

Are Women More Ethical than Men?

Andrew Sikula, Sr.

Adelmiro D. Costa

Introduction

There has been much concern, opinion, and data in recent years documenting the decline in ethical behavior of people in America today (Magnet, 1986). This is no longer a debate as it once was (Behrman, 1988). Empirical studies attempting to statistically use data to support their conclusions are fairly consistent in reaching these same conclusions (Walton, 1988). Popular opinion polls among the general public are also saying the same thing, namely, that morals in general are declining in America, and that, specifically, business ethics have been on the decline for several decades—although there is some debate about whether this is changing now in the early 1990s (Ricklefs, 1983 and 1983; Bowen, 1987).

A subset issue related to the larger documented ethical decline phenomena is the relatively un-researched but often conjectured question of whether women are more ethical than men. The general feeling among almost anyone you ask is that females are more moral (Jackall, 1988). Both men and women today commonly believe that females are more ethical than males. Studies are available which document that most DUIs (driving under the influence of alcohol) are males (95%), and that most incarcerations (94%) and death row inmates are men (Stephenson, 1992). Crimes, especially violent crimes, are much more likely to be perpetrated by men rather than women. Other studies report gender differences in the proclivity for unethical behavior (Betz *et al.*, 1989). Harris (1989) believes that male and female business students have different ethical value-based decision processes. Kidwell *et al.* (1987) report that male and female managers have different “perceptions.” These and other relatively recent studies are available attempting to differentiate between male and female ethical “beliefs” (Tsalikis and Oritz-

Buonafina, 1990) and “decision rules” (Galbraith and Stephenson, 1993; Gellerman, 1986). In contrast, this article reports that the idea that women are more ethical than men is not supported by the empirical data of this particular study of a large sample of California State University college-aged students. This study uses four different value measures and four different nonparametric statistical tests of probability and significance to conclude that women are *not* more ethical than men. They may have historically been so inclined, and perhaps even today may still be when fully matured. But among today’s youth of normal college age, there are no significant differences between the ethical values of male and female students (in this sample of Northern California university enrollees).

Business ethics

People who assume that women are inherently more ethical than men should consider the following facts. Business school enrollments have expanded and exploded during the 1960s, 1970s, and 1980s to the point where at both the undergraduate and graduate levels, business is the most popular major. This growth is largely due to women entering the business schools. Women now constitute half of all business students at the baccalaureate level, and a third of all business MBA enrollees nationally. In addition, women now constitute over half of the national work force although they do not yet make up half of all top corporate officerships. During these last 30 years of time, the ethical practices of business have been going down—not up (Harris, 1986). The authors are not herein suggesting that women are *less* ethical than men, they are merely setting the stage for stating that females are *not more* ethical than

males. During the last 30 years, business students have been taught "situational ethics" (McNichols and Zimmerer, 1985). Business student concerns for the environment and ethics have not been stressed much until the 1990s (Peterson *et al.*, 1991; Beltramini *et al.*, 1984). Models for managing ethical behavior in business organizations are only now beginning to be commonly seen (Stead *et al.*, 1990).

Enter moral maximization

Increasingly, business school professors have been convinced that ethical training must become part of what business schools teach (DeGeorge, 1987; Conry and Nelson, 1989). Some have gone so far as to state that "moral" maximization must replace "profit" maximization as the proper mission of all institutions, whether they are public or private, non-profit or profit, small or large (Sikula, 1989 and 1992). Elsewhere, the theory of "moral management" and "moral maximization" have been thoroughly explained and documented (Sikula, 1989 and 1992). "Moral Management" is defined as:

A state of ethical excellence and the practice and implementation of the moral maximization principle.

"Moral Maximization" is defined as:

Behaviors, actions, and decisions which result in the greatest enhancement of individual and collective human rights, freedoms, equity, and development.

The Rokeach Value Survey

For over 25 years now, the Rokeach Value Survey has been a commonly used research instrument to measure human beliefs, attitudes, and values (Rokeach, 1968 and 1968). Personal and organizational change have also frequently been measured using the Rokeach instrument (Rokeach, 1968). Human values and value systems have been studied via this research methodology for more than a quarter of a century (Rokeach, 1971; Sikula, 1972). Some early value research has indirectly used the Rokeach Value Survey to measure "religious values," but to the best of these authors' knowledge, this study is the first attempt to define "ethical values" in terms of the Rokeach Value Survey (Sikula, 1992).

The Rokeach Value Survey consists of two parts: 18 terminal ends and 18 instrumental means. Each set of 18 values is arranged in alphabetical order. Respondents are asked to arrange the 18 values in order of their importance as guiding principles of life. Number 1 is the most important, 2 is the second most important, *etc.*, until number 18 indicates the least important value. Table I shows the 18 Rokeach Terminal Ends, and Table II indicates the 18 Rokeach Instrumental Means.

Ethical values

The authors have decided to define "ethical values" in terms of the Rokeach Value Survey. "Ethical values" are a subset of the terminal ends and the instrumental means. Two terminal ends and two instrumental means constitute "ethical values" as show in Table III. For definitional purposes: "ethical values" consist of *Equality Freedom, Honest, and Responsible*. Since "moral maximization" is defined in terms of four components, namely: human rights, human freedoms, human equity, and human development, analogously, four ethical values from the 2 Rokeach lists of 36 total values have been selected

TABLE I
Rokeach value survey: terminal ends

_____	A Comfortable Life (a prosperous life)
_____	An Exciting Life (a stimulating, active life)
_____	A Sense of Accomplishment (lasting contribution)
_____	A World at Peace (free of war and conflict)
_____	A World of Beauty (beauty of nature and the arts)
_____	Equality (brotherhood, equal opportunity for all)
_____	Family Security (taking care of loved ones)
_____	Freedom (independence, free choice)
_____	Happiness (contentedness)
_____	Inner Harmony (freedom from inner conflict)
_____	Mature Love (sexual and spiritual intimacy)
_____	National Security (protection from attack)
_____	Pleasure (an enjoyable, leisurely life)
_____	Salvation (saved, eternal life)
_____	Self-Respect (self-esteem)
_____	Social Recognition (respect, admiration)
_____	True Friendship (close companionship)
_____	Wisdom (a mature understanding of life)

TABLE II
Rokeach value survey: instrumental means

_____	Ambitious (hard-working; aspiring)
_____	Broadminded (open-minded)
_____	Capable (competent, effective)
_____	Cheerful (lighthearted, joyful)
_____	Clean (neat, tidy)
_____	Courageous (standing up for your beliefs)
_____	Forgiving (willing to pardon others)
_____	Helpful (working for the welfare of others)
_____	Honest (sincere, truthful)
_____	Imaginative (daring, creative)
_____	Independent (self-reliant, self-sufficient)
_____	Intellectual (intelligent, reflective)
_____	Logical (consistent, rational)
_____	Loving (affectionate, tender)
_____	Obedient (dutiful, respectful)
_____	Polite (courteous, well-mannered)
_____	Responsible (dependable, reliable)
_____	Self-Controlled (restrained, self-disciplined)

which best relate and compare to these four components as shown in Table III.

Empirically defining moral maximization

We are now at the point where we can specifically define moral maximization. Operationally and empirically, moral maximization is define as:

The individual and collective priority given to the ethical values (*Equality, Freedom, Honest, and Responsible*) within the Rokeach Value Survey.

TABLE III
Moral Maximization is defined and measured in terms of four Rokeach Ethical Values

Moral Maximization	Rokeach Value Survey
Definitional components	Related ethical values
Rights	Responsible
Freedoms	Freedom
Equity	Equality
Development	Honest

Purposes of this study

The purposes of this study are:

1. To empirically define and measure “ethical values.”
2. To determine using student samples whether males and females have different ethical values.

Sample description

The sample used is 211 students in three different sections of the introductory, junior level Management and Organization course taught by the same professor at California State University, Chico during the Spring Semester of 1992. Each student filled out a Rokeach Value Survey twice, once about a month into the semester, and again exactly 10 weeks later. The professor teaching the course designed the class so that it contained a heavy dose of ethical and moral information, although the basic structure of the course remained organized and was presented using the management processes and functions as the basic subject matter and format of the course. The management processes of planning, organizing, controlling, leading, staffing, motivating, communicating, and decision making were topics within the course along with appropriate introductory, history, environmental, and international subjects. Each of these above mentioned topics lasted about one week, but contained at least some discussion of the ethical aspects and moral implications of these subjects. From the 211 student subjects, 171 usable pairs of Rokeach Value Surveys were produced. Forty potential before and after matched survey pairs were lost because students either intentionally or unintentionally would not provide their correct social security numbers which were used instead of names to identify respondents. Of the 171 usable matched surveys, 98 were males and 73 were females.

Course and 10 week intervention

The Management and Organization course vehicle used to deliver the ethics training to respondents was a traditional topic, introductory management course. However, the discussion of the topics and the mate-

rials read included ethical and moral dimensions. The main text used had an ethics theme and subtitle. Videos and movies shown were also management situations which stressed ethical analyses. Although some of this ethical emphasis appeared during the first month of the course, most of it was purposively implemented and given during the key 10 week period between administrations of the Rokeach Value Survey. In addition, at the end of the class, each student had to write a 5–7 page term paper about his or her “Personal Philosophy of Management and Code of Ethics.” Furthermore, the professor who taught the course frequently brought in current newspaper and magazine articles illustrating ethical and moral management problems, and he encouraged students to do likewise.

Statistical analysis

Because nominal ranking scales instead of ordinal intervals are involved when using the Rokeach Value Survey, nonparametric statistics rather than parametric statistical analysis must be used when comparing the two groups in this study — namely: male versus female students. Several references are provided for the reader interested in becoming more familiar with nonparametric statistical tests (Conover, 1980; Hayek, 1969; Lehmann, 1975; Quade, 1966).

In order to answer the questions raised in this study and to provide the appropriate statistical analysis, the following four nonparametric tests were applied to determine the differences in rankings between the male and female students. Four different tests were used and are reported in this study in order to support the constancy and reliability of the findings. In terms of testing for the significance of the findings and probabilities at the traditional level of 0.05, these four nonparametric tests almost always gave the same conclusions, and thus reinforced one another in terms of the reported results of this research study. The following four nonparametric procedures and tests were used:

1. *Wilcoxon Z* scores (rank sums) using a 2-sample test with normal approximation and continuity correction.

2. *Kruskal-Wallis* test with a chi-square approximation.
3. *Median 2-sample* test with normal approximation.
4. *Median 1-way* analysis with a chi-square approximation.

Results

Tables IV and V report the results of the initial Rokeach Value Survey for males and females respectively. Medians, quartile deviations, and ranks are reported for all 18 “terminal ends.” Tables VI and VII also reveal the data from the initial Rokeach Value Survey for males and females respectively. However, now medians, quartile deviations, and ranks are recorded for all 18 “instrumental means.” By merely eyeballing the terminal rankings in Tables IV and V, the only non-ethical terminal values that

TABLE IV
Rokeach value initial survey

Value	Terminal Ends Males, N = 98		
	Median	Quartile Deviation	Rank
A comfortable life	7.5	5.0	6
An exciting life	9.5	4.5	11
A sense of accomplishment	9.0	3.0	9
A world at peace	11.0	5.0	12
A world of beauty	12.0	3.0	15
Equality	11.0	4.0	12
Family security	5.0	3.5	1
Freedom	7.0	4.0	4
Happiness	6.0	3.0	2
Inner harmony	9.0	4.0	9
Mature love	8.0	4.5	7
National security	14.5	3.0	17
Pleasure	11.0	3.5	12
Salvation	16.0	3.0	18
Self-respect	6.0	3.0	2
Social recognition	14.0	3.0	16
True friendship	7.0	3.0	4
Wisdom	8.0	3.5	7

Male medians, quartile deviations, and ranks for Rokeach terminal values in the initial survey.

TABLE V
Rokeach value initial survey

Value	Terminal Ends Females, N = 73		
	Median	Quartile Deviation	Rank
A comfortable life	9.0	4.5	8
An exciting life	13.0	3.0	14
A sense of accomplishment	9.0	3.0	8
A world at peace	7.0	4.0	4
A world of beauty	13.0	3.0	14
Equality	10.0	4.5	11
Family security	4.0	2.5	1
Freedom	7.0	4.0	4
Happiness	4.0	3.0	1
Inner harmony	8.0	4.0	7
Mature love	9.0	3.0	8
National security	14.0	3.0	16
Pleasure	12.0	3.0	13
Salvation	15.0	6.0	18
Self-respect	5.0	3.0	3
Social recognition	14.0	2.0	16
True friendship	7.0	2.5	4
Wisdom	11.0	3.0	12

Female medians, quartile deviations, and ranks for Rokeach terminal values in the initial survey.

appear to be quite different (a spread of 5 or more ranks) between men and women are *A World at Peace* and *Wisdom*. Glancing at Tables VI and VII for non-ethical instrumental values shows *Courageous*, *Forgiving*, *Helpful*, and *Logical* to have wide spreads (5 or more ranks) between the male and female rankings. When these six values are tested statistically for their significant differences, the results shown in Table VIII are derived from the four probability testing procedures. The authors are basing their conclusions on solid empirical data which translated means that all four of the probability and significance tests must be passed at the 0.05 level (or greater significance) in order to be declared a "significant" difference. Accordingly, of the six values looked at, only one terminal value, *A World at Peace*, and two instrumental values, *Forgiving* and *Helpful* pass all 4 tests.

Table IX reports the same data classifications for the four "ethical" Rokeach values. Surprisingly,

TABLE VI
Rokeach value initial survey

Value	Instrumental Means Males, N = 98		
	Median	Quartile Deviation	Rank
Ambitious	8.0	4.0	5
Broadminded	8.0	4.0	5
Capable	9.5	3.5	9
Cheerful	10.0	3.5	10
Clean	15.0	3.0	17
Courageous	9.0	5.0	7
Forgiving	12.5	3.5	15
Helpful	11.5	3.5	14
Honest	4.0	3.0	1
Imaginative	12.5	3.0	15
Independent	9.0	4.5	7
Intellectual	7.5	4.0	4
Logical	10.0	4.5	10
Loving	6.0	3.5	2
Obedient	15.0	3.0	17
Polite	10.0	3.5	10
Responsible	6.0	3.0	2
Self-Controlled	10.0	4.5	10

Male medians, quartile deviations, and ranks for Rokeach instrumental values in the initial survey.

Table IX reports that women are significantly more *Responsible* than men! This conclusion is supported by the four significant tests. However, the authors do not include this finding as a major conclusion in this study because, as will be seen shortly, this same result is not achieved in the repeated survey. Both males and females rank *Responsible* as the 2nd most important instrumental value. The four probability tests determine that this is significant based on the frequency distributions of all rankings (which are not reported herein) and the median spread of 2.0 and the quartile deviation spread of 4.0 between males and females reported previously in Tables VI and VII.

Repeated results

Let us look at all of this analysis again-but now

TABLE VII
Rokeach value initial survey

Value	Instrumental Means Females, N = 73		Rank
	Median	Quartile Deviation	
Ambitious	6.0	3.0	4
Broadminded	9.0	3.5	7
Capable	10.0	2.5	9
Cheerful	11.0	4.0	12
Clean	15.0	3.0	16
Courageous	11.0	3.5	12
Forgiving	8.0	4.0	5
Helpful	10.0	3.0	9
Honest	2.0	2.5	1
Imaginative	15.0	3.0	16
Independent	8.0	4.0	5
Intellectual	9.0	4.0	7
Logical	12.0	3.5	15
Loving	5.0	3.5	3
Obedient	15.0	3.0	16
Polite	11.0	4.0	12
Responsible	4.0	2.0	2
Self-Controlled	10.0	3.5	9

Female medians, quartile deviations, and ranks for Rokeach instrumental values in the initial survey.

remeasured 10 weeks later. The repeated survey was done for verification purposes and other reasons reported by the authors elsewhere but not germane to this analysis.

Tables X and XI report the results of the repeated Rokeach Value Survey for males and females respectively. Medians, quartile deviations, and ranks are reported for all 18 "terminal ends." Tables XII and XIII also reveal the data from the repeated Rokeach Value Survey for males and females respectively. However, now medians, quartile deviations, and ranks are recorded for all 18 "instrumental means." By again merely eyeballing the terminal rankings in Tables X and XI, the only non-ethical terminal values that appear to be quite different (a spread of 5 or more ranks) between men and women are *A Comfortable Life*, *An Exciting Life*, and *A World at Peace*. Glancing at Tables XII and XIII for non-ethical instrumental values shows *Cheerful*, *Courageous*, *Forgiving*, *Helpful*, *Imaginative*, and *Logical* to have wide spreads (5 or more ranks) between the male and female rankings. When these ten values are tested statistically for their significant differences, the results in Table XIV are derived from the four probability testing procedures. Remember that the authors are basing their conclusions on solid empirical data which translated means that all four of the

TABLE VIII
Male and female values

Rokeach Value	98 Males Rank	73 Females Rank	Significant Differences Initial Survey			
			Wilcoxon	Kruskal-Wallis	P R O B A B I L I T Y	
					Median 2-Sample	Median 1-Way
<i>Terminal</i>						
A World						
At Peace	12	4	0.0059	0.0059	0.0009	0.0009
Wisdom	7	12	0.0041	0.0041	0.1723	0.1723
<i>Instrumental</i>						
Courageous	7	12	0.2199	0.2193	0.3113	0.3113
Forgiving	15	5	0.0013	0.0013	0.0081	0.0081
Helpful	14	9	0.0207	0.0206	0.0157	0.0157
Logical	10	15	0.0191	0.0190	0.1120	0.1120

Significance levels of male and female value differences in the initial survey.

TABLE IX
Male and female values

		(In) Significant Differences Initial Survey				
		P R O B A B I L I T Y				
Rokeach Value	98 Males Rank	73 Females Rank	Wilcoxon	Kruskal-Wallis	Median 2-Sample	Median 1-Way
<i>Terminal</i>						
Equality	12	11	0.11	0.11	0.23	0.23
Freedom	4	4	0.28	0.28	0.48	0.48
<i>Instrumental</i>						
Honest	1	1	0.18	0.18	0.07	0.07
Responsible	2	2	0.01	0.01	0.01	0.01

(In) significant levels of male and female ethical value differences in the initial survey.

TABLE X
Rokeach value repeated survey

Value	Terminal Ends Males, N = 98		
	Median	Quartile Deviation	Rank
A comfortable life	8.0	4.0	5
An exciting life	9.5	5.0	10
A sense of accomplishment	10.0	3.5	13
A world at peace	12.0	5.0	13
A world of beauty	13.0	3.5	15
Equality	12.0	4.0	13
Family security	5.0	2.5	1
Freedom	7.0	3.5	3
Happiness	6.0	3.0	2
Inner harmony	8.0	4.5	5
Mature love	9.0	4.0	9
National security	14.0	3.5	17
Pleasure	10.0	4.0	11
Salvation	16.0	3.5	18
Self-respect	7.0	3.5	3
Social recognition	13.0	3.5	15
True friendship	8.0	4.0	5
Wisdom	8.5	4.0	8

Male medians, quartile deviations, and ranks for Rokeach terminal values in the repeated survey.

TABLE XI
Rokeach value repeated survey

Value	Terminal Ends Females, N = 73		
	Median	Quartile Deviation	Rank
A comfortable life	10.0	4.5	11
An exciting life	14.0	3.5	16
A sense of accomplishment	11.0	4.0	12
A world at peace	8.0	4.5	5
A world of beauty	12.0	3.5	13
Equality	9.0	3.5	7
Family security	6.0	3.0	3
Freedom	6.0	3.0	3
Happiness	5.0	3.0	1
Inner harmony	9.0	5.5	7
Mature love	9.0	4.0	7
National security	13.0	4.5	15
Pleasure	12.0	3.0	13
Salvation	14.0	6.0	16
Self-respect	5.0	3.0	1
Social recognition	15.0	2.5	18
True friendship	8.0	2.0	5
Wisdom	9.0	3.5	7

Female medians, quartile deviations, and ranks for Rokeach terminal values in the repeated survey.

TABLE XII
Rokeach value repeated survey

Value	Instrumental Means Males, N = 98		
	Median	Quartile Deviation	Rank
Ambitious	6.0	4.0	2
Broadminded	8.0	4.5	6
Capable	9.5	4.0	9
Cheerful	12.0	4.0	14
Clean	14.0	4.0	17
Courageous	9.0	4.5	7
Forgiving	12.0	3.5	14
Helpful	11.0	4.5	13
Honest	4.5	3.5	1
Imaginative	10.0	3.5	11
Independent	7.0	4.5	4
Intellectual	9.0	4.5	7
Logical	9.5	3.5	9
Loving	7.0	4.0	4
Obedient	15.5	3.5	18
Polite	12.0	4.0	14
Responsible	6.0	3.0	2
Self-Controlled	10.0	5.0	11

Male medians, quartile deviations, and ranks for Rokeach instrumental values in the repeated survey.

probability and significance tests must be passed at the 0.05 level (or greater significance) in order to be declared a "significant" difference. Accordingly, of the ten values looked at, only two terminal values, *An Exciting Life* and *A World at Peace*, and four instrumental values, *Cheerful*, *Forgiving*, *Imaginative*, and *Logical* pass all 4 tests. Table XV reports the same data probability classifications for the four "ethical" Rokeach values. None of the four ethical values (including *Responsible*) show consistent, measurable, significant differences between the male and female students.

Conclusions

In order to qualify as a "conclusion" in this study, individual values must pass 8 tests of significance and probability. Four of the tests come from the

TABLE XIII
Rokeach value repeated survey

Value	Instrumental Means Females, N = 73		
	Median	Quartile Deviation	Rank
Ambitious	8.0	3.0	4
Broadminded	9.0	4.0	7
Capable	10.0	3.5	11
Cheerful	9.0	3.5	7
Clean	15.0	3.0	16
Courageous	11.0	2.5	12
Forgiving	9.0	4.0	7
Helpful	9.0	4.5	7
Honest	3.0	2.5	1
Imaginative	15.0	3.0	16
Independent	8.0	4.0	4
Intellectual	8.0	4.0	4
Logical	12.0	3.5	15
Loving	5.0	3.5	2
Obedient	16.0	3.0	18
Polite	11.0	3.5	12
Responsible	5.0	2.0	2
Self-Controlled	11.0	4.0	12

Female medians, quartile deviations, and ranks for Rokeach instrumental values in the repeated survey.

initial survey, and they must be replicated and verified individually and collectively also in the repeated survey.

The initial and repeated Rokeach Value Surveys generally show very consistent "ethical" value conclusions. None of the four ethical values; namely: *Equality*, *Freedom*, *Honest*, and *Responsible* — are ranked significantly different (as determined 8 times) by males and females. Table XVI shows that both males and females rank *Honest* as number 1, *Responsible* as number 2, and *Freedom* as number 4 in the initial survey. *Equality* is ranked number 12 by males and number 11 by females in the first survey. Table XVII illustrates that both males and females rank *Honest* as number 1, *Responsible* as number 2, and *Freedom* as number 3 in the repeated survey. *Equality* is ranked number 13 by males and number 7 by females in the repeated survey.

If not then in terms of "ethical" value differences,

TABLE XIV
Male and female values

Rokeach Value	98 Males Rank	73 Females Rank	Significant Differences Repeated Survey			
			P R O B A B I L I T Y			
			Wilcoxon	Kruskal-Wallis	Median 2-Sample	Median 1-Way
<i>Terminal</i>						
A comfortable life	5	11	0.1148	0.1144	0.0583	0.0583
An exciting life	10	16	0.0002	0.0002	0.0004	0.0004
A world at peace	13	5	0.0341	0.0340	0.0093	0.0093
<i>Instrumental</i>						
Cheerful	14	7	0.0206	0.0205	0.0422	0.0422
Courageous	7	12	0.5490	0.5479	0.3789	0.3789
Forgiving	14	7	0.0001	0.0001	0.0002	0.0002
Helpful	13	7	0.1497	0.1492	0.1996	0.1996
Imaginative	11	16	0.0010	0.0010	0.0006	0.0006
Logical	9	15	0.0133	0.0133	0.0385	0.0285

Significance levels of male and female value differences in the repeated survey.

TABLE XV
Male and female values

Rokeach Value	98 Males Rank	73 Females Rank	(In) Significant Differences Repeated Survey			
			P R O B A B I L I T Y			
			Wilcoxon	Kruskal-Wallis	Median 2-Sample	Median 1-Way
<i>Terminal</i>						
Equality	13	7	0.06	0.06	0.17	0.17
Freedom	3	3	0.31	0.31	0.42	0.42
<i>Instrumental</i>						
Honest	1	1	0.11	0.11	0.57	0.57
Responsible	2	2	0.23	0.23	0.02	0.02

(In) significant levels of male and female ethical value differences in the repeated survey.

TABLE XVI
Ethical comparisons

Ethical Value	Median		Quartile Deviation		Rank	
	Male	Female	Male	Female	Male	Female
Males Versus Females Initial Survey						
<i>Terminal</i>						
Equality	11.0	10.0	4.0	4.5	12	11
Freedom	7.0	7.0	4.0	4.0	4	4
<i>Instrumental</i>						
Honest	4.0	2.0	4.0	2.5	1	1
Responsible	6.0	4.0	6.0	2.0	2	2

Ethical comparisons between male and female students in the initial survey.

TABLE XVII
Ethical comparisons

Ethical Value	Median		Quartile Deviation		Rank	
	Male	Female	Male	Female	Male	Female
Males Versus Females Repeated Survey						
<i>Terminal</i>						
Equality	12.0	9.0	4.0	3.5	13	7
Freedom	7.0	6.0	3.5	3.0	3	3
<i>Instrumental</i>						
Honest	4.5	3.0	3.5	2.5	1	1
Responsible	6.0	5.0	3.0	2.0	2	2

Ethical comparisons between male and female students in the repeated survey.

can any value variances be shown to consistently exist between the male and female student populations? Yes, a few conclusions can be made in this regard. In order to pass the 8-fold significance tests, the findings in the repeated survey must be the same as the results of the initial survey. In this manner, one terminal end, *A World at Peace*, and one instrumental mean, *Forgiving* are reoccurring results passing all 8 tests of significance and probability.

Remember that we first investigated significance by "eyeballing" spreads of 5 or more between males and female rankings of the terminal and instrumental values in both the initial and repeated surveys. At this point, the question must be asked, "can any other of the 36 total values pass the 8-significance-test criterion even though they failed the 'eyeball' test (5 or more ranks between male and female rankings)?" The answer is yes. An examination of the

TABLE XVIII
Male and female values

Research Variable	Additional Significant Differences Comparing An Exciting Life and Imaginative			
	Terminal end An exciting life		Instrumental mean Imaginative	
	Male	Female	Male	Female
<i>Initial Survey</i>				
Median	9.5	13.0	12.5	15.0
Quartile deviation	4.5	3.0	3.0	3.0
Rank	11	14	15	16
Wilcoxon probability		0.0003		0.0043
Kruskal-Wallis probability		0.0003		0.0043
Median 2-sample probability		0.0196		0.0042
Median 1-way probability		0.0196		0.0024
<i>Repeated Survey</i>				
Median	9.5	14.0	10.0	15.0
Quartile deviation	5.0	3.5	3.5	3.0
Rank	10	16	11	16
Wilcoxon probability		0.0002		0.0010
Kruskal-Wallis probability		0.0002		0.0010
Median 2-sample probability		0.0004		0.0006
Median 1-way probability		0.0004		0.0006

Men and women are significantly different in how much they value *An Exciting Life* and being *Imaginative*.

total data base by the authors reveals that one more terminal end, *An Exciting Life*, and one more instrumental means, *Imaginative*, pass all 8 probability tests at the 0.05 level or better. Table XVIII summarizes initial and repeated value data for these two to-date, relatively unexamined variables. To repeat, since they pass all 8 tests, they become part of the final conclusions of this study. In short and in essence, men and women are also significantly different in terms of how much they value *An Exciting Life* and being *Imaginative*.

Men and women college students are ethically equivalent. However, males and females significantly differ on four other non-ethical values, namely: *An Exciting Life*, *A World at Peace*, *Forgiving*, and *Imaginative*. Table XIX summarizes the significant median, quartile deviation, and ranking value-difference data for both the initial and repeated surveys in this study. Finally, Table XX concludes that compared to

men, women students significantly value *A World at Peace* and *Forgiving* more; and *An Exciting Life* and *Imaginative* less.

Limitations of this study

There are three major limitations to this study which are also common to most empirical research. First is the question of sample representation. Can accurate conclusions be drawn from one study, and this case, one sample of 200 undergraduate students from one university in one location at one point in time? Secondly, how terms and variables are defined can affect and effect results. In this study, ethics is defined in terms of *Equality*, *Freedom*, *Honest*, and *Responsible*. Although eight different tests of significance were applied, perhaps different results and different conclusions would be reached if different

TABLE XIX
On what values do males and females differ the most?

Rokeach Survey Value	<i>Initial Survey</i>					
	98 Males Median	73 Females Median	98 Males Quartile Deviation	73 Females Quartile Deviation	98 Males Ranking	73 Females Ranking
<i>Terminal</i>						
An exciting life	9.5	13.0	4.5	3.0	11	14
A world at peace	11.0	7.0	5.0	4.0	12	4
<i>Instrumental</i>						
Forgiving	12.5	8.0	3.5	4.0	15	5
Imaginative	12.5	15.0	3.0	3.0	15	16
<i>Repeated Survey</i>						
<i>Terminal</i>						
An exciting life	9.5	14.0	5.0	3.5	10	16
A world at peace	12.0	8.0	5.0	4.5	13	5
<i>Instrumental</i>						
Forgiving	12.0	9.0	3.5	4.0	14	7
Imaginative	10.0	15.0	3.5	3.0	11	16

Significant value differences between male and female college students.

TABLE XX
Compared to men, women students significantly

<i>Value More</i>	<i>Value Less</i>
<i>Terminal</i>	
A World At Peace	An Exciting Life
<i>Instrumental</i>	
Forgiving	Imaginative

significant value differences between men and women.

values were included. The rationale for including these particular four values was presented earlier in this report. However, given the reported findings of this research, perhaps a definition of ethical values including or substituting *A World at Peace* and *Forgiving* might be considered. If this were done, the common notion that women are more ethical than men would probably be statistically supported.

Finally is the always present research limitation of whether paper and pencil manipulations can appropriately forecast real, actual behavior. Just because some students rank certain values ahead of others does not prove that their actual behaviors will be more or less ethical than other people activities.

References

Behrman, J. N.: 1988, *Essays on Ethics in Business and the Professions* (Prentice-Hall Publishers, Englewood Cliffs, NJ).

Beltramini, R. F., R. A. Peterson and G. Kozmetsky: 1984, 'Concerns of College Students Regarding Business Ethics', *Journal of Business Ethics* 3, 195-200.

Betz, M., L. O'Connell and J. M. Shepard: 1989, 'Gender Differences in Proclivity for Unethical Behavior', *Journal of Business Ethics* 8, 321-324.

Bowen, E.: 1987, 'Business Week/Harris Poll: Is an Anti-business Backlash Building?', *Business Week*, July 10, 71.

Conover, W. V.: 1980, *Practical Nonparametric Statistics*, 2nd.

- edition (John Wiley & Sons Publishing Company, New York, NY).
- Conry, E. J. and D. R. Nelson: 1989, 'Business Law and Moral Growth', *American Business Law Journal* **27**, 1–40.
- DeGeorge, R. T.: 1987, 'The Status of Business Ethics: Past and Future', *Journal of Business Ethics* **6**, 202–211.
- Galbraith, S. and H. B. Stephenson: 1993, 'Decision Rules Used by Male and Female Business Students in Making Ethical Value Judgments: Another Look', *Journal of Business Ethics* **12**, 227–233.
- Gellerman, S. W.: 1986, 'Why Good Managers Make Bad Ethical Choices', *Harvard Business Review*, July–Aug., 85–90.
- Hajjek, J.: 1969, *A Course in Nonparametric Statistics* (Holden-Day Publishers, San Francisco, CA).
- Harris, J. R.: 1989, 'Ethical Values and Decision Processes of Male and Female Business Students', *Journal of Education for Business* **8**, 234–238.
- Harris, L.: 1986, *Inside America* (Vintage Books, New York, NY).
- Jackall, R.: 1988, *Moral Mazes* (Oxford University Press, New York, NY).
- Kidwell, J. M., R. E. Stevens and A. L. Bethke: 1987, 'Differences in Ethical Perceptions Between Male and Female Managers: Myth or Reality', *Journal of Business Ethics* **6**, 489–493.
- Lehmann, E. L.: 1975, *Nonparametric Statistical Methods Based on Ranks* (Holden-Day Publishers, San Francisco, CA).
- Magnet, M.: 1986, 'The Decline and Fall of Business Ethics', *Fortune*, December 8, 65–72.
- McNichols, C. W. and T. W. Zimmerer: 1985, 'Situational Ethics: An Empirical Study of Differentiators of Student Attitudes', *Journal of Business Ethics* **4**, 175–180.
- Peterson R. A., R. F. Beltramini and G. Kozmetsky: 1991, 'Concerns of College Students Regarding Business Ethics: A Replication', *Journal of Business Ethics* **10**, 733–738.
- Quade, D.: 1966, 'On Analysis of Variance for the k-Sample Problem', *Annals of Mathematical Statistics* **37**, 1747–1758.
- Ricklefs, R.: 1983, 'Executives and General Public Say Ethical Behavior is Declining in U.S.', *Wall Street Journal*, Oct. 31, 33.
- Ricklefs, R.: 1983, 'Public Gives Executives Low Marks for Honesty and Ethical Standards', *Wall Street Journal*, Nov. 2, 33.
- Rokeach, M.: 1968, *Beliefs, Attitudes, and Values* (Jossey-Bass Publishers, San Francisco, CA).
- Rokeach, M.: 1968, 'A Theory of Organization and Change Within Value-Attitude Systems', *Journal of Social Issues* **24**, 13–33.
- Rokeach, M.: 1971, 'The Measurement of Values and Value Systems', in G. Abcarian, *Social Psychology and Political Behavior* (Charles E. Merrill Publishing, Columbus, OH).
- Sikula, A. F.: 1972, *Values, Motivation and Management* (Stipes Publishing, Champaign, IL).
- Sikula, A., Sr.: 1989, *Moral Management: Business Ethics* (Kendall/Hunt Publishers, Dubuque, IA).
- Sikula, A., Sr.: 1992, *Management in America: Crisis in Ethics* (Daniel Spencer Publishers, Bend, OR).
- Stead, W. E., D. Worrell and J. G. Stead: 1990, 'An Integrative Model for Understanding and Managing Ethical Behavior in Business Organizations', *Journal of Business Ethics* **9**, 233–242.
- Stephenson, J.: 1992, *Men Are Not Cost Effective* (Diemer Smith Publishing Company, Ventura, CA).
- Tsaikis, J. and M. Ortiz-Buonafini: 1990, 'Ethical Belief Differences of Males and Females', *Journal of Business Ethics* **9**, 509–517.
- Walton, C. C.: 1988, *The Moral Manager* (Ballinger Publishers, Cambridge, MA).

California State University-Chico,
College of Business,
Dept. of Management,
Chico, CA 95929-0031,
U.S.A.