# Chapter 29
# The Morality of Software Piracy: A Cross-Cultural Analysis

**William R. Swinyard, Heikki Rinne, and Ah Keng Kau**

## Introduction

As long as the personal computer has existed, software piracy has been an important issue. Software producers have tried just about everything to protect themselves from losses due to unauthorized copying. They have made the copying difficult, using unformatted or oddly formatted disk sectors, laser holes and burns, and special error codes. They have created software which works only with key disks or plug-in port keys. They use license-agreements or lease-contracts with probably unenforceable break-seal acceptance provisions. And through it all, ADAPSO (an anti-piracy trade association representing 750 computer and software companies) promotes an understanding of copyright law and the moral notion, "Thou Shalt Not Dupe" (ADAPSO 1984).

Despite these efforts, as the personal computer industry has grown, so has software piracy. The International Trade Commission, for example, estimates that theft of "intellectual property" costs the U.S. more than US$40 billion annually in lost sales and royalties. For software, it is estimated that one illegal copy is made for every software program sold (Bailey 1984).

Though software piracy is a troublesome issue in every corner of the globe, the popular press has singled out Asia for particular condemnation. Articles in the U.S. computer press often comment with disdain about Hong Kong's "Golden Arcade", Singapore's "Funan Center" and "People's Park," or Taipei's "Computer Alley" – retail outlets where the computer shopper can buy pirated copies of virtually any

W.R. Swinyard • H. Rinne
Institute of Business Management, Brigham Young University,
660 TNRB, Provo, UT 84602, USA

A.K. Kau
Department of Marketing, National University of Singapore, Kent Ridge, Singapore

A.C. Michalos and D.C. Poff (eds.), *Citation Classics from the Journal of Business Ethics*, Advances in Business Ethics Research 2,
DOI 10.1007/978-94-007-4126-3_29, 

copyrighted software for little more than the costs of a blank disk (see Hebditch 1986, for example). The illegal sales from these outlets are impossible to measure. Lotus Development Corporation believes that software piracy from Taiwan alone cost them lost sales of US$200 million annually (Eduardo Lachica 1989). In a single 1986 raid on one Hong Kong shopping arcade US$130,000 worth of pirated software was confiscated (Warner 1986). The shops stop making and selling pirated copies for only a few hours after such raids.

A casual reader of these articles could logically conclude that the people of these Asian nations are behaving immorally about software copyright law. Possibly even that they are immoral people. If we hold a belief – say, that Asians pirate software – we may form a belief structure that leads to broader conclusions about them (Bern 1970).[1] Are these conclusions warranted? By copying software are Asians behaving immorally? What *drives* their morality on this? How do they justify it? Is their moral development here different than that of Westerners? Or do they have similar moral development but different moral behaviors?

This paper investigates such issues. In particular, it contrasts the historical cultural development of proprietary intellectual property in Asia with that of the U.S. The piracy issue is specifically addressed using data collected in the United States and Singapore.

## Cultural Foundations

Protection legislation originated in the Western World. This legislation, which deals with patents, copyrights, trademarks, trade secrets, etc., reflects the traditional value of the West on the preservation and protection of individual creative efforts. Software can be protected through a variety of legal means. Program code has received both patent and copyright protection, but its most popular protection is under international copyright law (Harris 1985). Copyright law originated centuries ago with British common law. In the U.S. its origins are found in the first draft of the Constitution. Article I, Section 8 of that document contain these clauses:

> The Congress shall have power to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries …
> and
> To make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and all the powers vested by this constitution in the government of the United States, or in any department or officer thereof.

However, more thorough protection provided by statutory copyright law became available in 1909. These laws were strengthened with the 1976 Copyright Act (Davis 1985) and the 1980 Software Amendments to that act (Benheshtian 1986), which specifically included the visual representation of program code as appropriate to copyright.

## *Copyright Laws and the West*

Copyright and patent protection reflect a characteristic value of the Western World in general and the U.S. in particular. In the United States, individual freedom and benefits are emphasized over societal benefits. That and many other western nations generally hold that individual creative developments have individual ownership. This view is reflected widely: artists' signatures on their creative work, journalists' bylines in newspaper articles, authors' names on their work, individual claims to design or copyright ownership, individual patent ownership.

Not only have artists and authors have historically taken full credit for and signed their work, but also glass-blowers, ceramicists, silversmiths, photographers, clock-makers, leatherworkers, woodworkers and furniture-makers, welders, inventors of all kinds, and even sometime masons, cement-layers, clothing inspectors, and automobile workers.

The West's preoccupation with protecting original creative work led it to originate copyright, patent, and trade-secret legislation.

## *Copyright Laws and the East*

Asia presents quite a contrast. Asian cultures (and particularly the Chinese culture, which has dramatically influenced the culture of most Asian nations), has traditionally emphasized that individual developers or creators are obliged to share their developments with society. A Chinese proverb heralds this view: "He that shares is to be rewarded; he that does not, condemned." Indeed, third-world and Asian nations "traditionally believe that copyright is a Western concept created to maintain a monopoly over the distribution and production of knowledge and knowledge-based products" (Altbach 1988).

Barnes (1989) suggests that, "the inclination to create identical clones of a single product can be explained by [Asian] calligraphy." Becoming a master calligrapher in Japan takes countless hours of copying the works of a master until the student's work is indistinguishable from the original (Sanson 1943). Barnes (1989) points out that moveable type – not accidentally a Chinese invention – allowed exact copies of the master's original calligraphy. A likely motivation for the Chinese to invent moveable type was that it permitted them to precisely reproduce classically elegant calligraphy time after time, thus reflecting their cultural value of sharing creative work.

It is also noteworthy that in Asia books often feature both the name of the translator and the author with equal standing on the title page. Asian paintings often are signed with the name of the school that produced the work, rather than the name of the artist. Indeed, these schools typically have numerous artists, all precisely duplicating the same creative work.

We can see the legislative reflections of such values. Software was slow to achieve copyright protection in Japan and the Philippines, and it still does not exist

in Indonesia, Malaysia, and Thailand (Greguras and Langenberg 1985). And while mainland China is an attractive market for U.S. software firms, their major concern for that country is its lack of legal protection for software (Blois 1988; Greguras and Foster-Simons 1985).

And so we see that the cultural history of Asia does not generally support the notion of protecting proprietary creative work. In many Asian nations the highest compliment one can be paid is to be copied. Emulation is not only admired, it is encouraged. It is no surprise then that protection concepts would be adopted slowly.

### *Moral Decision-Making*

Asians also have a different perspective on moral decision-making than people of many western nations. Americans, in particular, tend to be more rule-oriented in their decisions than Asians, who tend to be circumstance-oriented. Swinyard et al. (1989) reported that Americans tend to make moral decisions based on fundamental value rules of right and wrong. That study found that Americans see little relativity in their moral choices; what is moral in one situation is also moral in another. The research concluded that they are relatively rule-oriented or deontological in their moral decisions.

By contrast, the study found that Asians (at least, Singaporeans) seem to make moral decisions less on rules and more on the basis of the consequences of their moral behavior. Thus, it concluded that Asians seem to follow a more utilitarian ethic. This tendency, too, suggests that Americans would be more likely be obedient to copyright laws than Asians, who would more carefully examine the situation, outcomes, or benefits which would result from a copyright violation.

## Hypotheses

As a result of the above discussion we are led to expect that,

1. Americans will have both attitudes and intentions which are more congruent with copyright laws than Asians, and
2. Asians will tend to base their moral decisions on the outcomes of the behavior, while Americans will tend to base their moral decisions on the nature of the decision itself.

## Methodology

### *Sample*

Our study uses a pilot sample of 371 student subjects: 221 attending a major western U.S. university and 150 attending the National University of Singapore.

Extensively pretested versions of a questionnaire were administered in classroom settings to students all across both campuses. The questionnaires were completed in private and subjects were assured of complete anonymity in their responses. The courses chosen typically contained students of all major fields of study in the respective schools of management for the two universities. While the sample does not represent "Americans" and "Singaporeans," it does reasonably represent the business management students of two Universities within those countries.

## *Measures of Cognition, Attitudes, and Intentions*

The questionnaire measured cognition of or *knowledge* toward pirating copyrighted software using three summed statements. Using five-point scales (anchored with 1 = "strongly disagree" and 5 = "strongly agree"), subjects were asked to indicate their view toward these statements:

- Making a copy of copyrighted software and giving it to a friend is illegal,
- When you buy a copyrighted software program, you usually are only buying the right to *use* the software. The program itself remains the property of the publisher, and
- It is illegal to copy "public domain" software (reverse scored).

Three measures were also summed to obtain subjects' *attitudes* toward software copyright laws:

- I would feel guilty about even *having* unauthorized copies of copyrighted software,
- I would not feel badly about making unauthorized copies of software (reverse scored), and
- I would feel badly about giving even my close friends copies of copyrighted software.

And, similarly, three measures were summed to obtain their *behavioral intentions* toward these laws:

- I wouldn't hesitate to make a copy of a copyrighted software program for my own personal use (reverse scored),
- I wouldn't hesitate to accept a copy of copyrighted software if someone offered (reverse scored), and
- I would never offer a friend a copy of a copyrighted software program.

For these three measures, then, higher scale values correspond with greater *knowledge* of copyright law, and *attitudes* and *behavior* more consistent with software copyright law.

## *Measures of Personal Utility*

Tradeoff analysis was used to measure personal utility. The first moral reasoning study to use tradeoff analysis was that by Swinyard et al. (1989). Tradeoff analysis

**Table 29.1** Decision alternatives

| |
|---|
| Do not copy the software and do not use it, |
| Copy the program and destroy the copy after using it for the assignment, |
| Copy the program and keep a copy for use on other projects, or, |
| Copy the program and sell copies to other people that ask for it. |

is a powerful method of analysis most often used to measure the relative importance of one product attribute (say, the quality or durability of a product) compared with another (for example, price). Tradeoff analysis requires that people ask themselves, "Are some attributes so important to me that I should sacrifice others to get them?" It takes into consideration context and situational contingencies.

It also fits comfortably with the requirements of a circumstantial study of moral decision-making. For example, suppose a manager of research is faced with both a depleted budget and a need for a second copy of a new but costly business software package to complete a project. She has some choices. Among them: she can make the sacrifice and buy the package, perhaps by using budget allocated to another necessary area, but escape any threat of prosecution, or spasm of conscience. Or she can make an illegal duplicate copy of the software package and risk an entanglement with the law or even her own boss, but preserve her meager budget. If the project had important outcomes for her, she would undoubtedly be more inclined to *somehow* obtain the software. What should she do? Tradeoff analysis permits the computation of her *utility* or preference level for her alternative actions, given the results or outcomes that face her.

Similar to this example, our questionnaire asked the subjects to role-play each of three different scenarios. Each scenario placed the subjects in charge of an important business project which could be successfully completed with some new software, but there was no money available for its purchase. The scenarios explained, however, that a friend who owns this software has offered to let it be illegally copied. Subjects were given several alternatives in dealing with this software dilemma, shown in Table 29.1.

But each alternative carried with it some consequences or outcomes or benefits for the completion of a project in which the copied software will be used. The three scenarios differed, in fact, only in these outcomes (shown in Table 29.2), which were those having personal benefits, family benefits, or community benefits. For each of these sets of benefits, some outcomes may be viewed as a more attractive incentive to pirate the software, while others are not. One scenario shown to subjects is found in Appendix 1.

## *Moral Acceptability and Tradeoff Measures*

In each scenario subjects completed a measure of "moral acceptability" for each of the four alternative decisions shown in Table 29.1 (scaled on a seven-point "acceptable" to "unacceptable" scale (with "7" as "acceptable")). This is illustrated

**Table 29.2** Possible outcomes from successful completion of the project

*Personal Benefits*

1. Provide you with a significant promotion and raise – a much better position and a 50% salary increase, or it could
2. Provide you with a modest promotion and raise – a somewhat better position and a 10% salary increase or it could
3. Not affect your job, position, or salary with the company

*Family Benefits*

1. A large financial reward – one which will totally pay all family bills, and completely relieve your family from its critical financial condition, or
2. A modest financial reward – one which will pay some of the family bills, and provide temporary relief from your family's critical condition, or
3. No financial reward – thus providing no relief for your family's critical financial condition.

*Community Benefits*

1. Significantly benefit thousands of people in your community, or
2. Significantly benefit hundreds of people in your community, or
3. Provide no benefits to people in your community.

in Appendix 1. After reading the scenario, subjects were then asked to complete a 16-cell "tradeoff" table having the moral choices in the columns, and the outcomes (Table 29.2) in the rows. One tradeoff table, using "personal benefits" as the outcomes, is shown in Appendix 2.

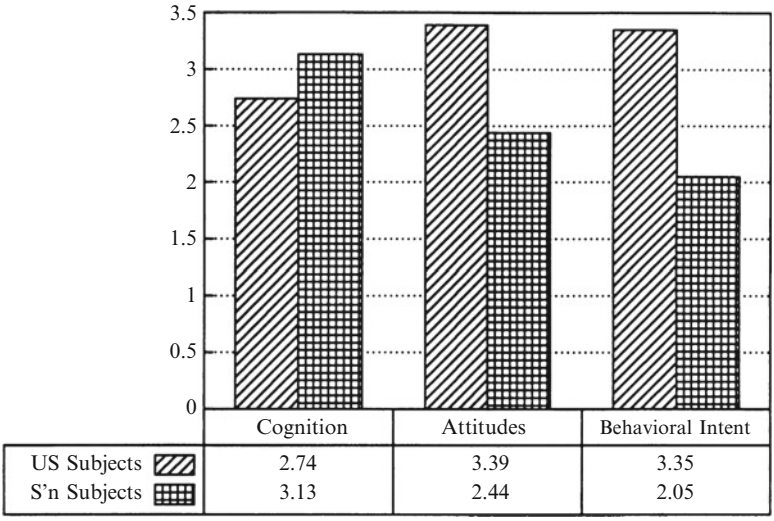
## Results

### *Cognition, Attitude, and Intentions Measures*

As shown in Fig. 29.1, compared with the U.S. group, the Singaporean subjects were more *knowledgeable* about software copyright law ($t = 4.70$, $p < 0.001$). Despite this however, their attitudes were *less* supportive of those laws ($t = 7.78$, $p < 0.001$). And their behavioral intentions were consistent with their attitudes – the Singaporeans were significantly more inclined to make pirated copies of software than the Americans ($t = 10.59$, $p < 0.001$). These data support our first hypothesis – that Americans will have attitudes and intentions more congruent with copyright laws than Asians.

### *Moral Acceptability*

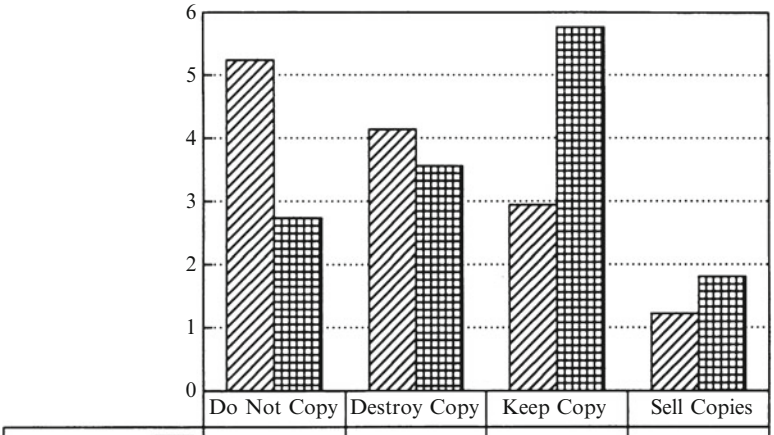
Figure 29.2 provides further support for the first hypothesis. This Figure shows that the U.S. subjects differed from the Singaporeans on measures of moral acceptability. Of the four decision measures shown in Table 29.1, the two groups were similar in




| | Cognition | Attitudes | Behavioral Intent |
|---|---|---|---|
| US Subjects | 2.74 | 3.39 | 3.35 |
| S'n Subjects | 3.13 | 2.44 | 2.05 |

N - 221 (US), 150(singapore)

**Fig. 29.1** Response toward software copying, cognition, attitudes, behavioral intent




| | Do Not Copy | Destroy Copy | Keep Copy | Sell Copies |
|---|---|---|---|---|
| US Subjects | 5.24 | 4.14 | 2.94 | 1.22 |
| S'n Subjects | 2.73 | 3.56 | 5.76 | 1.81 |

N-221 (US), 150 (Singapore)

**Fig. 29.2** Moral acceptability

their evaluations of the "destroy copy" and "sell copies" decisions ("copy the program and destroy the copy after [use]": $t = 0.85$, n.s. and "copy the program and sell copies": $t = 0.056$, n.s.). But "do not copy" and "keep copy" were rated very differently.

**Table 29.3** Tradeoff table results

| Software alternatives | Do not copy or use | Copy, but destroy after use | Copy and keep a copy | Copy and sell copies | |
|---|---|---|---|---|---|
| *Outcome for you:* | 1 | 2 | 5 | 10 | –U.S. |
| Benefit thousands of people in your community | 5 | 2 | 1 | 6 | –Asian |
| Benefit hundreds | 3 | 4 | 7 | 11 | –U.S. |
| of people in your community | 7 | 4 | 3 | 8 | –Asian |
| Provide no benefit | 6 | 8 | 10 | 12 | –U.S. |
| to people in your community | 11 | 10 | 9 | 12 | –Asian |

The Singaporeans found "copy the program and keep a copy . . ." significantly *more* acceptable ($t = 3.53$, $p < 0.001$), and "do not copy the software" significantly *less* acceptable than the Americans ($t = 3.58$, $p < 0.001$).

## *Tradeoff Utilities*

The tradeoff results reflect the above tendencies. For example, a typical tradeoff table is shown in Table 29.3 for the U.S. and the Asian groups.

As Table 29.3 shows, in completing the tradeoff table the U.S. group tended to favor the columns. In particular, their low numbers in the first column show that they preferred the "do not copy" alternative over all others, followed next by the "copy and destroy" column. Indeed, five of their first six preferences are in these first two columns. Thus, the U.S. students showed preference for their "decisions" over the "outcomes." That is, in making a moral decision, the U.S. group was more influenced by the legality of the copying than its impact on people.

The Singaporean subjects, on the other hand, specifically favored the "copy and keep a copy" over the other alternatives. They also tended to favor the rows – their lower numbers in Table 29.3 show concern toward the row variables of having a desirable outcome, rather than showing compliance with copyright laws. Thus, the Singaporean students showed preference for the "outcomes" over the "decisions."

The calculated tradeoff utilities from these data (and the two other tradeoff tables which were completed similarly) confirm this. The utilities are shown in Fig. 29.3.[2] These utilities are simply calculated representations of what we have already observed in Table 29.3. For example, because the U.S. subjects tended to favor the "do not copy" column more than the Singaporeans, it is no surprise to us that Fig. 29.3 shows that the calculated utilities for "do not copy" are substantially greater for the U.S. subjects than for the Singaporeans. And for "copy and keep a copy", the utility is somewhat greater for the Singaporeans than for the Americans.

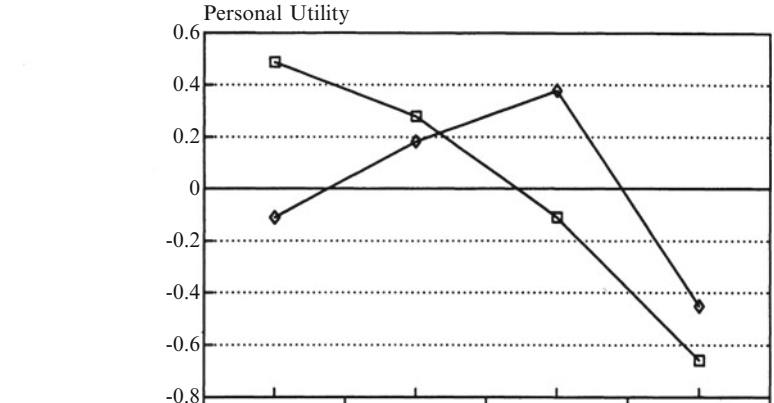


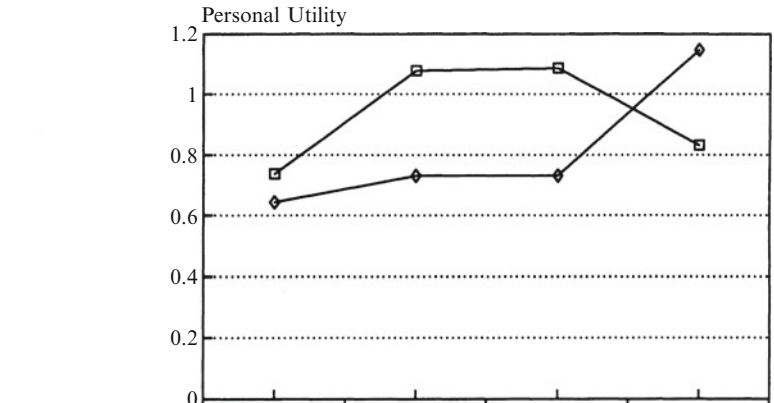

**Fig. 29.3** Utility of copying decision

The calculated tradeoff utilities representing the importance of the copying decision versus the outcome are shown in Fig. 29.4. Figure 29.4 plots four points along the horizontal axis. The first three of these – "self," "family," and "community" – represent utilities or importance for the *outcomes* to come from copying the software:

- personal benefits, or benefits to *self*
- *family* benefits, and
- *community benefits*.

The fourth point on the horizontal axis of Fig. 29.4 – "copy" – represents the utility or importance of the copying *decision*. Thus, Fig. 29.4's utility shown for "copy" represents the value or importance subjects are placing on the legality of the copying decision over the outcomes. On the other hand, the utilities shown for "self", "family", and "community" represent the value or importance subjects are placing on the actual outcomes of the project.

And so we see that, for the Singaporean subjects, the higher utilities in Fig. 29.4 show their greater interest in the outcomes or benefits of the copying decision than in the legality of the copying. That is, in making a moral decision, the Singaporean group was more influenced by the benefits of their actions on self, family, or community than by the legality of copying the software. By contrast, the U.S. group was more influenced by the legality of the decision than by the benefits of the decision.




| | Self | Family | Community | Copy |
|---|---|---|---|---|
| US Subjects | 0.643 | 0.731 | 0.731 | 1.147 |
| S'n Subjects | 0.737 | 1.077 | 1.086 | 0.831 |

-221 (US), 150(singapore)

**Fig. 29.4** Importance of decision vs outcome

We view these results in support of our second hypothesis – that Asians will base their moral decisions more on the outcomes of the behavior, while Americans will base their moral decisions more on the nature of the decision itself.

## Discussion and Conclusions

While Asians seem to have a more casual attitude than Americans toward software piracy, those in the West must understand that it is not simple law-breaking we are dealing with. Copyright and other protection legislation goes firmly against the grain of Asian culture, which supports the concept of sharing, not protecting, individual creative work. One should not expect Asians to quickly support copyright legislation, nor to immediately embrace it in their attitudes or behavior.

Meanwhile, police-action enforcements of copyright laws are being used in Asia. Despite the fact that many Asians are behaving illegally, to conclude that they are behaving immorally is inappropriate. More accurately, it appears that their moral values respecting this matter are simply very different from Westerners. Software copyright runs afoul of deeply rooted and somewhat fundamental Asian-cultural beliefs. Not only does their culture provide *less* support for copyright legislation, it provides *more* support for the human benefits which might come from the piracy.

We should expect relatively little voluntary compliance, until the Asian cultural norms change. Culture changes slowly, and people in the U.S. and other Western nations must have patience with Asia as it changes. Achieving Asian congruence of thought on it will likely take years; perhaps even generations.

## Appendix 1

### *The Scenario*

Suppose you are working for a private company on a government consulting project. The timing and the completion of the project is critical, and you are committed to the project.

You have just found out that there is *a computer software program which is essential to finish the project correctly and on time*. The software is copyrighted and costs $800. However, the company has not budgeted for the software and is not willing to purchase it.

You have a friend who has purchased this software program. Your friend has offered to let you copy the programs and use the copy however you wish.

### *Alternatives*

You have the four alternatives listed below available for you. Please check the space which best reflects your personal view how acceptable or unacceptable each alternative is for you.

| Acceptable | Unacceptable | |
|---|---|---|
| – | – | A. Do not copy the software and do not use it. |
| – | – | B. Copy the program and destroy the copy after using it for the assignment. |
| – | – | C. Copy the program and keep a copy for use on other projects. |
| – | – | D. Copy the program and sell copies to other people that ask for it. |

### *Outcomes for Your Decision*

Suppose that if you get the project finished correctly and on time, the following three alternatives exist for you. The successful completion of the project could:

1. Provide you with a significant promotion and raise – a much better position and a 50% salary increase, or it could
2. Provide you with a modest promotion and raise – a somewhat better position and a 10% salary increase, or it could
3. Not affect your job, position, or salary with the company.

## Appendix 2

### *Tradeoff Table for the Scenario*

Now please consider both the four alternatives (A, B, C, and D) available to you with regards to the software, and the three personal outcomes (1, 2, and 3) and indicate the order of your preference for each combination, by numbering each box from 1 to 12:

| Alternatives | | | | |
|---|---|---|---|---|
| | Do not copy or use | Copy, but destroy after use | Copy and keep a copy | Copy and sell copies |
| *Outcome for you:* Provide you with a significant promotion and raise | | | | |
| Provide you with a modest promotion and raise | | | | |
| Not affect your position with the company | | | | |

## Notes

1 In this case, the belief structure would be "vertical" and resemble a syllogism:
1. The Asians pirate software.
2. Software piracy is both illegal and immoral, and so …
3. The Asians must be immoral law-breakers.

2 While tradeoff analysis provides no difference tests of significance, it does provide a "badness of fit measure." Measures above 0.2 are to be considered unreliable. Our measures were all at 0.03 or lower, and no more than 6.5 inconsistencies out of a possible 198 comparisons, which suggests a very good fit with the original data.

## References

ADAPSO. 1984. *Thou shalt not dupe*. Arlington: ADAPSO.
Altbach, Philip G. 1988. Economic progress brings copyright to Asia. *Far Eastern Economic Review* 139(9): 62–63.
Bailey, Douglas M. 1984. A war of attrition: Software companies vs crafty pirates. *New England Business* 6(6): 22–23.
Barnes, Howared W. 1989.Cost leadership and differentiation: Contrasting strategies of Japan and the Federal Republic of Germany. Working Paper, Brigham Young University, Provo.
Benheshtian, Mehdi. 1986. Computer copyright law. *Journal of Systems Management* 37(9): 6–11.
Bern, Daryl. 1970. *Beliefs, attitudes, and human affairs*. Belmont: Brooks/Cole.
Blois, Keith. 1988. Supermarkets in China. *Retail & Distribution Management* 16(1): 40–42.
Davis, G.Gervaise. 1985. *Software protection*. New York: Van Nostrand Reinhold.

Eduardo, Lachica. 1989. Trade thievery: U.S. companies curb pirating of some items but by no means all. *Wall Street Journal* (March 16).

Greguras, Fred, and Frances Foster-Simons. 1985. Software protection in the People's Republic of China. *Information Age* 7(4): 220–228.

Greguras, Fred, and Peter M. Langenberg. 1985. Trends in proprietary protection in Asia and the Pacific Region. *Information Age* 7(1): 3–9.

Harris, Thorne D. 1985. *The legal guide to computer software protection*. Englewood Cliffs: Prentice-Hall.

Hebditch, David. 1986. Pirate's paradise. *Datamation* 32(17): 71–72.

Sanson, G.B. 1943. *Japan: A short cultural history*. New York: Appleton.

Swinyard, William R., Thomas L. DeLong, and Peng Sim Cheng. 1989. The relationship between moral decisions and their consequences: A tradeoff analysis approach. *Journal of Business Ethics* 8: 289–297.

Warner, Edward. 1986. U.S. attempts to take wind from Asian software pirates' sails. *Computerworld* 20(18): 123.