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IS ETHICS: A CROSS - CULTURAL COMPARISON

Key Words

***Cross-Cultural
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Information Systems;
Business Ethics; Ethical
Decision-making;
Bommer's Model;
Moral Obligation.***

Abstract

There has been an increasing interest in the area of business ethics. In this study, we expand on this topic by examining ethical issues in Information Systems (IS) across cultures. Two samples representing two cultures (the U.S. based sample, and a Kuwait based sample representing the Middle-Eastern sample) were compared regarding the ethical decision making regarding issues in Information Systems (IS). The two groups were presented with 5 IS related scenarios and were asked to indicate whether the acts were ethical or not ethical. Also, the respondents were asked to indicate the importance/unimportance of nine factors believed to influence ethical/unethical intention and behavior. The results show that these seemingly different cultures viewed these ethical situations similarly, and that the factors influencing these decisions were also somewhat similar. The results also show that moral obligation was found to be the most influential factor on decision-making for both cultures.

Introduction

During the last decade, much research has been dedicated to the study of ethics in business. Ethical situations arise often in many different areas of business, and this has been complicated by the integration of Information Systems (IS) into business operations. The integration

of IS in business complicates ethical decisions for many reasons (Weiss *et al.*, 1990). One main reason is the fact that information is available in electronic form, allowing factors such as property rights, piracy, privacy, and security to have new dimensions of ethical issues in business. A study

published in 1999 (Kreie and Cronan) concluded that unethical use of computer systems in organizations has resulted in significant losses to businesses and society. In a world where profit is the motive, unethical behavior within organizations can impose a serious impact on that profit. Costs can range from financial losses, loss of a company's good will, to affecting the relationship between customers and businesses (Al-Kazemi and Zajac, 1999).

Another emerging issue with business ethics is related to globalization. The global business world is being connected by new technological super-infrastructure such as the Internet, creating a worldwide market for goods and services. Doing businesses globally is not uncommon these days; in fact, it is the trend. With more organizations expanding into markets with different cultural beliefs, the problem of cross-cultural ethics is becoming more prevalent (Tsalikis and Nwachukwu, 1988). Businesses often encounter many problems arising from cultural conflict of values when they operate across countries and cultures (Hendry, 1999).

As a result, ethical differences between different cultures (in a global business world) have caused losses to businesses in monetary terms as well as losing the company's image (good-

will). A business that wishes to expand globally, must take into consideration those different and conflicting values in order to succeed globally (Hendry, 1999).

In an interconnected global business world that is extensively utilizing information systems, an understanding of the ethical differences between cultures regarding IS should be an important issue for businesses who wish to conduct business globally. The main purpose of the study is to examine whether there are differences in ethical perceptions regarding IS issues between different cultures. Ethical issues related to IS are examined across different cultures in the United States (a Western culture) and Kuwait (a Middle Eastern culture). Samples from these cultures are exposed to different ethical scenarios related to IS, and ethical judgments and their antecedents are presented and examined in this study (similar to a study by Robertson *et al.*, 2002).

Theoretical Background

Ethics Literature

There has been much research that was done on business ethics. Different models exist that have tried to explain ethical/unethical behavior in business. Some of the popular models include: The Theory of Reasoned Actions (TRA) (Fishbein and Ajzen, 1975),

Theory of Planned Behavior (TPB) (Ajzen, 1985), The Person-Situation Interactionist Model of Ethical Decision Making (Trevino, 1986), and Bommers Behavioral Model of Ethical/Unethical Decision Making (Bommer *et al.*, 1987).

TRA is a general behavioral model that has been applied in the ethical domain (Randall, 1989). The theory regards a persons intention to perform an action as the best predictor of the behavior. This intention is determined by two factors: attitude towards performing the behavior, and the subjective norms regarding the behavior. Randall (1989) successfully applied the TRA in the area of ethical decision-making.

TPB is an extension of the TRA (Ajzen, 1985). Like the TRA, it asserts that a persons intention to perform a behavior precedes the behavior. Three determinants influence intention: the factors from TRA, and perceived behavioral control which deals with the perception of control over the behavior held by the subject. Randall (1991) employed the TPB to predict ethical behavior.

The Person-Situation Interactionist Model of Ethical Decision Making was developed by Trevino (1986). It combines individual variables with situational variables to explain and predict the ethical decision-making

behaviors of individuals in organizations.

Bommer *et al.* (1987) developed a model that identified several factors that affect ethical/unethical decision-making behavior. The factors include: work environment (corporate goals, stated policy, corporate culture), government/legal environment (legislation, administrative agencies, judicial system), social environment (religious values, humanistic values, cultural values, societal values), professional environment (codes of conduct, licensing requirements, professional meetings), personal environment (peer group, family), and individual attributes (moral level, personal goals, motivation mechanism, position/status, self concept, life experiences, personality, demographics). Kreie (1998) utilized the Bommer model to examine differences between ethical perceptions between men and women. Another study by Kreie and Cronan (1999) used the Bommer model to identify factors that affect ethical decision making in IS issues.

Cultural Literature

Business research that examines the role of culture in ethical decision-making has also been popular lately. Lu (1999) states that individuals from different cultures are exposed to different traditions, rituals, customs, and religions; And that these experiences

help shape an individual's moral standards (and thus, ethical behavior). Lu asserts that culture is a fundamental determinant of ethical decision-making; it directly affects how individuals view ethical situations. A multi-national organization might set a code of ethics for its employees, only to find out that some parts of the code are contrary to beliefs in some cultures (Goodwin and Goodwin, 1999). One example is the issue of bribes, while it is illegal in the United States and viewed as unethical, it is widely accepted and is not considered unethical in many other cultures.

A debate over the influence of culture on ethical values has been growing as of late (Robertson and Fadil, 1999). One side supports the "moral relativism" concept that states that each culture has its own unique set of values. The opposing side supports the concept of "universalism" which contends that all cultures have the same value-set, but each has its own moral pace due to the environment.

According to Hendry (1999), viewing ethical conflicts that arise between cultures is one way to understand differences in ethics between cultures. Hendry groups the origin of these conflicts into three groups: conflicts that arise because of having cultures with different values, conflicts be-

tween cultures with similar values but one attributes moral significance to one that another does not, and when the different environments lead to a conflict even when the values are similar.

The first group is considered the hardest to resolve when a conflict arises. It's the case when two cultures have different values that lead to opposite beliefs, what is wrong for one culture is right for the other. An example of this type of conflict is promotion practices. While it might be acceptable to promote based on gender, status, caste in other cultures, it is unacceptable in the United States (Hendry, 1999).

The second group of conflicts is more common than the first group. It is the case when a practice is ethical in one culture, but not ethical in another; because one culture views the issue as morally significant while the other doesn't. Under-declaration of income tax is an example of this group; where in parts of Europe it is considered immoral, and in other parts of the world it is considered to have little or no moral significance (Hendry, 1999).

The third group and the most common of the other groups is the case where conflict arises because of differences in environments between the two cultures. It's the case where the environment leads to a conflict of

ethical issues even though the underlying values are similar. An example of this group would be the differences between developed and developing countries about standards of safety in work conditions (Hendry, 1999).

Another cultural classification scheme was also suggested by Hall (1977), where classification is based on the cultural context. In a high-context culture, the context (for example, the sender, the time, relationship between the two parties etc) in which a message is sent from one to another would play a big part in interpreting the message. In a low-context culture, the context would be mainly ignored. Kuwaits (a Middle-Eastern) culture would qualify as a high-context culture, while the U.S. culture would more likely be a culture of low context.

Hofstede's theory of culture (1980) received considerable interest in the cultural literature. The theory is based on the notion that national cultures have four dimensions (high versus low uncertainty avoidance, a large versus a small power distance, individualism versus collectivism, and masculinity versus femininity). Al-Weqaiyan (1998) used Hofstede's dimensions to differentiate between the U.S. and the Kuwaiti cultures. The Middle-Eastern culture was found to have a high power distance, high uncer-

tainty-avoidance, low individualism, and a more feminine culture. The U.S. culture, on the other hand was found to have a low power distance, low uncertainty-avoidance, high individualism, and a medium feminine/masculine culture (Al-Weqaiyan, 1998; Chang, 2003).

In this study, a cross-cultural comparison of ethical decision-making regarding IS issues is presented. One culture being a western culture (United States), and the other being from the Middle East (Kuwait). Kuwait is an Arabic and an Islamic country. Arabs are united by a common culture and language, and not just the religion of Islam. Arab traditions are embedded in the society, and have a greater effect on their culture than Islam. These traditions are evident in the typically conservative Arab society (Saeed *et al.*, 2001). Also, Arabs are a minority of Muslims, and many Arabs follow different religions such as Christianity and Judaism.

Cultural Ethics Literature

Literature examining ethics from a cultural point of view has also been done. Kohlbergs (1969) model of moral development asserted that the environment does play a role in ethical decision making. Different landmark ethical studies (Ferrell and Gresham, 1985; Hunt and Vitell, 1986) proposed a relationship between culture and

ethical decision making. Different studies had also proposed an ethical decision making model that is based on culture (Wines and Napier, 1992; Robertson and Fadil, 1999).

As for cross-cultural research, there are journals dedicated to cross cultural research (such as Cross-Cultural Research, and Journal of Cross-Cultural Psychology). Creie and Cronan (1999, Journal of End User Computing) did a US based study of IS ethical issues, where they examined US subjects ethical perceptions toward IS dilemmas. A similar approach is used in this study where a cross-cultural comparison between the US and an Middle-Eastern culture.

There has been a flurry of studies that compared ethics across cultures (Fritzsche and Becker, 1984; Lysonski and Gaidis, 1991; Tsalikis and Nwachukwu, 1991; Armstrong and Sweeney, 1994; Singhapakdi *et al.*, 1994; Husted *et al.*, 1996 among others). The results, however, were mixed. Some studies found differences in ethical perceptions, while others reported no ethical differences between cultures. Robertsons *et al.* (2002) study employed ethical scenarios to examine ethical differences between different cultures.

IS Ethics Literature

IS ethics research was practically started in 1986 when Mason (1986) examined major ethical issues with IS.

Mason identified the ethical issues as privacy (what information about individuals should be disclosed?), accuracy (accuracy and authenticity of data), accessibility (what information is accessible to others?), and property (ownership and the value of the information).

Lock and Conger (1996) based their model on the TRA to examine ethical decision-making. Using situations related to privacy and resource-ownership, the authors develop a model of ethical decision-making regarding computer use. The model posits that self-image (how individuals characterize themselves), deindividuation (feeling of being estranged or separated from others), and computer literacy (individuals knowledge about computers) affect ethical attitude; and thus social norms and ethical attitude affect intentions; which in turn causes behavior.

In a series of three articles, Kreie and Cronan (1999b; 1999a; 2000) examined ethical decision-making concerning IS issue. For these studies, the authors used ten factors that have been theorized to affect ethical decision-making. Seven factors were used from Bommers model; three more factors were added that included personal characteristics, moral obligation (Schwartz and Tessler, 1972), and awareness of consequences (Rest, 1986; Eining and Christensen, 1991).

Literature Review Summary

A summary of ethics, IS ethics, cultural, and cultural ethics has been presented in this section. This study will provide us with an opportunity to examine ethical perceptions between different cultures, and examine what might influence those ethical perceptions in each culture.

Methodology and Research Model

The purpose of this research is to identify whether significant ethical differences related to IS exist between these two different cultures. A model based on Bommers *et al.* (1987) model is developed and tested in this study. Bommers *et al.* model is based on the idea that different variables in the environment do affect ethical decision making. Those variables are as follows: societal environment, belief environment, individual environment, professional environment, legal environment, business environment, and personal values.

In addition to Bommers *et al.* model, other variables have been suggested to affect ethical decision making. Moral Obligation (MO) refers to the feeling of guilt or the personal obligation to perform or not to perform a behavior. Schwartz and Tessler (1972) indicated that moral obligation would be a good predictor of ethical/unethical inten-

tion. This factor has been used in the literature to predict ethical intention (Randall and Gibson, 1991; Kurland, 1995; Banerjee *et al.*, 1998; Leonard and Cronan, 2001). Awareness of consequences is association of behavior with outcomes, and knowing what possible consequences are there. It has been used as a predictor of ethical decision making (Rest, 1979; Eining and Christensen, 1991).

Overall, the model consisted of the following variables (first seven from Bommers *et al.* model):

1. Societal Environment: The social and cultural values (What does the society say should be done?)
2. Belief Environment: Religious and spiritual values (What does religion say about this issue?)
3. Individual Environment: Significant others, family and close friends (What does my mother say about this?)
4. Professional Environment: The codes of conduct and professionalism (What does my profession say about this issue?)
5. Legal Environment: Legal issues (What does the law say about this issue?)
6. Business Environment: Corporate goals and the bottom line (What does the company and the “bottom line” say about this issue?)

7. Personal Values: Ones internalized values and experiences (What do I say?)
8. Moral Obligation: The feeling of responsibility or obligation
9. Awareness of the consequences: association of the behavior with the outcomes.

The model is presented in the following figure.

The subjects are presented with five IS-related scenarios (listed in Appendix A) and are asked to consider

whether the act in each scenario was ethical or unethical. The scenarios are based on IS related dilemmas and are concerned with major concerns that include: copyright, privacy, security, and piracy.

After presenting the scenario, the subjects are asked to respond to whether the action of the person involved in the scenario was ethical or unethical. The subject is then asked a list of questions related to how significant were these factors (previously discussed) on the decision making

Figure 1
Research Model for this Study

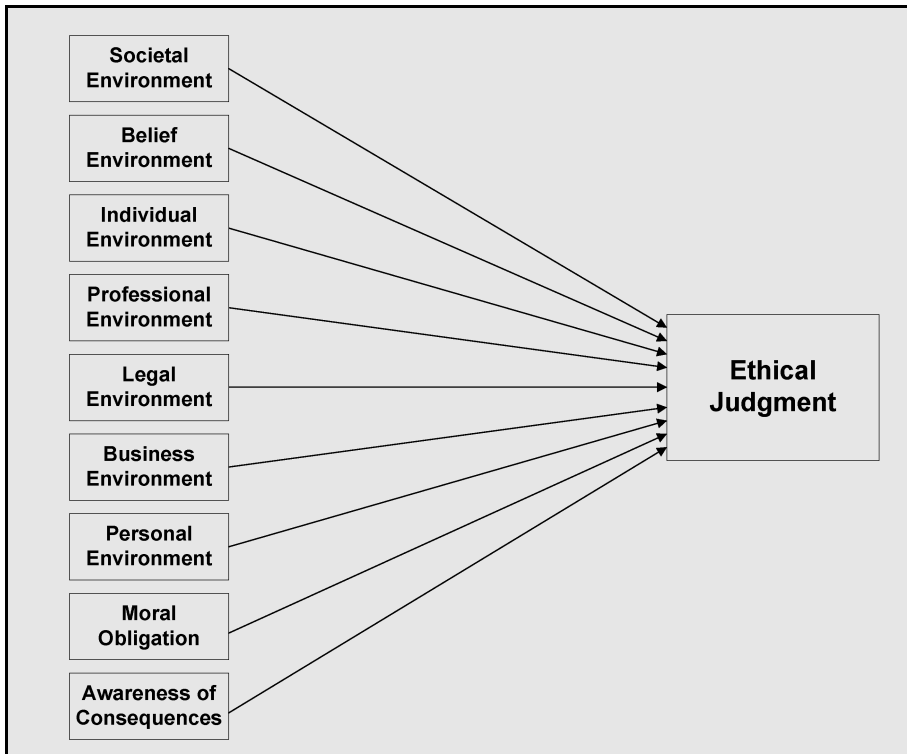


Table 1
Demographical Information about the Two Samples

	US Sample	Kuwaiti Sample
Number of Subjects	307	2191
Average Age	21.6	20.8
Average GPA	3.0	2.74
Average Work Experience	2.9	2.4
Gender	F: 128, M: 179	F: 122, M: 97

process. Each of the questions is answered using a 5-point likert scale ranging from very important to not important at all.

The US subjects were sampled from a university in the Midwestern area of the United States. The sample came from sophomore/junior level classes at the business college. A questionnaire was administered to the subjects during class time. As for the Middle Eastern subjects, again, the sample was sampled from students (sophomore/junior level) of a business college in Kuwait (an Arabic/Islamic country in the Middle East). Because of distance, the subjects were directed to fill out an Arabic online version of the questionnaire using the World Wide Web. As for the translation, to eliminate any problems with the instrument, the questionnaire was translated into Arabic, and back into English (using the back translation method). Some of the wordings were

modified before the questionnaire was distributed to the subjects in Kuwait.

Results

The following table shows demographical information about the two samples:

There were more females in the Kuwaiti sample; this is attributed to the fact that the majority of the sample was taken from a business college, which is typically favored by female students. After conducting a test of significance between the two groups, they were found to be significant on age, GPA, and work experience (at the 0.05 level). This was not unexpected, as the two cultures are very different even though they were chosen from sophomore/junior classes in a business college in both countries. In Kuwait for example, students attend college right after they graduate from high school (being younger, and having no work experience). While in the

1 There was a total of 243 subjects, but 24 had to be removed because of incomplete responses

Table 2
Comparison between Samples in Ethical/Unethical Judgment

	US sample		Kuwaiti sample		P-Value
	Ethical	Unethical	Ethical	Unethical	
Scenario 1	14%	86%	13%	87%	.74
Scenario 2	40%	60%	5%	95%	< .01
Scenario 3	53%	47%	52%	48%	.82
Scenario 4	45%	55%	39%	61%	.17
Scenario 5	20%	80%	24%	76%	.27

US, students usually work (having more work experience) to support their tuition at the university and some even start work before they start attending the university (thus being older on average). As for the GPA difference, this is probably attributed to the fact that students in Kuwait are guaranteed a job after they graduate and are not required to pay tuition to attend the university (which might influence the motivation to study harder and get better grades).

The data will be examined from two different aspects. The first aspect includes looking at whether there was a difference in the perception of ethical/unethical behaviors between the two samples for each of the scenarios. Then, an examination of the factors affecting the subjects decision will be examined for each of the scenarios.

The following table shows how each sample judged each scenario in the study to be ethical or unethical (used percentages because of unequal sample sizes).

The following is a discussion of these results:

- **Scenario 1:** dealing with making unauthorized software changes for personal gains There was an agreement between the two samples. In both samples, the majority thought that the action of the programmer in the situation was unethical (86% in the US, and 87% in the Kuwaiti sample).
- **Scenario 2:** user keeping software he/she didnt pay for this case had the largest difference between the two samples (35% difference). The majority of the Kuwaiti sample thought that this practice was unethical (95%), while only 60% of the US sample thought it was unethical. This difference follows the third group type of conflict according to Hendry (1999). Where both groups have similar values (not keeping something you didnt pay for), but the environment played a role somehow in

changing how its viewed ethically (the role of capitalism and the competitive business nature in the US, and strict Islamic laws that prohibit theft in the Middle Eastern culture). This was the only scenario where the two cultures were different in their ethical perceptions (see the p-value column in table 2).

- Scenario 3: using company resource on own time this case had almost identical ethical evaluation between the two samples (with a difference of only 1%). In both cases around half of the samples (53% in the US sample, and 52% in the Kuwaiti sample) perceived the programmers use of company resources as ethical.
- **Scenario 4:** software piracy there was a difference of 6% between the answers of these two samples. 61% of the Kuwaiti sample judged it as unethical, while 55% of the US sample thought of the practice to be unethical. This was surprising, as software piracy is very common in Kuwait, unlike the way it is in the United States. A recent development might be attributed to this unforeseen finding, as copyright laws have recently been enforced in Kuwait and there has been considerable debate around that issue

in the community during the preceding year.

- **Scenario 5:** copying customer information not belonging to the company again, not much difference was observed between the two samples in ethically judging the action taken by the employee. The majority of the both samples (80% in US, and 76% in Kuwait) thought that this practice was unethical.

General Observations:

Except for one scenario (keeping software you didnt pay for), all others had somewhat similar numbers for both samples. There was a general agreement on most of the scenarios.

Factors Influencing the Decision

To assess which variables influenced each of the scenarios, discriminant analysis was used. Discriminant analysis is a tool used to predict group membership (in this case, whether the action was ethical or not ethical) based on predictor variables (the independent variables used in the study) (Tabachnick and Fidell, 1996). Discriminant analysis was used because of the nature of the dependent variable (ethical or unethical) being a classification type variable. The hypothesized factors relationships to the decision were examined for each sce-

Table 3
Results of the Multiple Discriminant Analysis on Case 1

	US Sample	Kuwait Sample
Significant Variables	Moral Obligation Awareness of Consequences Belief System Legal Environment	Legal Environment Awareness of Consequences
Classification Rate for Reduced Model ¹	77.6%	70.3%
Classification Rate for Full Model ²	79.1%	63.9%

nario (p-level of.05). The dependent variable was whether the action was ethical or not, and the independent variables included the 9 factors discussed previously. This analysis is done independently for each sample and scenario, and the results are shown below. For each scenario, a classification rate is included. The classification rate is the percentage of correct classification (predicted versus actual). Two classification rates are included, one with only the significant variables included in the equation (classification rate for reduced model), the one with all the variables (classification rate for full model).

- **Scenario 1:** making unauthorized changes for personal gains

Table 3 shows the findings from running a Multiple Discriminant analysis on the data from the sample:

While the US sample contained factors dealing with legal/punishment

and moral/belief/personal values, the Kuwaiti sample only contained factors dealing with the legal aspect and consequences of the action if caught. Another way we can examine the data can be by looking at variables that have consistently scored by the subject as highly influential or scored as having very little influence. In the US sample, a high number of respondents (63%) who judged this situation to be unethical indicated that the legal environment was influential or very influential in their decision. In the Kuwaiti sample, 72% of subjects of perceived this scenario as unethical indicated that awareness of consequences was influential/very influential in their decision. Also, 66% of the Kuwaiti sample who perceived this scenario as unethical indicated that the legal environment was influential or very influential in their decision.

- **Scenario 2:** user keeping software he didnt pay for

¹ With only significant variables in the model

² Includes all variables in the model

Table 4
Results of the Multiple Discriminant Analysis on Case 2

	US Sample	Kuwait Sample
Significant Variables	Moral Obligation Personal Values Societal Environment Legal Environment Awareness of Consequences	Moral Obligation Legal Environment Business Environment
Classification Rate for Reduced Model	73.1%	75.8%
Classification Rate for Full Model	72.5%	81.3%

Table 4 shows the findings from running a Multiple Discriminant analysis on the data from the sample:

Moral obligation, the legal environment, and the business environment were the significant factors in the Kuwaiti sample. The US sample had moral obligation, personal values, the societal environment, the legal environment, and awareness of consequences. In the Kuwaiti sample, a high majority (83%) of subjects of perceived this scenario as unethical indicated that moral obligation was influential/very influential in their decision. Also, 66% of subjects who perceived this scenario as unethical indicated that the legal environment

was influential or very influential in their decision.

- **Scenario 3:** using company resource on own time

Table 5 shows the findings from running a Multiple Discriminant analysis on the data from the sample:

The moral obligation factor was the most significant factor in the Kuwaiti sample, and the other factor was the societal environment. The US sample had only moral obligation as the significant variable. In the US sample, a high number of respondents (75%) who judged this situation to be ethical indicated that they had no or little moral obligation towards this case. In the Kuwaiti sample, a major-

Table 5
Results of the Multiple Discriminant Analysis on Case 3

	US Sample	Kuwaiti Sample
Significant Variables	Moral Obligation	Moral Obligation Societal Environment
Classification Rate for Reduced Model	75.3%	73.5%
Classification Rate for Full Model	78.3%	73.1%

Table 6
Results of the Multiple Discriminant Analysis on Case 4

	US Sample	Kuwaiti Sample
Significant Variables	Moral Obligation Legal Environment	Moral Obligation Business Environment
Classification Rate for Reduced Model	66.9%	74.9%
Classification Rate for Full Model	70.3%	76.3%

ity of subjects (67%) who judged this situation to be ethical indicated that moral obligation was influential or very influential in their decision.

- **Scenario 4:** software piracy

Table 6 shows the findings from running a Multiple Discriminant analysis on the data from the sample:

The significant factors identified for the Kuwaiti sample included moral obligation and the business environment. The US sample contained moral obligation, and legal environment. 55% of the respondents in the US sample viewed moral obligation as having an influence on their decision. In the Kuwaiti sample, 63% of respondents who perceived this scenario as unethical cited moral obligation as

at least influential in their decision, while 61% of respondents who perceived this scenario as ethical cited moral obligation as of no or little influence in their decision.

- **Scenario 5:** copying customer information not belonging to the company

Table 7 shows the findings from running a Multiple Discriminant analysis on the data from the sample:

Personal values, moral obligation, and awareness of consequences were the significant factors in the Kuwaiti sample. The US sample contained moral obligation, the legal environment, and awareness of consequences as influential factors. A high majority of respondents in the Kuwaiti sample

Table 7
Results of the Multiple Discriminant Analysis on Case 5

	US Sample	Kuwaiti Sample
Significant Variables	Moral Obligation Legal Environment Awareness of Consequences	Personal Values Moral Obligation Awareness of Consequences
Classification Rate for Reduced Model	73.1%	67.1%
Classification Rate for Full Model	72.5%	69.4%

(77% for personal values, 78% for awareness of consequences, and 74% for moral obligations) who perceived the scenario as unethical indicated influential/very influential effects of these three variables on their decision.

Discussion and Conclusion

In this study, a comparison was made between two cultures regarding different ethical situation related to IS. The data was examined from two aspects: the ethicalness of each scenario, and the factors effecting the decision made by the individuals for each scenario.

As for how the individuals viewed the scenarios: except for one scenario, all the other scenarios were viewed similarly by both cultures. This was not expected, as these cultures differ significantly. These findings might also point to the fact that in an inter-connected world that we live in, IS (and technology) might possibly be

universal in a world with many different cultures. While there are many differences when it comes to behaviors among different cultures, IS behavior might possibly be an exception to that rule. While other research has had conflicting results, these findings might lead to a better understanding on the global adoption of technology that might be culture-independent. Technology might be the one factor IS/cross-cultural/organizational researchers should use the results of this study as a springboard to explore different ideas in their domains.

As for the factors influencing the decision making process, the following table shows the frequencies of the significant factors in the five scenarios:

Looking at the two samples, we see that moral obligation is the dominant factor in both samples. That might indicate that maybe there really isn't much difference between these seemingly different cultures when it comes

Table 8
Frequency of Factors in Both Samples

US Sample		Kuwaiti Sample	
Variable	Frequency	Variable	Frequency
Moral Obligation	5	Moral Obligation	4
Legal Environment	4	Legal Environment	2
Awareness of Consequences	3	Awareness of Consequences	2
Belief System	1	Business Environment	2
Personal Values	1	Societal Environment	1
Societal Environment	1	Personal Values	1

to moral values. Moral obligation has been used in the literature to predict ethical intention (Randall and Gibson, 1991; Kurland, 1995; Banerjee, Cronan *et al.*, 1998; Leonard and Cronan, 2001). This factor has also been theorized as affecting intention in studies within the psychology field. Ajzen (1991) indicated that moral obligation could possibly be added to the TPB as a separate determinant of intention. And, in a review of TPB research, Conner and Armitage (1998) found that moral obligation was a significant predictor of intention in a number of studies. Al-Rafee (2002) also found that moral obligation to be the most significant factor affecting intention.

The legal environment and awareness of consequences had a bigger influence in the US sample than the Kuwaiti sample. This is probably due to the fact that laws about these piracy/privacy/security/copyright issues are highly debated and controversial/recent in the U.S. while they are not of importance in the Kuwait. Also, another explanation might be attributed to the fact that Kuwaitis may perceive moral obligation to be of more importance in their ethical decision making than the legal environment or awareness of consequences. The third most significant variable was the awareness of consequences, which can be closely related to the legal environment.

Further Research

Further research should try to examine differences between other cultures using the same scenarios as well as verification of the results of this study. Also, different scenarios dealing with different situations should also be examined.

As for the factors influencing ethical decision-making, moral obligation was by far the most influential factor. Recognized by Ajzen (1991) as a possible determinant of intention in the TPB, this factor should be examined further and possibly included in future ethics studies. Awareness of consequences also had a strong influence on ethical decision making, and that too should be considered in future ethics studies (and possibly general behavioral studies). Also, future research should try to incorporate personal variables (such as personal characteristics and psychological traits). Previous research has found different personal variables to influence ethical decision-making (Banerjee, Cronan *et al.*, 1998; Rest *et al.*, 2000; Ajzen, 2001; Leonard and Cronan, 2001; Salter *et al.*, 2001 among others). Another area of research would be examining how Hofstede's factors influence ethical decision making in different cultures (and whether the influence is universal or dependent on each culture).

Research Limitations

There are some research limitations with this study. First of all, the use of students as subjects in the study. The use of professionals would have been a better sample, unfortunately, time and distance limitations did not permit us to use such a sample. The different procedures used in collecting the data (questionnaires versus a web-survey) might have also confounded the results of the study. Also, the use

of a scale to measure the subjects perception of the ethicalness of the scenario would have been a better measure than the ethical/unethical (yes/no) choice provided to the subjects in the questionnaire. A further limitation would have been the use of a better instrument for measuring the variables (which we can test for validity and reliability) that were used in this study.

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APPENDIX A: THE SCENARIOS

SCENARIO 1

A programmer at a bank realized that he had accidentally overdrawn his checking account. He made a small adjustment in the banks accounting system so that his account would not have an additional service charge assessed. As soon as he made a deposit that made his balance positive again, he corrected the banks accounting system.

SCENARIO 2

With approval from his boss, a person ordered an accounting program from a mail-order software company. When the employee received his order, he found that the store had accidentally sent him a very expensive word processing program as well as the accounting package that he had ordered. He looked at the invoice, and it indicated only that the accounting package had been sent. The employee decided to keep the word processing package.

SCENARIO 3

A computer programmer enjoyed building small computer applications to give his friends. He would frequently go to his office on Saturday when no one was working and use his employers computer to develop computer applications. He did not hide the

fact that he was going into the building; he had to sign a register at a security desk each time he entered.

SCENARIO 4

A computing service provider offered the use of a program at a premium charge to subscribing businesses. The program was to be used only through the service company's computer. An employee at one of the subscribing businesses obtained a copy of the program accidentally, when the service company inadvertently revealed it to him in discussions through the system (terminal to terminal) concerning a possible program bug. All copies of the program outside of the computer system were marked as trade secret, proprietary to the service, but the copy the customer obtained from the computer was not. The employee used the copy of the program after he obtained it, without paying the usage fee to the service.

SCENARIO 5

A marketing company's employee was doing piece work production data runs on company computers after hours under contract for a state government. Her moonlighting activity was performed with the knowledge and approval of her manager. The data were questionnaire answers of 14,000 public school children. The

questionnaire contained highly specific questions on domestic life of the children and their parents. The government's purpose was to develop statistics for behavioral profiles, for use in public assistance programs. The data included the respondents' names, addresses, and so forth.

The employee's contract contained no divulgement restrictions, except a provision that statistical com-

pilations and analyzes were the property of the government. The manager discovered the exact nature of the information in the tapes and its value in business services his company supplied. He requested that the data be copied for subsequent use in the business. The employee decided the request did not violate the terms of the contract, and she complied.

الملخص

أخلاقيات نظم المعلومات: مقارنة لثقافات مختلفة

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في الآونة الأخيرة ازدادت اهتمامات الباحثين بمجال الأخلاقيات المتعلقة بالإدارة. ولقد تعمقنا في هذه الدراسة في هذا المجال بالمقارنة بين الثقافات المختلفة، وبخاصة ما يتعلق منها بمجال نظم المعلومات. ولقد تمت مقارنة ثقافتين مختلفتين من حيث أخلاقيات الخطوات المتبعة في عملية اتخاذ القرار لسيناريوهات مختلفة تتعلق باستخدام نظم المعلومات، حيث تم عرض سيناريوهات تشمل قطاعات مختلفة من نظم المعلومات لعينات عشوائية تمثل ثقافتين مختلفتين. لقد شملت الاستبانة أسئلة تتعلق بمدى أخلاقية السيناريو المقدم، وكذلك العوامل المؤثرة في الوصول إلى هذا القرار. وتوضح نتائج هذه الدراسة أنه لا توجد أية فروق معنوية ما بين الثقافتين في رؤيتهما لهذه السيناريوهات، وكذلك الأسباب المؤدية لهذه القرارات. كما بينت هذه الدراسة بأن الواجب الأخلاقي للفرد يعد من أكثر الدوافع تأثيراً عند اتخاذ هذا النوع من القرارات.

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