

Character Development in Business Education: A Comparison of Coeducational and Single-Sex Environments

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Abstract

This study questions the widely held assumption, particularly in the United States, that coeducation is best. Previous research supports the development of single-sex education for both female and male students. This study examines how the learning climate of the coeducation environment seems to affect the character development of female business students. Female business students from 11 single-sex colleges (secular and religious) perceived more reinforcement in 13 of 21 character traits than female (and male) students in 3 coeducational institutions. Several of these character traits are related to ethical behavior, such as honesty, compassion, and independence, and are sorely needed in the workplace. Improved ethics education may enable women to play a larger role in avoiding future ethical crises.

Keywords

character development, moral development, character traits, business ethics, single-sex and coeducational environments

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The current global financial crisis has been identified by some observers as a crisis of ethics in American society. The resulting economic recession with its depletion of retirement accounts, the increasing losses of jobs, loss of consumer confidence, and loss of moral character has created a growing distrust of the financial system, the government, and its leaders (Andersen, 2009). Over the past 20 to 30 years, the endless corporate scandals have raised questions about the values of our corporate leaders (George, 2006). Several articles appearing in the popular press have argued that our current woes are the result not only of greed and irresponsibility of business schools graduates but also the failure to redress what has gone wrong in business schools over the past decades (Gentile, 2009; Podolny, 2009). Although some debate exists on whom to blame, some observers contend that the ambiguity in morality can be traced to the decline in teaching character back in the 1960s (Lerner, 1976). The teacher's role as a transmitter of social and personal values was deemphasized (Huett, Moller, & Young, 2004). In earlier days, moral values and sensitivity to ethics were considered so important that the president of the college taught them as a required course in the last year of studies (Morrill, 1980).

Although character education has become one of the fastest-growing movements in elementary and secondary education (Schwartz, 2000), many college and university educators, especially in professional schools, seem reluctant to accept responsibility for character development among their students and may actually obstruct the development of any ethical sense (Cavanagh, 2006). Although some college course catalogs still imply that developing values and behaviors are important, only small, often religiously affiliated, and single-sex schools seem to be succeeding (Bok, 2004; Schwartz, 2000). These assertions suggest that single-sex colleges could be a possible solution to character development. To test these assertions, we chose to investigate the relationship between single-sex education character development and business school context.¹ Because actual character development is very difficult to measure until faced with organizational dilemmas (Symonds, 1924), we chose to measure student perceptions of character. Hypotheses examining trait importance were tested comparing senior business students from 11 all-women's colleges (religious and secular) with senior business students (women and men) from 3 coeducational colleges (religious and secular). We now develop the theory and arguments underlying each of the hypotheses tested.

Literature Review

Problem of Ethics in Society, Business, and Education

Ethical scandals that have dominated the news the past 20 to 30 years have been in the business arena primarily because of their extensive and measurable impact on the rest of society. For example, the Savings & Loan scandal cost the U.S. taxpayers \$125 billion (Curry & Shibut, 2000), whereas the costs of scientific or governmental scandals are more difficult to measure. The current global financial crisis is estimated to cost trillions of dollars—just in the United States (Bestani, 2009).

Although some debate exists on whom to blame for the current financial crisis and ensuing recession, most analysts seem to agree that greed and dishonesty were prime motives of the Wall Street bankers. Most of the Wall Street bankers were graduates of American business schools who were taught classical economic theory, which often emphasizes maximizing shareholder wealth—at the expense of other stakeholders. Furthermore, classical economic theory rests on two assumptions about human nature: (a) individuals are only motivated by self-interest and (b) all individuals are rational decision makers (Jensen & Meckling, 1976). People are expected to be selfish, constantly calculating their own advantage, with no thought for others (Shiller, 2005). Kiel (2008) argues that these assumptions are not only inaccurate and incomplete, but they also lead to several unproductive management practices. Self-interested managers shun transparency because information needs to be guarded to protect one's self. Expensive monitoring is often imposed to rein in selfish behaviors at the expense of shareholders. Also, compassion for employees is viewed as a waste of time, because everyone is supposed to be out for themselves. As a result, distrust can develop and employees can become less engaged and committed with some ready to quit when the first better opportunity arises (Kiel, 2008).

A group of noted business school educators agree that many of the worst excesses of recent management practices stem from the teachings in business schools (Bennis & O'Toole, 2005; Ghoshal, 2005; Lysonski & Gaidis, 1991). Others claim that business school programs create a climate where students tend to believe they need unethical beliefs in order to compete and are more likely to cheat than non-business students (Lane & Schaupp, 1989; McCabe & Trevino, 1995). Unfortunately, these beliefs have been found to have a strong relationship to the propensity toward unethical behavior in the business world (Lawson, 2004). Others blame the wide range of problems in schools, in business, in politics, and so on, to a “defect in character formation” (Callahan, 2004; Wilson, 1985).

Jennings (1994) prophetically proclaimed, “we are in real danger of producing a new generation of leaders who are ethically illiterates at best or dangerously adrift and morally misguided at worst” (p. 2). Until the recent business scandals, an empirical study of ethics teaching in business schools found that the teaching of ethics was not taken seriously at the majority of business schools (Alsop, 2006; Etzioni, 1989; Kelly, 2002). A recent finding by the National Association of Scholars (2002) reported that three quarters of students surveyed said that their professors teach them that ethical standards are simply a matter of individual choice. Many business school faculty members prefer to teach their disciplines, run the numbers, and take little account of the effects that these decisions have on other stakeholders (Morahan, 2002).

For the past 20 years, some corporate CEOs and politicians have been concerned about ethics in business education. Research findings suggest that business schools have not been committed to developing good moral habits for a good character. Among others, Vaughn (2009) concluded that top business schools are being criticized for focusing too much on the analytics of business and not enough on character skills.

Character and Character Development

Although character is defined in many ways, for the ancient Greeks, character or *ethos* meant the constellation of strengths and weaknesses that form and reveal who we are. Hartman (2002) argues that one’s character is partly determined by one’s values, insofar as one is able to act on them, as well as one’s habitual impulses. Values are one of the foundations for character because values are orientations or dispositions whereas character involves action or activation of values and knowledge. Most people tend to agree that character is an identifiable value system reflecting morality with values such as honesty, concern for others, responsibility, respect for the law, or common decency (Hutcheon, 1999). In business it implies being committed to more than self-interest, but to virtues such as honesty, self-control, justice, and compassion (Greer & Kohl, 1995). Solomon (1992) agrees with those traits and suggests that friendliness, compassion, loyalty, caring, shame, and justice are necessary virtues for business. Baumrind (1998) contends that integrity marks an exemplary character in Western thought and is critical to trust and suggests that character is formed at those defining moments when one must choose between right and right. Manning and Curtis (2003) contend that character, in its highest form, is based on a value system that is known, cherished, stated, and lived habitually.

Although definitions may vary, Berkowitz (2002) defines “character” as an individual set of psychological characteristics that affect a person’s ability

and inclination to function morally. It generally means those qualities that lead a person to do the right thing. Peck (1960) contends

There is no study of human behavior more fraught with risk of subjective bias and culture-bound prejudice than is the study of moral character. Yet in no aspect of life is objective knowledge and understanding more essential to human happiness than character. (p. v)

However, Maccoby (1976) argues that character can be evaluated based on how one values or perceives the importance of different qualities of both the *head* and the *heart* and that these character traits are a result of the reinforcement from the organizational culture. Maccoby (1976) argues that the culture of the organization reinforces or stimulates certain modes of conduct it considers acceptable.

A study of major national universities by Allen, Davis, Ruhe, and Geurin (1998) found that the perceived importance of character traits is highly correlated with the perceived reinforcement of those same traits. Biswas-Diener (2006) used the 24 character strengths called Values in Action (VIA) and found high rates of agreement about the existence, desirability, and development of these strengths of character across cultures. However at the same time, despite the strong similarities, there were differences between and within cultures in terms of gender, the perceived importance of specific strengths (such as modesty), and the existence of cultural institutions that promote each strength.

Character can be perceived as a process of development through life. According to Schwartz (2000) and Cavanagh (2006), Aristotle once said that we are what we repeatedly do. Character development does not occur in a cultural vacuum but is shaped (reinforced) by a particular moral culture. Hutcheon (1999) extends this importance even further by concluding that a good measure of success of any society is how well the task of character development is being performed.

Women's Colleges, Character Development, and Business Education

One would expect there to be differences in perceptions of character trait importance and reinforcement between students at single-sex, women's colleges (many are religious) and coed religious schools that tend to have male cultures. In addition to similar religious training that emphasizes ethical decisions in unambiguous terms (e.g., good and evil, right and wrong, moral and immoral, etc.) and environments where faculty are encouraged to teach their courses in ways that support the dogma of the church sponsoring the

school, one might expect that women in religious women's colleges might be reinforced in a unique way that emphasizes compassion, caring, and relationships as suggested by Gilligan (1982).

In an exploratory study, Ruhe, Allen, Davis, Geurin, and Longenecker (1998) found that women's character traits are more effectively nurtured and developed in women's colleges than in coed institutions. They found that senior business students in one women's religious college perceived higher reinforcement in five heart character traits of Honesty, Compassion, Generosity, Friendliness, and Self-confidence than their counterparts from three coed religiously affiliated and three coed public institutions. Furthermore, perceived importance of 13 of the 19 character traits were higher.

Ruhe et al.'s (1998) research seems to support the research findings of others about single-gender education that female schools provide a setting that both promotes and develops character in females significantly better than coeducational schools (Astin, 1993; Dowdall, Crawford, & Wechsler, 1998; Kim, 2001; Langdon, 2001; Riordan, 1994; Stoecker & Pascarella, 1991). Davis, Ruhe, Lee, and Rajadhyaksha (2006) argued that females in single-gender schools may develop differently from those in coeducational schools because the mission of female-only schools is more centered on moral and character development. They also argued that the mission of single-gender institutions may also attract females with particular moral, ethical, and character inclinations (Davis et al., 2006). This line of reasoning suggests that both in terms of institutional mission as well as student choice, females in single-gender schools will have significantly different perceptions of character trait reinforcement within the school and perceived importance than those at coeducational schools. Our first hypothesis tests whether there is difference in perceived character trait importance and reinforcement as suggested by Ruhe et al. (1998), Kim (2001), and others by contrasting women in women-only colleges and those in coeducational colleges. The following hypotheses will be examined in the present study:

Hypothesis 1: Perceived reinforcement of character traits will be higher for females in women's colleges than females in coed schools.

Hypothesis 2: Perceived importance of character traits will be higher for females in women's colleges than females in coed schools.

Hassett (1981) found that the most significant predictor of a person's moral behavior was her or his religious commitment. This result was supported by Hunter's (2000) finding of more than 5,000 children and young adults that the students most likely to show restraint in cheating, lying, stealing, and sexual matters were those operating with a theistic moral orientation. Although

specific religions were notably distinct from each other in terms of moral values, the intensity (strength) of their faith was significant. It suggests that women in religious, women-only colleges may perceive character trait importance and reinforcement differently than women in women-only secular colleges. Do the religious missions of female-only schools provide an environment that reinforces character development more than female-only schools *without* a religious mission (Davis et al., 2006)? What impact does the religious mission and history of a school have on character development? These questions suggest the following hypotheses:

Hypothesis 3: Perceived reinforcement of character traits will be higher for females in all-women's religious colleges than females in women's secular schools.

Hypothesis 4: Perceived importance of character traits will be higher for females in all-women's religious colleges than females in women's secular schools.

Research by Piaget, Kohlberg, and others in the psychology literature has long established that there are gender differences in moral development from an early age (Crain, 1985). Differences in moral judgment have also been found in high school students by gender in even though results of these studies were "complicated by interaction effects with gender" (Schultz, Barr, and Selman, 2001, p. 3). Many empirical studies based on samples of college students have further established a pattern of gender differences in ethical behavior at the higher education level. For example, in a study examining gender differences in ethical attitudes of 318 graduate and undergraduate business students, Smith and Oakley (1997) found significant differences in male and female responses to questions concerning ethics in personal and social relationships, such as the case of a corporate executive promoting a loyal friend and competent manager to the position of divisional vice president in preference to a better qualified manager with whom he had no ties; female students were more likely to condemn such behavior and uphold higher ethical standards. In another study conducted on a sample of 285 accounting majors at four public institutions, females were found to be less tolerant than males about academic misconduct. Females were also found to be less cynical and less often involved in academic dishonesty (Ameen, Guffey, & McMillan, 1996). Gender differences in proclivity for unethical behavior were found by Betz, O'Connell, and Shepard (1989) in their study conducted on 213 business school students. Male students were two times as likely as female students to indulge in behavior that would be regarded as unethical—50% of male students were willing to buy stock with insider

information. Reiss and Mitra (1998) found similar results in a study of college students: Male students were more likely to regard extra-organizational behavior of an uncertain ethical nature as acceptable, as compared with female students. For instance, they were more likely than female students to rate as "acceptable" the practice of charging their company for a 5-dollar cab ride when in fact they had walked.

In their study on moral judgment development in higher education, King and Mayhew (2002) reviewed 172 studies to provide a framework to analyze educational contexts in higher education. They argued that dramatic gains in moral judgment are associated with collegiate participation. They found that research is needed to determine the differences in gains by institutional type and to explain the variability among types of college students (King & Mayhew, 2002).

A study by Ruhe et al. (1998) found 13 of 19 character traits perceived to be more important by business students from one single-sex religious women's college compared with women business students from three coed religious universities. The current study extends this research to 11 women's colleges, religious and secular. Thus, an open and important question for the present study is whether differences by gender and institutional-type remain in higher education. Do women and men in coeducational settings develop differently in higher education? Although previous research cited above seems to suggest differences exist, few studies have empirically, explicitly examined whether the difference is statistically significant. The following hypotheses are examined in the present study to determine whether females perceive character trait importance and reinforcement differently within the coeducation context than their male counterparts:

Hypothesis 5: Perceived reinforcement of character traits will be higher for females in coed schools than their male counterparts.

Hypothesis 6: Perceived importance of character traits will be higher for females in coed schools than their male counterparts.

Gilligan (1982) argued that much of personality psychology was male centered and that females have different stages of moral development. She argued that as women age they typically move from the conventional stage of gaining approval, avoiding disapproval, duty and guilt to a postconventional stage of agreed on rights and personal moral standards. Several empirical studies have supported Gilligan's theory. For example, Lyons (1994) found that after age 27 women show increased "consideration of rights in the conceptualization of moral problems or conflict" (p. 139). They also had a

“disappearance” of consideration of “care of the self” at the same age. She found that these findings differed from what she saw in men at the same age and women in younger years.

Others have also argued that older or nontraditional age students would be less influenced in character development by the college experience because their character would already be developed (Alsop, 2006). The argument begs the question as to whether females in female-only institutions differ in perceived reinforcement and value trait importance by age. Are nontraditional female student’s perceptions of reinforcement different than younger traditional age students? We therefore posit and examine the following hypotheses:

Hypothesis 7: Perceived reinforcement of character traits will be higher for traditional age female students than nontraditional age female students.

Hypothesis 8: Perceived importance of character traits will be higher for traditional age female students than nontraditional age female students.

Method

Student Subjects and Instruments

The participants consisted of 602 senior undergraduate students majoring in business (400 females and 202 males) who were attending single-sex women’s colleges or coeducational colleges. Of the students from the 11 single-sex women’s colleges, 144 were from 6 different religiously affiliated schools and 93 were from 5 secular schools. (All the women’s colleges were selected by the Women’s College Coalition because they have similar business curricula.) The remaining 365 students (163 females and 202 males) came from three national coed business colleges and included one religiously based coed business college. These coed schools were selected because of their similar educational context and convenience in sampling. The convenience samples represent the majority of senior business students from the 11 women’s colleges located across the nation from the East to the West and from North to the South. Although the sample of the three coeducational institutions from the Midwest and East is hardly representative of all coed business schools like the sample of women-only schools, the students were from most states. Likewise, the sampling of schools within the universities was through a convenience sampling of courses rather than random sampling. The average student was 22 years old ($SD = 6.98$); 76% of the sample reported they were

Caucasian, 8% Hispanic, 6% African American, and 8% Asian. Both types of institutions contained nontraditional age students completing their bachelor's degree after the age of 25 years.

The sample included only colleges that had degree granting programs in business and only included students who were majoring in a business discipline (finance, marketing, management, accounting, management information systems, etc.). In some colleges in the sample, the program of business education was found within the college of social sciences or similar colleges. In other cases, colleges in the sample had a college of business. Many women's colleges have a liberal arts underpinning, but some business schools also have courses in philosophy, modern language, composition, history, and so on. Not all business schools in our sample require a core of general studies. Students in our sample likewise had a large variety of minors (4.6% psychology, 9.2% language, 5.3% mathematics, 3.1% political science, 17.6% economics, etc.). To be sure that the schools themselves did not vary with a particular context of interest for this study, we ran within-group analyses (religious women only, secular women only, coeducational secular, and coeducational religious). We found no significant difference between groups. Therefore, we are confident that the between-groups contrasts that are the focus of this article are reliable and valid. There does not appear to be between-school variance, within group because of the location of business studies or exposure to nonbusiness education.

For this study, we adopted two parts of the tripartite model of cognition, affect, and behavior—*head, heart, and hand* (Berkowitz, 2002).² Maccoby (1976) argues that character can be evaluated based on how one perceives the importance and reinforcement of different traits of both the *head* and the *heart*. Maccoby identified 9 character traits that he classified as qualities of the head and 10 character traits classified as qualities of the heart. Maccoby's head traits (thinking qualities related to conceptualization) include ability to take the initiative, flexibility, pleasure in learning, creating something new, coolness under stress, self-confidence, cooperation, open-mindedness, and pride in performance. The heart traits (feeling qualities related to consciousness) include honesty, compassion, generosity, idealism, openness, independence, critical of authority, loyalty, friendliness, and sense of humor. His easy-to-use survey format evaluated perceived qualities of an organizational culture as well as qualities valued. Maccoby contends that these qualities or character traits are also behavioral inclinations. Two additional traits (strength of religious beliefs and tolerance of different beliefs) were added to the original Maccoby survey and were identified as heart and head traits, respectively.

The researchers distributed surveys to helpful professors, who handed them out to their business classes. The students were given the one-page

Name of School _____; Age: ____; Sex: M __ F__
 Major: _____; Minor: ____; Religious Affiliation: _____
 Highest Education: Mother____ Father____; Ethnicity: _____

Please circle the extent to which you believe the following traits of character help one achieve success in a career.

	Very Important	Somewhat Important	Not Important
1. Generosity _____	5	4	3
2. Satisfaction in creating something new _____	5	4	3
3. Sense of humor _____	5	4	3
4. Idealism _____	5	4	3
5. Ability to take the initiative ____	5	4	3
6. Compassion _____	5	4	3
7. Openness, spontaneity ____	5	4	3
8. Flexibility _____	5	4	3
9. Pleasure in learning something new _____	5	4	3
10. Coolness under stress _____	5	4	3
11. Self-confidence _____	5	4	3
12. Open-mindedness _____	5	4	3
13. Critical and questioning attitude toward authority _____	5	4	3
14. Friendliness _____	5	4	3
15. Loyalty to fellow students _____	5	4	3
16. Honesty _____	5	4	3
17. Independence (vs. dependence) ____	5	4	3
18. Cooperativeness _____	5	4	3
19. Pride in performance _____	5	4	3
20. Tolerance of people with different beliefs/backgrounds _____	5	4	3
21. Strength of religious beliefs _____	5	4	3

Now **please CIRCLE ALL THE NUMBERS** above to the left of those traits which you consider have been stimulated or reinforced during the course of your studies in your College. Source: Adapted from: Michael Maccoby, The Gamesman, [New York: Simon & Schuster, 1976]

Figure 1. A survey of “Factors at My School”

survey with an attached consent form (see Figure 1). Students were asked voluntarily and anonymously to rate each of the 21 traits as to their perceived importance in achieving business success on a Likert-type scale (5 = very

important to 1 = not important). They also indicated their perception of reinforcement by encircling the specific traits (see Figure 1). Columns A to G in the tables are expressed in percentages. The overall Maccoby scale had an alpha of .783, which is an acceptable level of reliability for this type of analysis (Gable & Wolf, 1993). Numerous other studies have applied this approach to studying college students (Allen et al., 1998; Kochunny & Rogers, 1994; Kreitner & Reif, 1980; Stevens, 1995).

For each hypothesis test, 21 character traits were examined. We chose to support a hypothesis if a simple majority of at least 50% of the *t* tests examining that hypothesis were significant. Where the percentage is close to 50%, we indicate that the hypothesis is only marginally supported. In most cases, the percentage of significant tests was much higher than 50% and thus, we believe that our conclusions for strongly supported hypotheses are valid and reliable.

Results

The first two hypotheses asked whether perceived reinforcement of character traits and perceived importance of character traits was higher for females in women's colleges (religious and secular) than females in coed schools. Independent *t* tests were used to determine whether there were statistically significant differences between the two female student populations on the 21 character traits.

Females in women's colleges were found to perceive significantly higher reinforcement in 13 character traits than females in coeducational colleges: 6 heart traits (honesty, compassion, independence, idealism, friendliness, and strength of religious beliefs) and 7 head traits (satisfaction in creating something new, ability to initiate, flexibility, self-confidence, open-mindedness, pride in performance, and tolerance of different beliefs). Females in coeducational settings perceived higher reinforcement on only one item, loyalty to colleagues (see Table 1). These results support Hypothesis 1. Females in women's colleges perceive higher character trait reinforcement than those in coeducational settings.

A word of caution must be used for the results of our hypotheses. Because of the number of *t* tests involved in testing our hypotheses there is a probability of Type 1 error in the findings. Our way of controlling for Type 1 error is to use a lower *p* level of .01. Because all but one of the significant *t* tests were significant at a *p* level of .01, the results of Hypothesis 1 have a lower probability of Type 1 error. This issue will be further discussed in the Limitations and Conclusions section at the end of the article.

Table 1. Perceived Trait Reinforcement Contrasts

	A: All		B: All		C: Women, Religious		D: Women, Coed		E: Secular Women Colleges		F: Traditional Students		G: Nontraditional Students		H: Women, Colleges		Z Scores						
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	1: H - D	2: C - E	3: C - E	4: D - A	5: D - A	6: F - G	7: F - G
Reinforce	0.126	0.124	0.14	0.142	0.101	0.142	0.101	0.142	0.142	0.142	0.110	0.110	0.105	0.105	0.141	0.141	1.04	-0.04	-0.04	-0.75	0.08	0.08	1.18
Generosity	0.246	0.346	0.384	0.368	0.296	0.368	0.296	0.368	0.368	0.350	0.350	0.240	0.240	0.378	0.378	2.54**	0.25	0.25	1.06	-0.75	1.06	1.18	
Satisfaction creating something new	0.15	0.173	0.183	0.179	0.164	0.179	0.164	0.179	0.179	0.160	0.160	0.190	0.190	0.182	0.182	0.44	0.08	0.08	0.36	0.36	0.36	-0.40	
Sense of humor	0.159	0.103	0.131	0.16	0.063	0.16	0.063	0.16	0.16	0.110	0.110	0.120	0.120	0.143	0.143	2.02*	-0.62	-0.62	-3.01**	-0.16	-0.16	-0.16	
Idealism	0.367	0.543	0.572	0.547	0.497	0.547	0.497	0.547	0.547	0.545	0.545	0.305	0.305	0.563	0.563	2.63**	0.38	0.38	2.50**	2.45**	2.45**	2.45**	
Ability to take initiative	0.068	0.183	0.223	0.179	0.132	0.179	0.132	0.179	0.179	0.295	0.295	0.155	0.155	0.206	0.206	3.03**	0.83	0.83	1.99*	1.62	1.62	1.62	
Compassion	0.188	0.245	0.266	0.255	0.22	0.255	0.22	0.255	0.255	0.0	0.0	0.160	0.160	0.262	0.262	1.34	0.19	0.19	0.75	0.75	0.75	1.82*	
Openness and spontaneity	0.3	0.424	0.459	0.406	0.377	0.406	0.377	0.406	0.406	0.485	0.485	0.310	0.310	0.439	0.439	2.40**	0.81	0.81	1.54	1.54	1.54	1.78*	
Flexibility	0.232	0.416	0.437	0.39	0.39	0.443	0.39	0.443	0.443	0.416	0.416	0.325	0.325	0.440	0.440	1.29	-0.09	-0.09	3.25**	0.52	0.52	0.52	
Pleasure in learning new	0.271	0.313	0.336	0.368	0.283	0.368	0.283	0.368	0.368	0.215	0.215	0.125	0.125	0.349	0.349	1.23	-0.51	-0.51	0.25	0.25	0.25	1.15	
Coolness under stress	0.28	0.499	0.541	0.434	0.434	0.509	0.434	0.509	0.509	0.645	0.645	0.385	0.385	0.530	0.530	3.09**	0.48	0.48	3.06**	2.68**	2.68**	2.68**	
Self-confidence	0.28	0.437	0.493	0.491	0.352	0.491	0.352	0.491	0.491	0.700	0.700	0.275	0.275	0.493	0.493	4.13***	0.03	0.03	1.46	1.46	1.46	4.64***	
Open-mindedness	0.193	0.292	0.301	0.272	0.272	0.274	0.272	0.274	0.274	0.350	0.350	0.120	0.120	0.291	0.291	1.24	0.45	0.45	1.76*	1.76*	1.76*	2.63**	
Critical toward authority	0.126	0.217	0.262	0.157	0.157	0.255	0.157	0.255	0.255	0.430	0.430	0.175	0.175	0.260	0.260	3.33**	0.12	0.12	0.84	0.84	0.84	2.74**	
Friendliness	0.237	0.346	0.306	0.499	0.499	0.226	0.499	0.226	0.226	0.490	0.490	0.260	0.260	0.275	0.275	-2.87***	1.38	1.38	5.29***	2.37**	2.37**	2.37**	
Loyalty to colleagues	0.3	0.416	0.467	0.34	0.34	0.396	0.34	0.396	0.396	0.540	0.540	0.365	0.365	0.440	0.440	3.64***	1.09	1.09	0.81	0.81	0.81	1.76*	
Honesty	0.164	0.444	0.476	0.403	0.403	0.453	0.403	0.453	0.453	0.570	0.570	0.260	0.260	0.468	0.468	2.56**	0.35	0.35	5.11***	3.22**	3.22**	3.22**	
Independence	0.353	0.491	0.476	0.425	0.516	0.425	0.516	0.425	0.425	0.380	0.380	0.315	0.315	0.457	0.457	-0.18	0.77	0.77	3.15**	0.67	0.67	0.67	
Cooperation	0.232	0.39	0.459	0.509	0.296	0.509	0.296	0.509	0.509	0.240	0.240	0.325	0.325	0.480	0.480	3.27**	-0.76	-0.76	1.37	1.37	1.37	-0.96	
Pride in performance	0.362	0.473	0.502	0.434	0.434	0.538	0.434	0.538	0.538	0.710	0.710	0.345	0.345	0.517	0.517	2.59**	-0.54	-0.54	1.39	1.39	1.39	3.93***	
Tolerance of different beliefs	0.111	0.134	0.17	0.082	0.082	0.094	0.082	0.094	0.094	0.270	0.270	0.120	0.120	0.141	0.141	3.37**	1.72*	1.72*	-0.94	-0.94	-0.94	1.82*	
Strength of religious beliefs																							

*p < .05. **p < .01. ***p < .001.

Hypothesis 2 tested whether perceived importance of character traits would be higher for females in women's colleges than females in coeducational settings. No support was found for this hypothesis as only four traits (critical of authority, coolness under stress, cooperation, and strength of religious beliefs) were found to be significantly higher for females in women's colleges (see Table 2). Perceived importance of just one trait—openness—was higher for females in coeducational settings as compared with females in women's colleges. As with Hypothesis 1, because there is a chance of a Type 1 error, caution must be used while interpreting even the three of five (60%) *t* test results pertaining to Hypothesis 2 that were significant at the .05 level.

Hypothesis 3 posited that females in religious, all-women colleges will perceive significantly higher character trait reinforcement than females in secular, all-women colleges. Only strength of religious beliefs received higher support in religious, all-women colleges. No support was found for the arguments supporting Hypothesis 3.

No support was found for Hypothesis 4 as well. Perceived importance on only two heart traits, loyalty and strength of religious beliefs, was found to be higher for females in religious, all-women colleges than females in women's secular schools.

Hypotheses 5 and 6 examined whether perceived reinforcement and importance of character traits would be higher for females in coeducational schools than their male counterparts. Perceived reinforcement on four heart traits (compassion, critical of authority, independence, loyalty) and four head traits (ability to initiate, self-confidence, cooperation, and pleasure in learning something new) was found to be higher for females in coeducational schools as compared with their male counterparts. Because 50% of the *t*-test results were not significant at the *p* level of .01, we concluded that Hypothesis 5 was not supported. Similarly, Hypothesis 6 was not supported because perceived importance on less than half of the traits in Maccoby's scale was higher for females than males in coeducational settings. What is significant about the *t* tests for Hypothesis 6, however, is that the four traits that tested significantly were heart traits that are considered important for ethical decisions.

Hypothesis 6 examined whether perceived importance in traits would be higher for females than males in coeducational settings. Similar to reinforcement, females perceived nine traits significantly higher than men (four heart traits—compassion, honesty, independence, and openness; and five head traits—satisfaction in creating something new, ability to take initiative, flexibility, pleasure in learning, and open-mindedness). Men perceived one trait significantly higher than women, critical of authority. These results do not provide adequate support (at least 50% trait significance) to support for Hypothesis 6.

Table 2. Perceived Trait Importance Contrasts

Traits	A:		B:		C:		D:		E:		F:		G:		H:		Z Scores			
	All Males	All Women	All Religious	Women Religious Colleges	Traditional Students	Nontraditional Students	Women Colleges	Women Colleges	Women Colleges	Women Colleges	2: H - D	4: C - E	6: D - A	Hypothesis 8: F - G						
Generosity	0.570	0.540	0.590	0.503	0.537	0.620	0.565	0.565	1.31	0.81	1.31	0.81	1.31	0.81	1.31	0.81	1.31	0.81	-1.27	0.56
Satisfaction creating something new	0.725	0.824	0.825	0.798	0.869	0.860	0.836	0.836	1.13	-0.94	1.13	-0.94	1.13	-0.94	1.13	-0.94	1.13	1.64*	1.64*	3.19**
Sense of humor	0.690	0.703	0.762	0.667	0.704	0.785	0.734	0.734	1.55	0.99	1.55	0.99	1.55	0.99	1.55	0.99	1.55	-0.47	-0.47	2.76**
Idealism	0.647	0.599	0.668	0.610	0.557	0.705	0.620	0.620	0.30	1.72	0.30	1.72	0.30	1.72	0.30	1.72	0.30	-0.72	-0.72	2.22*
Ability to take initiative	0.913	0.972	0.974	0.962	0.970	0.945	0.966	0.966	0.59	0.15	0.59	0.15	0.59	0.15	0.59	0.15	0.59	1.98*	1.98*	-1.45
Compassion	0.589	0.657	0.657	0.692	0.593	0.700	0.685	0.627	-1.24	0.99	-1.24	0.99	0.627	0.99	0.99	0.99	0.99	2.05*	2.05*	0.16
Openness and spontaneity	0.711	0.767	0.807	0.818	0.633	0.780	0.733	0.733	-1.88*	2.91**	-1.88*	2.91**	0.733	2.91**	2.91**	2.91**	2.91**	2.43**	2.43**	2.91**
Flexibility	0.785	0.938	0.956	0.944	0.926	0.945	0.950	0.938	0.03	0.95	0.03	0.95	0.938	0.95	0.95	0.95	0.95	4.69***	4.69***	-0.11
Pleasure in learning new	0.802	0.891	0.877	0.893	0.925	0.915	0.910	0.890	0.11	-1.23	0.11	-1.23	0.890	-1.23	0.11	-1.23	0.11	2.46**	2.46**	0.09
Coolness under stress	0.904	0.928	0.982	0.899	0.915	0.945	0.949	0.949	2.10*	2.18*	2.10*	2.18*	0.949	2.18*	2.18*	2.18*	2.18*	-0.16	-0.16	-0.85
Self-confidence	0.957	0.967	0.963	0.975	0.970	0.945	0.965	0.959	-0.53	-0.29	-0.53	-0.29	0.959	-0.29	-0.29	-0.29	-0.29	0.96	0.96	-0.46
Open-mindedness	0.889	0.925	0.903	0.937	0.898	0.835	0.895	0.895	-1.30	1.65*	-1.30	1.65*	0.895	1.65*	1.65*	1.65*	1.65*	-1.99*	-1.99*	-1.99*
Critical toward authority	0.527	0.514	0.587	0.384	0.568	0.670	0.730	0.575	3.91**	-0.64	3.91**	-0.64	0.575	-0.64	-0.64	-0.64	-0.64	-2.75**	-2.75**	-0.64
Friendliness	0.667	0.767	0.829	0.736	0.751	0.785	0.710	0.793	1.44	1.42	1.44	1.42	0.793	1.42	1.42	1.42	1.42	1.44	1.44	0.88
Loyalty to colleagues	0.662	0.685	0.791	0.647	0.586	0.810	0.760	0.705	1.33	3.33***	1.33	3.33***	0.705	3.33***	3.33***	3.33***	3.33***	-0.30	-0.30	0.61
Honesty	0.840	0.920	0.938	0.931	0.850	0.890	0.895	0.897	-0.98	2.08	-0.98	2.08	0.897	2.08	2.08	2.08	2.08	2.80**	2.80**	-0.08
Independence	0.739	0.876	0.877	0.875	0.868	0.915	0.880	0.867	-0.04	0.20	-0.04	0.20	0.867	0.20	0.20	0.20	0.20	3.37***	3.37***	0.59
Cooperation	0.879	0.801	0.954	0.867	0.904	0.945	0.815	0.928	2.18*	1.43	2.18*	1.43	0.928	1.43	1.43	1.43	1.43	-0.34	-0.34	2.24*
Pride in performance	0.846	0.879	0.904	0.843	0.887	1.000	1.000	0.891	1.58	0.42	1.58	0.42	0.891	0.42	0.42	0.42	0.42	-0.08	-0.08	0.00
Tolerance of different beliefs	0.850	0.909	0.920	0.893	0.895	0.920	0.965	0.904	0.57	0.65	0.57	0.65	0.904	0.65	0.65	0.65	0.65	1.23	1.23	-0.90
Strength of religious beliefs	0.217	0.290	0.426	0.183	0.311	0.405	0.410	0.378	4.51***	1.83*	4.51***	1.83*	0.378	1.83*	1.83*	1.83*	1.83*	-0.81	-0.81	-0.05

*p < .05. **p < .01. ***p < .001.

Hypotheses 7 and 8 asked whether perceived reinforcement and importance in character traits were higher for traditionally aged female students than nontraditionally aged female students. Hypothesis 7 was supported: traditionally aged female students perceived higher trait reinforcement than nontraditional female students. Seven heart traits (compassion, openness, honesty, independence, friendliness, critical of authority, and strength of religious beliefs) and five head traits (ability to initiate, flexibility, self-confidence, open-mindedness, and tolerance of different beliefs) were statistically significant in the hypothesized direction. This finding suggests that older students, usually nonresidential, are less influenced by the college culture.

Hypothesis 8 examined whether perceived importance of character traits will be higher for traditional age female students than nontraditional age female students. This hypothesis received only limited support. Only three heart traits (idealism, sense of humor, openness) and two head traits (satisfaction in creating something new and cooperation) were statistically significant in the hypothesized direction. Perceived importance of only one character trait—open-mindedness—was significantly higher for nontraditional age female students. Overall, there does not appear to be a difference in perceived importance of character traits between traditional and nontraditional female students.

Table 3 summarizes the individual traits that were significant for each of the eight hypotheses. As noted earlier, we arbitrarily used a 50% cut-off to determine whether a particular hypothesis was supported. As a result, this testing found support for only two hypotheses, 1 and 7. We now turn to a discussion of our results.

Discussion

The most important finding of this study is that women in women's colleges (both religious and secular) perceive more reinforcement of 13 of 21 character traits than women in coeducational institutions. Specifically, this article provides some support for the importance of single-sex education for younger women studying business. One reason for this finding is that single-sex education may provide a more supportive learning environment for developing character traits so important to ethical decision making and the head traits desired by employers as described in earlier research.

Our findings seem to suggest that female students perceived different reinforcement and valued different character traits than their male counterparts in the same educational institutions (the differences in perceived trait reinforcement and value by gender are discussed below). The lack of significant differences in perceived trait reinforcement and importance among students

Table 3. Results Summary

Hypothesis	Traits Significantly Supporting the Hypothesized Direction	Finding
<i>Hypothesis 1:</i> Perceived reinforcement of character traits will be higher for females in women’s colleges than females in coed schools	Satisfaction creating something new, idealism, ability to take initiative, compassion, flexibility, self-confidence, open-mindedness, friendliness, honesty, independence, pride in performance, tolerance of different beliefs, strength of religious beliefs	Supported
<i>Hypothesis 2:</i> Perceived importance of character traits will be higher for females in women’s colleges than females in coed schools	Coolness under stress, critical toward authority, cooperation, strength of religious beliefs	Not supported overall
<i>Hypothesis 3:</i> Perceived reinforcement of character traits will be higher for females in all-women’s religious colleges than females in women’s secular schools	Strength of religious beliefs	Not supported overall
<i>Hypothesis 4:</i> Perceived importance of character traits will be higher for females in all-women’s religious colleges than females in women’s secular schools	Openness and spontaneity, coolness under stress, loyalty to colleagues, strength of religious beliefs	Not supported overall
<i>Hypothesis 5:</i> Perceived reinforcement of character traits will be higher for females in coed schools than their counterpart males	Ability to take initiative, compassion, pleasure in learning something new, self-confidence, critical toward authority, loyalty to colleagues, independence, cooperation	Not supported overall
<i>Hypothesis 6:</i> Perceived importance of character traits will be higher for females in coed schools than their counterpart males	Satisfaction creating something new, ability to take initiative, compassion, openness and spontaneity, flexibility, pleasure in learning something new, open-mindedness, honesty, independence	Not supported overall

(continued)

Table 3. (continued)

Hypothesis	Traits Significantly Supporting the Hypothesized Direction	Finding
<i>Hypothesis 7:</i> Perceived reinforcement of character traits will be higher for traditional age female students than nontraditional age female students	Ability to take initiative, openness and spontaneity, flexibility, self-confidence, open-mindedness, critical toward authority, friendliness, loyalty to colleagues, honesty, independence, tolerance of different beliefs, strength of religious beliefs	Supported
<i>Hypothesis 8:</i> Perceived importance of character traits will be higher for traditional age female students than nontraditional age female students	Satisfaction in creating something new, sense of humor, idealism, openness and spontaneity, cooperation	Not supported overall

in female schools may suggest a consistency in mission to character development in women's colleges and seems to support gender socialization. These results also provide some support to the theory proposed by Yankelovich (1972) that females have a moral orientation focused on a greater sense of commitment to do things for others.

Although most universities indicate an explicit or implicit commitment to the development of values and behaviors in their missions or course catalogs, Bok (2004) argued that what is actually done is in direct contrast. In the debate over these and other issues the purposes are overlooked—except in smaller liberal arts schools. Moral development and preparation for citizenship falls into neglect. Ironically, many business faculty believe that ethics is a values-driven and internal construct; they do not want to affect student values and may not think teaching of ethics is important (Lund Dean & Beggs, 2006). The lack of perceived reinforcement by students in their business studies supports this view. Perhaps more attention should be given to teaching values to bring higher education into better alignment with the espoused mission regarding values and ethics.

This study supports Bok's (2004) thesis that some coed institutions prefer to disregard their role in character development. This study also supports the contention by Maccoby (1976), Gellerman (1986), and Golembiewski (1965) that organizations shape our behavioral inclinations and values by

the reinforcement perceived. (The correlations between trait reinforcement and perceived trait importance by respondents in this study were all statistically significant, $p < .01$.) More important, this study supports the argument by Kuh (2000) that the institutional environment of colleges and universities is an important factor in values and character development.

A fine-grained comparison of perceived reinforcement and importance of specific character traits across the different types of educational institutions selected in this study indicates that the character trait of compassion was perceived to be reinforced more strongly by females from women-only colleges as compared to females from coed institutions. Furthermore, perceived reinforcement and importance of compassion was higher for females in coed institutions compared with their male counterparts. This significant result deserves additional comment. It could be viewed as supporting the contention by Gilligan (1982), followed by Langdale (1983) and Lyons (1994), that females framed moral questions in terms of care, involving compassion and empathy, while males focused more on problems of justice, rights, and fairness. Also, with compassion being such a significant component of women's college socialization, one could extend its importance by acknowledging that empathy, a key aspect of compassion, is critical in understanding others and is related to effective listening and leadership today (Sharpe, 2000).

Other character traits that have consistently emerged as being more strongly reinforced in all-women's colleges are honesty, critical of authority, and independence. Ruhe (1991), in his first article involving using the Maccoby survey in the women's college environment, contended that these traits, along with compassion, are keys to ethical decision making because they would give a whistle-blower the courage to report unethical practices. Kanter (2006) agrees that these values, along with self-confidence and ability to initiate, would enable individuals to confront an establishment's unethical practices. Foster (2003) concurs with these three traits and added empathy, integrity, loyalty, and tolerance, to name a few. Females in coed schools have also perceived more reinforcement in many of these traits than their male counterparts, as also traditional age students compared with nontraditional age students. Because these specific character traits are consistently perceived as being strongly reinforced, it appears that these are important character traits to be developed in college, even for nontraditional age students. Obviously, older students are less affected by reinforcement in college because their character traits are already well developed before college. It is the excuse used by many business school professors for not discussing ethics in their MBA classrooms (Alsop, 2006). But a recent survey shows that MBA students' values change: Social values diminish in importance whereas shareholder values rise (Aspen

Institute, 2003, 2008). Hence the character traits that support ethical behavior such as compassion, honesty, critical of authority, and independence, should be emphasized in college education.

The importance of honesty cannot be overestimated. Without honesty, trust in our society would be difficult. Although many people agree that honesty is the best policy, the perceptual differences in honesty reinforcement may reflect the current cheating problem among many American students who often feel under competitive pressure to cheat when they perceive others engaged in cheating (Callahan, 2004). Newberger (2000) found that males may be more likely to cheat because of their competitive spirit. Unfortunately, if males cheat, females in coed schools may feel pressure to cheat as well in order to compete with the males. Lamsa, Sakkinen, and Turjanmaa (2000) agree that business education changes values. In a study involving accountants, Smith and Rogers (2000) found that occupational socialization blurs the differences that could occur in the responses of male and females, when specific rules of the business are violated. Similarly, our research indicates that female business students may be socialized into the coeducational environment during their studies affecting their perceptions of character trait importance.

Higher perceived reinforcement in the many head traits (ability to take the initiative, flexibility, pleasure in learning something new, self-confidence, open-mindedness, pride in performance, and tolerance of different beliefs) underscores the need for curricular changes in the teaching of management as well as highlights the difference between women's college environments and coed school environments. In the earlier study by Ruhe et al. (1998), many of these head traits also were found to be different between the one women's college and the three coed religious and three coed public schools. Although females from all-women's colleges perceived greater reinforcement in both heart and head traits than females from coed schools, there was not a significant difference in the number of traits perceived as important between the groups (only five characteristics were found to differ significantly). This finding is counterintuitive. One would expect that if female schools perceived significantly higher trait reinforcement than females in coeducational settings, one would expect they would also perceive significantly higher trait importance over the same group. Although we found a significant correlation between perceived trait reinforcement and perceived trait importance for every trait ($p < .001$), the difference in proportions of students perceiving trait importance by context was not significantly different. It appears that 2 or 3 years in the business school do not change the character traits female students perceive as important by context, even though, as our results suggest, they perceive

a difference in the reinforcement of character traits. It may be that prior to attending college women students experience similar character trait development in their families and early schooling. Trait development early in life may affect their current perceptions of trait importance, despite the perceived trait reinforcement within their context. This line of investigation is beyond the scope of this paper and requires additional research. Future research is also necessary to determine if, after several years in the corporate world, they change the traits they perceive as very important and if their college context moderates those perceptions.

What the findings suggest further is that because single-sex or predominantly female environments are associated with a higher perceived reinforcement of character traits, they are likely to benefit women business students somewhat, by preserving their different (from men) moral and ethical orientation. An implication of this finding could be that coed schools may want to consider buffering women students from an inadvertently unpleasant environment facing them by creating largely female-oriented learning settings, both in terms of culture as well as curricular content, especially when it comes to imparting business education. Because our research focuses on female students, future research is necessary to determine whether single-sex learning environments would have similar benefits for male business students.

Practical Implications of the Study

The results of this study suggest, to a degree, that a single-sex educational environment may be beneficial to female business student character development (Helfat, Harris, & Wolfson, 2006) because females from single-sex institutions appear to perceive more reinforcement of character traits than females from coed institutions. To the extent that single-sex environments have a slight competitive edge over coeducational environments in creating a learning context that is less traditionally masculine and more traditionally feminine in its orientation, they could enable women to nurture traditional sex-role traits such as character traits of the heart that are important to ethical decision making. The corporate world may then be able to see more ethical behavior through heart character traits as more women enter upper managerial ranks.

These results raise the question of what business colleges can do to improve the existing educational climate for women students. Although some have called for programmatic initiatives to increase the percentage of women students in business schools (Bilimoria, 1999), it seems fairly unlikely that coeducational institutions will go to single-sex classrooms to correct for their

climate deficiencies. Still, it is important to note that the trend toward coeducational institutions seems to be reversing somewhat in primary and secondary education, especially with the new October 2006 regulations by the U.S. Department of Education governing single-sex education in public schools. A provision in the No Child Left Behind Act (5131(a)(23) and 5131(c) NCLB) legalizes single sex education in public schools provided (a) the school offers a rationale for offering a single-gender class in that subject, (b) the school provides a coeducational class in the same subject at a geographically accessible place, and (c) the school conducts a review every 2 years to determine whether a single-sex class is still required. Higher education, however will likely stay strongly coeducational (98% of all higher education), given the dramatic, 80% drop in the number of female-only colleges. Assuming that the trend toward coeducation in higher education cannot be changed, the results of this study beg the question, what can be done to facilitate optimal character development in young women in that context? To that end, we move to a consideration of several suggestions for the pedagogy and content of business curricula that can be implemented in coed colleges.

First, the faculty members in business colleges need to be informed that women approach their studies and learn differently than men. In a study of undergraduate women at Harvard University, Gallos (1993) found that the psychological orientation of women to learning is often very different from men and clashed with the contextual norms in educational settings. She argued that women insert themselves into the classroom context often doubting their personal abilities and beliefs. This tendency leads women to the perception that their world is less significant or important than the real world (Gallos, 1993). Often the women felt alienated and that "real learning required them to leave significant parts of themselves outside the classroom door" (Gallos, 1993). Faculty-defined high standards, strong expectations, and demands may appear seemingly gender-neutral and value-neutral but present a double-edged sword for women students who mix their efforts to learn with their efforts to please. Faculty must develop classroom approaches that build "communities of learning" to support and confirm what women know. This work can be done through experiential learning that is grounded in context and provides ample space for women to validate their experiences alongside their male counterparts. It may also require developing single gender small group activities within coeducational courses.

Evaluation of women and men in ethics and character development courses could further allow for gender differences. As shown above, research in the psychology literature shows developmental differences (Gilligan, 1982), and these differences must be accounted for when evaluating student performance.

Gilligan identified three stages of moral development: first, a selfish stage; second, a stage of belief in conventional morality; and third a post-conventional stage. Female children tend to begin with a selfish orientation according to Gilligan. They then learn to care for others and learn that selfishness is wrong. As a result, in the second, conventional stage, women typically feel it is wrong to act in their own interests, and that they instead should value the interests of others. They equate concern for themselves with selfishness. In the third, post-conventional stage, they learn that it is just as wrong to ignore their own interests as it is to ignore the interests of others. Thus, according to Gilligan, the female approach to morality is that people have responsibilities toward others. Hence morality is an imperative to care for others. In contrast, the male approach to morality is that individuals have certain basic rights and that one has to respect the rights of others. So morality for men imposes restrictions on what one can do.

One implication of this difference in male and female morality for the business classroom is that women could be inadvertently evaluated as being “too soft to take tough business decisions” if their constant concern is to not hurt stakeholder interests. A more accurate evaluation of morality and business paradoxes in general must be found that considers both male and female perspectives. This can happen only if there is more emphasis on faculty education and development so that faculty members become aware of gender perspectives on morality. Both male and female students should be given the opportunity to “get in touch” with gender orientation to morality and learning. Although this change is ideally accomplished in mixed gender learning environments (the genders must learn to communicate and work together), single-gender (men-only, women-only) learning may be necessary. Moving to single-gender classes within a coeducational setting does not fit the culture and context of the organization and will likely be viewed negatively as segregation and exclusionary. As a result, where single-gender activities are necessary within coeducational contexts, extracurricular activities (symposia, conferences, clubs, etc.) are recommended. Although single-gender extracurricular activities within a coeducational context cannot create the same atmosphere, norms, or mission as single-sex institutions, they still give women and men the opportunity to emerge and express themselves in the coeducational context rather than simply “blend in.”

Another initiative for coed business institutions could be to increase the scope of management education to include gender issues. If women’s character, ethics and moral development differs from that of men, as previous research suggests they might (e.g. Ameen et al., 1996; Betz et al., 1989; Gallos, 1993; Gilligan, 1982; Smith & Oakley, 1997), then those differences

must be taken into account. More elective courses on gender and management topics of special interest to both male and female students would at a minimum provide opportunities for future managers to learn about male and female perspectives in the workplace (Rosener & Pearce, 1989). A more conscious effort could be used to mainstream or integrate gender issues into the core curriculum so that all students get exposure to it (Sullivan & Buttner, 1993). For this integration to happen, faculty training (male and female) on gender differences in character and moral development may be necessary so that the content and classroom procedures and processes are improved. Numerous articles have been published that could be used for this training and within classrooms themselves. For example, in their paper on ethics, Banaji, Bazerman, and Chugh (2003) describe the effects of unconscious biases. Faculty diversity training could bring such biases to light and improve their understanding of gender differences with respect to character development.

To ensure that female students are given the educational opportunities to express themselves and learn without encumbrances in the business classroom, course content changes to the business curriculum could be considered. A number of resources are available to inform and direct higher education in this redesign. For example, Sullivan and Buttner (1993) have suggested several specific course content changes that facilitate the learning of gender differences in mainstream management topics through the use of appropriate cases and exercises. For instance, they recommend the use of exercises such as the Janis/Jerome case (Gandz & Howell, 1989) to examine gender issues and dual career couples. Further, they suggest that instructors could present gender differences in discussions of research findings—for instance, talk about Gilligan's work (1982) while discussing moral reasoning and ethics or more recently, Eagly, Johannesen-Schmidt, and van Engen's (2003) findings of gender differences in transactional, transformational, and laissez-faire leadership. Additionally, they suggest providing more women role models to both male and female students, using special class projects such as completing case studies on women in management positions, dual career couples, and so forth and dealing with sexism directly by using diagnostic tools and surveys to figure out, within the classroom context, how real and how big is the problem of sexism. Although some of these suggestions may be easier to implement in certain business courses such as organizational behavior as compared with other courses, in sum they still represent fairly easy ways to make the business classroom less inhibiting for female students.

Changes in classroom practices and procedures could follow changes in course content suggested in the preceding paragraph. Instructors could focus

on the manner in which women students are treated and heard in mixed-sex coeducational settings. They could begin by setting ground rules early in their courses that convey the message that everyone's views, including women's, are respected by the instructor and that put-downs are not appropriate classroom behavior (Sullivan & Buttner, 1993). Instructors could encourage more class participation from all students, men and women, by giving equal air-time to women and provide a more supportive atmosphere where women voices have equal validity to their male peers when discussing issues of ethics and character. They could also be better prepared for dealing with sexist comments and the generally emotionally charged atmosphere that can pervade the classroom during discussions on gender differences. Of course, these changes in classroom procedures would need to go hand-in-hand with more counseling of and an improved reward system for individual faculty members to alert them to the various pedagogical issues pertaining to women's experiences (Bilimoria, 1999).

Limitations and Conclusions

This study relies on measures of perceptions of ethical behavior rather than actual ethical changes in behaviors which might be questioned. However, Ray and Montgomery (2006, p. 2) contend that "research suggests that individual perceptions are the best predictors of individual behavior and that educators' beliefs influence their perceptions, judgments, and practices" (Bandura, 1986; Pajares, 1992; Rokeach, 1968). How effective are Maccoby's behavioral inclinations indicative of actual behavior on the job? Further research in follow-up of the students is difficult, but Chen and Tang's (2006) 15-item Unethical Behavior Measure could be used to further examine ethical inclinations.

The statistical analysis in this study used a large number of *t* tests increasing the probability of Type 1 error in our findings. One way of dealing with this increased probability is to use lower *p* values in testing than the traditional .05. Only 8 of the 36 significant results for character trait reinforcement were significant at the .05 *p* level. Thus, 78% of the *t* tests were significant at the .01 *p* level or lower. These results do not alter our conclusions to our hypotheses examining character trait reinforcement. However, caution must be taken with the tests examining perceived value trait importance where 11 of 25 significant tests (44%) were significant at the .05 *p* level. This is particularly true for Hypothesis 2, which even though it was not supported, had three of five (or 60%) *t*-test results significant at the .05 level. Given the increased probability of Type 1 error, further study is needed.

As described in the Method section, we chose to support a hypothesis if at least 50% of the *t* tests examining that hypothesis were significant. Although in most cases the percentage of significant tests was much higher than 50%, there is still some concern about the rather arbitrary choice of 50% as our decision criteria for support of our hypotheses. Future research using different methodology both in terms of scaling and metrics is needed to verify and support our findings.

Although this article controls for important demographic variables, it does not overcome the problem of self-selection. It is possible that women who choose to study in single-sex colleges, or whose parents influence them into studying in single-sex colleges differ in important ways, particularly in relation to character traits, than those who choose coed institutions. In other words, women who select single-sex (especially religious) colleges may come with an already heightened development of the character traits examined in our study.

As described in the Method section, we used convenience sampling to test our hypotheses. Because our findings were similar to the earlier study by Ruhe et al. (1998) that involved six national coed schools—three religious and three public—we had greater confidence in our sample and findings. More studies are suggested using the same methodology. A follow-up comparison study of alumnae from women's and coed colleges with business programs, as well as math and science, would be valuable in understanding the long-lasting impact of the college reinforcement that tends to be masculine. This comparison should be the subject of further study.

Although the difference in character trait development of women in the single-sex environment compared with the coed environment is obvious from the higher perception of reinforcement in 13 of the 21 character traits, only 4 of these traits were perceived very important by the students. Further analysis of the data is needed to explain this difference from previous studies. Also it would be important to examine why males perceive such low reinforcement and importance of character traits. Do they see heart traits as too soft? How does learning of character traits occur? Would all-male collegiate institutions differ from coed schools? Unfortunately, only three such schools exist in the United States, and they also lack the comparative business programs to be included in this study.

In conclusion, this study supports the call by Bok (2004) for higher education to foster research on character and moral development. Our results may also suggest better classroom techniques that consider gender and that may better prepare students for ethical leadership. This must be done to answer the Association to Advance Collegiate Schools of Business International's (AACSB) call for improved ethical preparation leadership

(AACSB International, 2004; www.aacsb.edu/publications/enewslines). Flanagan (1998) suggests that the challenge will be great unless higher education takes more serious its role in character development. Unless the AACSB, the Higher Learning Commission, and other accrediting bodies develop measures to monitor character development of students and hold their institutions accountable, little progress will occur. The well-researched Maccoby survey could be a start in this monitoring process. Because Alsop (2006) contends that recruiters will be looking for business school graduates with a strong grounding in ethics, perhaps recruiters should consider women's college students as a potential source of future ethical managers. The current financial crisis should support the need for more ethically minded graduates of business schools and business departments.

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Notes

1. The decline of single-sex education in the United States has left only 3 all-male colleges (none with business departments) and only 54 all-women's colleges (Women's College Coalition, 2009). As a result, women's colleges (secular and religious) are the focus of this study.
2. Because Maccoby's scale does not measure "hand" traits and we chose to use Maccoby's measure, we have restricted ourselves to head and heart traits in the study, which have been found to be very relevant in explaining ethical behavior. Berkowitz's (2002) research on hand traits occurred about the time we were collecting our data and a scale on hand traits was not available. We agree that it is quite possible that "hand" traits (behavior) affect character development, and we do allude to the link between character traits and ethical behavior in our section on limitations and in the work of Lawson (2004) cited in the article; however, until a reliable measure for hand traits emerges, it will be difficult to use it in an empirical study of this nature.

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