</td>
<td>2.2</td>
<td>**</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.0</td>
<td>**</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.5</td>
<td>***</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Note: Scale varies between 1 and 6.
*** $p < .001$, ** $p < .01$, * $p < .5$

Table 5. Scale Variables Displaying Means and Standard Deviations for University

<table>
<thead>
<tr>
<th>Subscales</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>3.4</td>
<td>1.3</td>
<td>77</td>
</tr>
<tr>
<td>Organizational</td>
<td>3.0</td>
<td>1.6</td>
<td>77</td>
</tr>
<tr>
<td>Total</td>
<td>3.1</td>
<td>***</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Note: Scale varies between 1 and 6.
*** $p < .001$
Discussion

Our results confirm the reliability of the questionnaire, as assessed by Cronbach’s alpha, correlations and factor analysis. The levels of acceptance were high, pointing at one main factor, in this case, ethical competence. The same is true for the two subscales, Personal and Organizational Competence. However, the results of the factor analysis indicating two factors in the Organization subscale do not necessarily imply the real existence of two separate factors, considering the high correlation between them. A possible explanation is that the difference may depend on the content of the questions that are grouped around two themes: questions 1, 2, 3, 8 and 9 asked about how the respondent perceived organizational functions and support, while questions 4 through 7 asked about the existence and quality of organizational processes and roles that take care of ethical issues.

ETHIX showed a significant difference in scoring between hierarchical levels at the construction company. This was in accordance with previous results using other instruments based on the same theoretical approach (Kavathatzopoulos & Rigas, 1998, 2006). The result confirmed also our hypothesis that persons at higher organizational levels and with more responsibility feel that the level of ethical competence in their organization is higher compared to persons at lower hierarchical levels. However, the difference appeared only at the construction company and not at the university department. This can be explained by the fact that the respective organization configurations are not similar. The university has a flatter structure with a professional core having more control over their job and its outcome, whereas the construction company is more hierarchically divided. This was also mirrored in the results for the two organizations: the university department scored higher than the construction company. This was what was expected since more people at the university department are independent and take more responsibility compared to the construction company, where the hierarchical structure is more distinct.

ETHIX did not only show high internal reliability, but it also revealed differences between persons and between organizations. This was exactly what was theoretically expected from the instrument, which can be interpreted as satisfactory external validity.

The present study was the first trial to investigate the reliability and validity of this instrument assessing ethical competence at personal and organizational levels. The results are very
positive and encouraging. This opens up and facilitates further development and adaptation of
the instrument. It is important to continue testing its correlation to the results of other
instruments which assess relevant aspects for organizational effectiveness and personal skill
in ethics. Such tests could be the previously developed ECQ-WLB, which is based on the
same theoretical assumptions, as well as other psychological tests, on intelligence or
personality etc. We have seen here a correlation to the hierarchical status of the persons, but
we would need to correlate the scoring of the instrument to more independents factors, such
as income, education level and length and kind of experience. Furthermore, correlation tests
to organizational independent factors, such as profit, customer, employee and stakeholder
satisfaction, are important for the validation of ETHIX.

As for the further development of the instrument, it is important to review the number and the
content of the questions. We can for example remove the questions that do not contribute to
the scoring with high significance. It is also of great importance to test ETHIX on a larger
sample of participants working in different kinds of organizations. In future versions of the
instrument, it would also be important to include a subscale about the construction, revision
and application of ethical rules and guidelines. Such a subscale would be optional, depending
on the participant’s knowledge of the enacted rules.

Development and testing of other tools based on same theoretical grounds, supplementing
subjective reports of ETHIX and of each other, could help us achieve a holistic view of an
organization’s ethical competence by providing necessary complementary information. Such
methods could be e.g. observation methods, to assess ethical competence at the work place
and describe how persons and groups handle real-life moral problems. Another useful method
could be guidelines for an expert in ethics for gathering data relevant to a description of
organizational ethical competence.

The need to assess ethical competence is significant for many reasons, mainly for achieving
higher organizational effectiveness and efficiency. We present here a first effort to construct a
tool for this aim with promising results. Conditioned on its further development and
standardization, ETHIX can be used for different purposes, e.g. to identify organizational
ethical strengths and weaknesses, to map needs, to plan, follow and evaluate organizational
changes, and to assess the effect of certain measures such as personnel training, introduction
of ethical processes and roles etc.
Appendix

*Ethical Index, ETHIX*

**Person**

1. Have you received education in sufficient extensiveness and quality for you to be able to deal with moral conflicts and problems in a satisfying way?

2. How do you find predicting moral conflicts and problems before they arise or develop into bigger conflicts?

3. How do you find handling and solving concrete moral problems you face upon in your work?

4. How do you find arguing for, explaining and defending your ethical decisions and procedures in a convincing way?

5. Do you feel certain or uncertain when dealing with moral problems?

**Organization**

1. Does your organisation show an ethical profile outwards and inwards; does it present itself as an organisation which cares about ethical issues?

2. Do you find your organisation taking a real interest in ethical issues, or does it only pretend?

3. How do you find your organisation dealing with the ethical issues?

4. Does your organisation have special processes and routines for handling moral problems, for example, plan meetings, discussion groups etc.?

5. If your organisation has ethical processes and routines, how do find them working?

6. Are there in your organisation formally responsible individuals, groups or committees dealing with ethical issues?

7. If your organisation has formally responsible individuals or groups, how do you find them working?

8. Do find your organisation supportive when you face ethical issues?

9. Do you find support in your colleagues if and when you face ethical issues?
References


Πλάτων [Plato]: 1992, ‘Ἀπολογία Σωκράτους, Μένων, Θεαίτητος [Apology of Socrates, Menon, Theaititos], (Κάκτος [Kaktos], Αθήνα [Athens]).


