Organizational Commitment and Ethical Behavior: An Empirical Study of Information System Professionals

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ABSTRACT. IS professionals have been reported to have one of the highest turnover rates. They have also often been accused of unethical conduct, specifically, pirating software, hacking, giving professional opinion that exceeds their knowledge, and not protecting people's privacy. In a sample of 71 IS professionals and 250 members of other professions we found that IS professionals were more committed to their organizations than the other professionals, and that IS professionals were, indeed, less ethical with respect to software piracy and hacking. However, we found that they were not less ethical regarding professional opinions that exceed one's knowledge and protecting people's privacy.

KEY WORDS: ethics, information systems professionals, organizational commitment, privacy, professional ethics

Introduction

The impact of information systems (IS) professionals on society and the economy is tremendous. Almost every worker in the industrialized countries uses information systems for daily work. Businesses have spent billions of dollars on development and implementation of IS applications. The development and implementation of these systems is the responsibility of IS professionals. Thus, the welfare of both organizations and the individuals with whom they interact largely depends on the conduct of these professionals. This conduct, in turn, may be greatly influenced by the ethical attitudes of these professionals.

Case studies have shown that software development failures occur, at least partially, because of unethical behavior (Frantz, 1991; Oz, 1994). The majority of studies concerning IS professionals as a group deal with their job involvement, job satisfaction, careers, and the effects of gender and race on IS careers (Igbaria and Greenhaus, 1992; Igbaria and Siegel, 1992; Baroudi and Igbaria, 1994).

Despite the huge amounts of resources that society spends on the work of IS professionals, very few studies have been conducted on the ethical behavior of these practitioners. The turnover rate of IS professionals is among the highest of any occupation (Tan and Igbaria, 1994; Engler, 1997). Keeping in mind that many IS development projects last years, this fact may have a great adverse impact on the quality of the products these professionals turn out. Yet, few empirical studies addressed the issue of high turnover among IS professionals (Igbaria and Greenhouse, 1992; Igbaria and Siegel, 1992; Tan and Igbaria, 1994). No published studies exist on their organizational commitment and ethical attitudes. The purpose of our study was to address these issues.

Theoretical background and hypotheses

Organizational commitment (OC) is "the relative strength of an individual's identification with and involvement in a particular organization" (Steers, 1977, p. 46). Research in the marketing field has shown that there is a positive relationship between corporate ethical values and OC (Hunt, Wood and Chonko, 1989). Some studies showed

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a positive relationship between the congruence of corporate and employee value and organizational commitment (Posner et al., 1985; Balazas, 1990; O'Reilly et al., 1991), and an inverse relationship between such congruence and employee turnover (O'Reilly et al., 1991). However, Posner (1993) found that clear personal values were more important in relation to attitudes about work and ethical practices than clarity about organizational values. This is probably because "ultimately it is people and not organizations who bear the responsibility for decisions" (p. 346). One should bear in mind that the term "values" in the literature reviewed refers to ethical (or unethical) attitudes.

The huge shortage of IS professionals has been widely reported to cause the great turnover among these people. The turnover may cause and be caused by a low degree of OC. This high turnover, in turn, may have contributed to lax ethical behavior. Since other professions have been around a longer time, and since some of their members must adhere to mandatory ethical standards (unlike IS professionals, who are not bound by such standards), both OC and ethical behavior of IS professionals may be weaker than those of other professionals.

Thus, we hypothesized as follows:

Hypothesis 1: IS professionals' organizational commitment is weaker than that of other professionals.

Since IS professionals are more familiar with both the benefits and risks of the systems they develop and maintain, they are expected to be more sensitive than other professionals to ethical issues such as software piracy, unauthorized access to ISs, exaggerated professional opinion on the capabilities of ISs, and privacy. Our hypothesis, therefore, is:

Hypothesis 2: IS professionals are more sensitive than other professionals to information technology (IT)-related ethical issues.

Method

Measurement of organizational commitment

OC is measured in three dimensions: 1. A strong belief in and acceptance of the organization's goals and values; 2. A willingness to exert considerable effort on behalf of the organization; and 3. A definite desire to maintain organizational membership (Porter et al., 1974; Steers, 1977). Several OC measurement instruments have been developed. The most frequently used, despite its "age," is the one developed by Mowday, Porter, and Steers (1982). Due to its high degree of internal validity, it was the one used in this study.

Measurement of ethical behavior

In measuring ethical behavior we try to measure the degree to which a person is likely to behave in a certain ethical, or unethical, manner. The assumption is that the people responding to a stimulus, or a question, know whether the behavior they indicate is ethical or unethical. Since it is impractical to actually observe unethical behavior for research purposes, researchers usually use one of two methods. One method is to describe a scenario of unethical behavior and ask the respondents to indicate to what degree they agree with the behavior or to provide a scenario with an ethical dilemma and ask the respondents to indicate how they would behave, with closed-ended potential answers which are pre-ranked by degree of ethicality (Crawford, 1970; Dubinsky et al., 1980; Levy and Dubinsky, 1983; Ferrell and Gersham, 1985; Gifford and Norris, 1987; Kellaris and Dabholkar, 1989; Nel et al., 1989; Swinyard et al., 1990). The other method is to provide first-person statements of unethical behavior and to have the respondents indicate to what degree they agree or disagree with the statements (Oz, 1990; Akaah, 1993).

Based on the Theory of Reasoned Action (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980) Beck and Ajzen (1991) proved the viability of Theory of Planned Action (Ajzen, 1985): people who report that they behaved or intend

to behave in a certain manner actually behave in that manner. Furthermore, their study showed that there is considerable consistency in dishonest behavior over time. The theory allows us to conclude that people behave ethically or unethically in their daily life or professional careers if they agree with statements that reflect such behavior. Based on this theory, we preferred to use the "statement method" to measure ethical behavior for this study.

TABLE I
Ethics statements

1.	Sometimes, for my work, I copy software without permission.
2.	Sometimes I access computing or telecommunication resources without permission.
3.	Sometimes I give a professional opinion which exceeds my knowledge.
4.	Sometimes I don't protect people's privacy and/or confidentiality of information to which I have access in my work.

Sample

Three-hundred twenty-one professionals were asked to voluntarily fill out a three-part questionnaire. All agreed to participate, and the rate of useful responses was 100%. All the professionals are full-time employees who take evening classes at the university where the questionnaire was administered. The ages of the participants ranged from 22 to 57 with a mean of 32. Fifty-one percent were women, and forty-nine percent were men. Seventy-one of them were IS professionals. The other 250 participants were accountants, lawyers, nurses, marketing managers, engineers, teachers, and other professionals. Only the teachers comprised more than 5% (12%) of the 250 people.

Questionnaire

The questionnaire consisted of three parts. The first part contained an established instrument for determining the organizational commitment of the participant's organization (Mowday et al., 1982). In the second part, the participants had to indicate on a five-point Likert-type scale the degree to which they agreed with statements of ethical behavior relating to ISs (see Table I). Although codes of ethics of IS professionals vary on some issues, all of the acts described in these statements are explicitly prohibited by all of these organizations. These acts are also forbidden by many organizations in their policies: copying software without permission, accessing telecommunication resources without permission, giving professional opinion that exceeds one's expertise, and not protecting people's privacy when accessing personal files. The scale anchors were 1 for "strongly disagree," and 5 for "strongly agree."

Data analysis and findings

To test Hypothesis 1 we ran a one-way analysis of variance (ANOVA) of the two groups, IS professionals and the other professionals where the dependent variable was the average organizational commitment score. Table II displays the results. To our surprise, the organizational commitment of IS professionals was greater than that of the other professionals (an average score of 4.3 versus 4.1) at a p-value of 0.049.

Hypothesis 2 was tested separately for each of the first four ethics statements. This allowed us to discern attitudes toward different ethical issues. One may be highly protective of the privacy of employees or customers, but at the same time pirate software or access ISs without permission. Table III presents the results of the ANOVAs for the four statements of two groups: IS professionals and other professionals.

TABLE II
Organizational commitment of IS- and other professionals

	n	Mean	p
IS professionals	71	4.3	0.049
Other professionals	250	4.1	

TABLE III
ANOVA of ethical attitude of IS- and other professionals

Statement	Group	*n*	Mean	*p*
Statement 1	IS professionals	71	2.8	0.046
	Other professionals	250	2.4	
Statement 2	IS professionals	71	2.6	0.005
	Other professionals	250	2.0	
Statement 3	IS professionals	71	3.0	0.511
	Other professionals	250	3.2	
Statement 4	IS professionals	71	1.8	0.094
	Other professionals	250	2.2	

The mean response of the IS professionals to Statement 1 on software piracy was significantly higher (2.8) than the mean response of the other professionals (2.4) at $p = 0.046$. On average, the other professionals disagreed more strongly with the statement.

Similarly, the IS professionals responded with less disagreement to Statement 2 on accessing computing and telecommunication resources without permission. Apparently, IS professionals are more likely to "hack" than other professionals.

As is evident from Table III, we found no significant differences between the groups regarding Statement 3 (giving opinion exceeding one's knowledge) and Statement 4 (not protecting people's privacy at work).

Conclusions

When comparing IS professionals with other professionals on specific information and IS-related ethical attitudes, we found some differences between the groups. As hypothesized, IS professionals are more likely to pirate software and to access computing and telecommunications resources without permission. However, they are no more and no less likely than other professionals to give a professional opinion that exceeds their knowledge or to not respect the privacy of people to whose records they have access.

Interestingly, the first two statements address behavior that requires some technical knowledge. Generally, IS professionals have more experience than other professionals with regard to duplicating software and accessing computing and telecommunications resources. It is reasonable to assume that they are more sophisticated in duplicating software and accessing IT resources. They may also benefit from software piracy and hacking more than other professionals. This may partially explain their higher tendency to commit such acts.

Giving a professional opinion that exceeds one's knowledge has been often attributed to IS specialists in recent years. Codes of ethics of IS professional organizations (e.g., ACM, BCS, and CIPS) specifically address the issue. This is probably due to the fact that these specialists account for an increasing part of the economy, and also because much of their work involves development of new systems, which always carries some risk of budget and time overruns or complete failure. However, exaggerating one's knowledge when giving an opinion to nonmembers of the profession does not involve experience in the IT field, and, apparently, is not more pervasive among IS professionals than it is in other professions.

Similarly, not only IS professionals have frequent access to personal records. So do physicians, teachers, engineers, and many other professional groups. And while keeping and

manipulating personal information in computerized databases is almost universal, other professionals are as capable of storing, maintaining, and accessing such data as are IS professionals. (Also, note that the statement does not necessarily refer to *computer-based* personal records.) This may partially explain why other professionals are as likely as IS professionals to commit these acts. Further research, perhaps with larger samples, may shed more light on the reasons for IS professionals' ethical attitudes.

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