

Attitude and Change: Conditioning in the Business School Environment

Todd A. Brown
210 CBA
University of Nebraska – Lincoln
Lincoln, NE 68588-0490
Phone: (402) 472-2325
tabrown@unlnotes.unl.edu

John A. Sautter
103-B Filley Hall
University of Nebraska – Lincoln
Lincoln, NE 68583-0922
Phone: (402) 499-3508
jsautter@bigred.unl.edu

Levi Littvay
University of Nebraska – Lincoln
Lincoln, NE 68588-0490
Phone: (402) 310-6487

Attitude and Change: Conditioning in the Business School Environment

Abstract

Many studies have reported that economics and business students have been more apt to act in self-interested ways when compared to their counterparts in other academic fields. It is our contention that past studies have not shed light on the extent to which selfish students pursue pecuniary studies like business, compared to how students' exposure to the business school environment and ideology make them more selfish? We put forth suggestive evidence that certain business majors do cause a marked increase in levels of narcissism and decreased levels of empathy, as measured by psychological based personality tests.

1. INTRODUCTION

It has been well established that business students often cheat more and act in less cooperative ways than students from other academic fields. Indeed, the recent wave of corporate scandals promulgated by individuals with business degrees is alarming. But, are business schools to blame? Surely these few rotten apples do not reflect the general population of business-educated professionals.

This is an important question to ask. If business schools are fostering an environment where students are not taught how to separate notions of business profitability from ethical decisions, future catastrophes not unlike Enron are just waiting to happen. In posing this question we decided to look at one business school, comparing students' year in school, personality profile measurements and undergraduate majors to determine if there is a correlation between taking business classes and a student's relative level of selfishness. Moreover, if business students are indeed more selfish, are they conditioned by their business school pedagogy or do selfish individuals self-select into business majors that complement their psychological biases? We present evidence that supports the former. Certain business school majors condition their students to be more selfish and less empathetic towards others.

The link between education and social development was proposed by John Dewey (1916) in his seminal work, Education and Democracy. Later, in his essay "Education and Experience," Dewey (1938) explores the actual experience of education, analyzing how pedagogical conditioning can indelibly manifest itself throughout the life of an individual. Dewey states, "Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time. Collateral learning in the way of formation of enduring attitudes is often much more important than

the spelling lesson or the lesson in geography...and it is these attitudes that fundamentally count in the future.” Similarly, Durkheim (1925) posits that childhood and adolescent education is an important facet of moral development. Viewing morality as a cognitive and developmental process, he felt that an individual’s ethical framework stemmed from learning how to construct moral judgments, as well as through environmental conditioning. Both Dewey and Durkheim suggest that at the core of education is a fundamental need to complement the analytical tools students learn with moral faculties that will assist them in negotiating future ethical dilemmas.

Pratt and McLaughlin (1989) offer empirical evidence that supports these prior assessments. They show that the development of subjective norms of college students is a reflection of the attitudes of their peers and their professors. Using Ajzen and Fishbein’s (1980) Theory of Reasoned Behavior as a theoretical model, they demonstrate that students’ ethical behavior is closely linked to their attitude development in the classroom. There is a separation by which “students’ subjective norms (their perceived social pressures) are a function of the normative beliefs (expectations) of various others in the environment.” This begs the question, if students’ attitude development concerning morality is subject to their peers and teachers, then what is the primary catalyst causing business schools to have an environment that is reinforcing behavioral beliefs that are contrary to mainstream notions of what is ethical and just?

There is substantial literature that indicates undergraduate business students cheat more than other undergraduate majors. Baird (1980) reported that business students are more likely than education majors to cheat and more likely to conceal instructors mistakes. McCabe (1992) noted that business students had the highest rate of cheating, at

87% in a survey-based study of undergraduate students. Brown (1995) shows that in a survey study of graduate business, education and engineering students, business students were substantially more inclined to participate in academic dishonesty. In another study, McCabe and Trevino (1995) looked at reported cheating at 31 of America's best undergraduate colleges and universities. Their sample consisted of 6,096 responses. Business students had a 50% higher rate of reported cheating than any other major.

Khaneman et al (1986) showed that commerce, or Canadian business students, were more likely to offer less in an ultimatum bargaining experimental game. Ultimatum bargaining is where an individual is asked to divide an amount of money between himself and another player. The other player has the option of accepting or rejecting the offer made by the decision player. Khaneman et al compared commerce students to psychology students of the same year in school, finding that the business oriented students in general offered less to the opposing player.

There is an important point that these studies only address mildly. Is this relationship between business/economics students and selfish behavior a behavioral or an environmental concern? Or more precisely, do selfish individuals self select into studying business or economics compared to how their psychological biases may change over time. In a study conducted by Donald and Fuller et al (1998), it is suggested that the underlying differences in rates of cheating among business students between universities rests in how school administrations institute anti-cheating policies. Schools that treat cheating as a behavioral rather than as a moral development issue, tend to have higher rates of dishonesty. In contrast, a school that incorporates moral logic into the general curriculum fares better. This would seem to support a notion purported by Frank (2004),

that ethics in the classroom are less tangible than merely holding individuals accountable for their actions, but rather reside more in the pedagogical experience fused with the ideology of the subject matter.

The very nature of a business school is to help teach young people how to succeed in business. This type of education boasts of inculcating young minds with the quantitative tools, competitive spirit and leadership traits that will drive anybody, who is hard working enough, up the corporate ladder. What maybe left out of this equation is the proverbial moral line in the sand that helps students decipher between what is profitable and what is dishonest. A study by Sims (1993) demonstrates that many business professionals learn selfish behavior while in undergraduate or graduate business school. He shows these behavioral attitudes follow them into the work world. Sims's work highlights the importance of attitude development in dealing with dishonest or selfish actions. Attitudes, which are cultivated and fostered in business school, form the basis of how corporate cultures evolve.

2. SPECIFICATION

This study was highly influenced by two main sources. Initially, Frank's (2004) research was indubitably significant in shaping the theoretical aspects of this research. However, in order to find functional models of undergraduate business and economics student behavior we were forced to further consult the relevant literature concerning academic dishonesty. We attempted to synthesize aspects of the Beckerian crime models used by Bunn et al. (1992) and Kerkvliet (1994) with more general models of behavior used by Nowell and Laufer (1997), as well as Hetherington and Feldman (1964). Nowell

and Laufer offer the best guide to a possible experimental design. They were the first investigators to use an econometric model to examine salient variables that tend to increase chances of known cheating by economics students. Their *modus operandi* called for observing economics classes during an entire semester, thus enabling them to offer stronger conclusions instead of more suggestive results. Hetherington and Feldman (1964) used pre-placed student observers to monitor cheating activities in the classroom. They reported higher incidences of cheating among men, regular church attendees, and first-born children. GPA's, I.Q. levels and a low class grade were also important independent variables found to influence cheating.

3. EXPERIMENTAL DESIGN

We contacted 1,189 students at a large research university and had 441 respondents, or a 37.9% response rate. A web-based survey was used to allow all non-demographic questions to be randomized in order to eliminate the possibility of data pollution. Similar to Kerkvliet (1994), who investigated academic dishonesty among economics students, our survey was completely anonymous. We thought that this would encourage sincere responses. Kerkvliet was concerned with garnering honest responses on a survey that aimed to measure self-reported cheating. Umeseh and Peterson (1991) have suggested that the random response method does not necessarily yield more earnest results because students do not feel they are really anonymous. However, students that took the survey in a pre-study run through generally felt that the survey conveyed a sense of anonymity as the web-based design allowed them to access the survey from anywhere, at any time and without identifying themselves.

Our survey instrument was designed to accomplish two main research goals. First, we were interested in gathering information on the psychological profile of students. Second, we gathered information pertaining to each student’s demographic and academic backgrounds.

The personality profile portion of the survey had two specific focuses, including a selfism test and an empathy test. After consulting the pertinent psychology literature and discussing the strengths and weaknesses of alternative assessment tools with experts in the field of psychology, we decided on two mainstream and widely accepted scales to test narcissism and empathetic tendencies. There were a total of twenty-three questions in this section. All personality profile questions are included in an appendix attached to this paper.

The Phares and Erskine Selfism Test was designed by its developers E. J. Phares and N. Erskine (1984) as an instrument to measure relative narcissism. As defined by the authors this test measures “an orientation, belief, or set affecting how one construes a whole range of situations that deal with the satisfaction of needs. A person who scores high on the NS (narcissism scale) views a large number of situations in a selfish or egocentric fashion.” This assessment tool has been tested and found to have a very high rate of internal consistency. Each test used a seven point Likert scale, from one to seven, asking respondents to either strongly agree or strongly disagree. The following is a sample question:

Call it selfishness if you will, but in this world today, we all have to look out for ourselves first.

Strongly Agree						Strongly Disagree
1	2	3	4	5	6	7

The other personality measure used in our survey focused on testing individuals for empathetic tendencies, or the ability to understand the needs of others and their community. Goldberg (1999) developed a series of questions to test for empathetic patterns of behavior in respondents. We felt it was important to include this test as a way to measure the relative selfishness of students. Selfish attitudes when left unchecked by a lack of understanding of other's needs and group collective action could lead an individual into taking selfish actions without contemplating the effects of those acts on the group, community or, in the case of business, the firm. Therefore, in our test of business students, if narcissism increased while empathy for others decreased then it would signal that students were being conditioned with selfish attitudes.

In order to elicit a positive survey return rate it was necessary to use a subset of each test, with eight narcissistic and eight empathetic questions. Seven questions taken at random from an introvert versus extrovert test were added into the psychological profile segment of the survey to separate and disguise the true intent of the tests. The length of each individual test, over thirty questions, with the added ethics and demographic questions would not have been a practical length without substantial incentive offered to students to complete the survey. Students were not informed of the full intent of the project, but told that a study to improve business education was being conducted. In nine classes instructors agreed to offer a small amount of extra credit to students who completed the survey. In another twelve classes investigators were allowed to enter the class to ask students to voluntarily complete the survey. At the end of each completed survey students were given a six-digit number. If the student's professor had offered extra credit this number was to be reported to the instructor in order to signal that the

student had completed the survey. Before we conducted the survey, we informed the Internal Review Board and Compliance Services of the methodology of the study. Approval was granted for the research.

4. EMPIRICAL MODEL

4.1 Dependent Variables

It was necessary to develop two dependent variables: one for narcissism and another for empathy. The ordinal nature of our data from the psychological tests offered us two main options. Either use a factor analysis to develop a relative rating for each individual on both tests, or use an iterative cluster analysis with a bi-modal distribution to split the entire sample into two main groups for each dependent variable. We chose the latter. A cluster analysis can identify relatively homogeneous groups of cases by using an algorithm that can handle the large number of questions and respondents. There is no prior demarcation; the algorithm uses the information available to find both cluster size and mean, though the procedure does require a specification on the number of clusters. Following the work of Bunn et al. (1992), Kerkvliet (1994), Nowell and Laufer (1997), we desired binary dependent variables for methodological purposes. The cluster analysis allowed us to classify and transform our psychological tests into a binary (0,1) set for both narcissism and empathy. Respondents were accordingly categorized as either narcissistic or non-narcissistic, and empathetic or non-empathetic. For example, 0 = non-narcissistic and 1 = narcissistic. See Table 1, Panel A, for descriptive statistics concerning the cluster analysis.

4.2 Independent Variables

Variables describing individual characteristics included gender, year in school, GPA, age, parent's income, and religious preference. Dummy variables were used in our model for gender and religious preference, with 0 = male and 1 = female, as well as, 0 = religious and 1 = non-religious. We decided to gather data on religious preferences as Hetherington and Feldman (1964) found evidence that religious preference had a positive effect on cheating in undergraduates. GPA was an important variable to include. In each study reviewed in preparation for this project, grade point average was a highly significant determinate of undergraduate academic integrity. We believed, as Bunn et al. (1992) found with cheating, that GPA would have a negative coefficient on the narcissism test; however, we had no hypothesis concerning this variable on the empathy test. Increasing age and year in school, we believed would be correlated with higher levels of narcissism, but again we had no inclination how these individual characteristics would affect empathy toward others.

Information on student academic profiles was gathered with regards to the number of business classes, number of math classes and undergraduate major. We felt that business classes would have a positive correlation with narcissism, but there was no *a priori* prediction on the relationship between empathy and the number of classes. Frank (2004) found a positive correlation between number of math classes completed and starting salaries of graduating Cornell University students. We believed that higher levels of math classes would have a positive coefficient in relation with narcissism and a negative effect with empathy.

Dummy variables were used for the individual undergraduate business majors,

freshman and non-business seniors. Business students fell into one of four classifications: Accounting, Finance, Management and Marketing. Because of the necessity to run multiple regressions at different stages of our investigation in order to compare separate segments of the sample population, different sub-groups (including non-business seniors, freshman and marketing students), were used as a baseline at varying stages of the analysis.

Another important dummy variable used in our model was extra credit, where 0 = no extra credit and 1 = extra credit. We felt this was an important factor to control. It was possible that if we did not control for this less narcissistic and more empathetic students would be over-weighted, as more selfish individuals would be less willing to take the survey unless there was some sort of incentive that served their self-interest.

5. ESTIMATION

Means and standard deviations of our control variables are included in the estimations reported in Table 1, Panel B. Out of 441 respondents, 435 empathy and 431 narcissistic observations were reported respectively for each of our dependent variables. Our initial estimated regression equations included all of the explanatory variables stated above. However, due to the need for consistency between both the narcissistic and empathetic models, certain variables that did not consistently perform throughout both models and at different stages of analysis were dropped from consideration. The observations eliminated were variables for which we had no strong prior hypothesis as to their effect on the likelihood of being either narcissistic or empathetic. These variables included gender, religious preference and number of business classes. Of the observations

dropped, all of them, or similar proxies, were variables that were also eliminated from prior econometric models by researchers: Nowell and Laufer (1997), Kerkvliet (1994), and Bunn et al. (1992).

The variable “class” (year in school) was also dropped. After collecting observations, we garnered feedback from students who had participated. We found that due to extended time in school exceeding the traditional four years, many students could be either juniors or seniors depending on how they classified themselves. From our informal discussions with students we found that many had finished their major requirements in the business school and were still waiting to graduate for different reasons.

Furthermore, undergraduate students at this particular university cannot officially declare themselves as a business major until the end of their sophomore year. During their junior year students are obligated to take introductory and prerequisite business classes. It is not until their senior year that students can declare an official business major. This official declaration can occur anywhere between a student’s second to fourth year in school, depending on the track the student has chosen. Therefore, we considered all declared business majors, upper-classmen. If narcissism and empathy are learned attitudes it should not matter whether the classes thought to condition students occur during the second, third or fourth year. It is more important that students have taken the classes necessary for a declared major. However, the observations taken on the survey under the “year in school” question did provide us with important information regarding nonbusiness seniors and freshman.

After eliminating the variables we were left with the following two equations that

we used in varying forms throughout the regression process:

$$Narcissism_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \sum_{m \in M} \delta_m BusMajor_{mi}$$

$$Empathy_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \sum_{m \in M} \delta_m BusMajor_{mi} ,$$

where *Narcissism* and *Empathy* are the binary cluster variables and *BusMajor* is a dummy variable representing the four categories of business school study. Please see Table 1, Panel C, for a listing of the number of observations for each major area. The independent control variables are grade point average, number of math classes, age and extra credit. A PROBIT model was used to predict narcissism and empathy among our respondents.

6. RESULTS

6.1 Finance Majors are Different

We first tested whether there was a general difference in business versus nonbusiness students across our entire sample. Following our procedure of reducing the original regression we settled on the following two models of narcissism and empathy for this analysis:

$$(1) \quad Narcissism_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \beta_5 BusMajor_i$$

$$(2) \quad Empathy_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \beta_5 BusMajor_i ,$$

where *BusMajor_i* is a dummy variable denoting a student that is majoring in business. The results are present in Table 2, Panel A. Notice there are no statistically significant coefficients, indicating similar patterns of attitudes between both segments of the sample.

Next, we wanted to look at the total sample and find out if business students

differed from our control group of non-business students. It was also important to look at the individual business majors to see how each individual major differed from the nonbusiness sample. This was found by running the following two regressions:

$$(3) \quad Narcissism_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \sum_{m \in M} \delta_m BusMajor_{mi}$$

$$(4) \quad Empathy_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \sum_{m \in M} \delta_m BusMajor_{mi} ,$$

where $BusMajor_i$ is a dummy variable for the identity of each business major ($m =$ Accounting, Finance, Management and Marketing).¹ In this case, the rest of the population including non-business majors and business freshman were the baseline comparison.

Finance majors were significantly more narcissistic and less empathetic than any other undergraduate business major. In both regressions, finance majors were significant at the 5% level. Notice in Table 2, Panel B, the strong positive coefficient concerning narcissism and the strong negative coefficient concerning empathy as compared to the other business majors. Also, remember this is as compared to the baseline non-business majors as well.

As with prior studies of cheating, GPA was negatively correlated with the selfish variable and significant at the 1% level. It is intriguing how the statistical analysis of these personality tests seems to match, on an intuitive level, the idiosyncrasies of the individual business majors. For example, management majors have a comparatively strong positive coefficient with empathy, paralleling their training in understanding how

¹ The reader might notice that our regressions have fewer observations than the total number taken. This result occurs if a respondent omitted an answer to the necessary questions needed to form the regression equation. The R^2 is not reported. This study is not a test of a model of narcissism and empathy, but an attempt to identify a change in these dependent variables between sub-samples.

to work with and lead others. Marketing also has a positive coefficient in empathy, matching how they need to understand the emotions and desires of others in their focus of study. Accounting majors do have a negative empathy coefficient, however, it is not statistically significant. No other major comes close to matching the strength of contrast in finance majors: selfish attitudes and a lack of empathy for others.

6.2 Self-selection versus Conditioning

The next stage in our analysis was to compare freshman to the rest of the sample. It was important to look for trends that would inform us on whether students self-select into majors that fit predisposed attitudes, or if certain psychological biases were the result of pedagogical conditioning. We analyzed the sample looking for differences between non-business freshman and business freshman, but found no statistical differences in either narcissism or empathy.² This leads us to believe that *by our measures* freshman enter college *carte blanche*, or without significant selfish or empathic attitudes relative to upper-classman. As there were no differences between non-business and business freshman, we therefore decided to treat freshman as a homogenous group in order to compare them to upper-classman. We used the following regression equations to accomplish this:

$$(5) \quad Narcissism_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \beta_5 Freshmen_i$$

$$(6) \quad Empathy_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \beta_5 Freshmen_i,$$

where $Freshmen_i$ is a dummy variable identifying first year students.

We found that when compared to the rest of the sample, as per our hypothesis, freshman as a group are much less narcissistic. Notice the strong negative coefficient at

² Using a sub-sample of only freshmen, regressions of equations (1) and (2) yielded no significant coefficients on the dummy variables for business students.

the 1% significance level in regards to selfishness for freshman in Table 2, Panel C. Predictably, age is an important variable in the narcissistic regression, significant at the 5% level. The negative correlation in this regression for age suggests that younger individuals are less likely to have selfish attitudes. Again, on an intuitive basis, it makes sense that freshmen might be generally less cynical and selfish, as life might not have yet calloused them with difficult and trying experiences. Similarly to the prior narcissistic regression's results concerning GPA, there is a negative correlation at the 1% level, suggesting that GPA is an important factor in selfish attitudes even in first year students. What is interesting is that the empathy factor is not statistically significant and holds a very small coefficient. This shows that empathy toward others is nearly the same as the average upperclassman.

6.3 Comparison Without Freshmen

We could now posit that between a student's freshman year and their completion of their undergraduate major classes a change in attitudes was taking place, particularly for finance majors. We now needed to take freshman out of the sample to view how significantly the business major dummy variables would perform compared to only nonbusiness seniors. Recall in the first step of analysis that we treated all freshman and nonbusiness seniors as the baseline for our regression. The possibility existed that when we compared individual business majors in our first step of analysis to the rest of the sample, freshmen were heavily weighting the baseline comparison. Therefore, in order to get a true measure of any differences between non-business seniors and individual business majors we needed to take out the freshmen. We used the same regression equations as in our first test, except we eliminated freshmen from the sample:

$$(7) \quad Narcissism_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \sum_{m \in M} \delta_m BusMajor_{mi}$$

$$(8) \quad Empathy_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \sum_{m \in M} \delta_m BusMajor_{mi} ,$$

where $BusMajor_i$ is a dummy variable for the identity of each business student's major ($m = \text{Finance, Management, Accounting, Marketing}$). Notice in Table 3, Panel A, there is only a marginal change from the regressions ran on the entire sample in step one. Finance is still strongly narcissistic and weakly empathetic at a statistically significant level. We could therefore now say that as compared to other seniors at this university, finance majors generally hold attitudes that are more selfish and less understanding of the needs of others.

6.4 Finance as Compared to Other Business Majors

The next step in our analysis was to compare the individual business majors to each other using a business student only segment of our sample population, without freshman and non-business seniors. We used the following regression models:

$$(9) \quad Narcissism_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \beta_5 Fin + \beta_6 Mngt + \beta_7 Acct$$

$$(10) \quad Empathy_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \beta_5 Fin + \beta_6 Mngt + \beta_7 Acct ,$$

where marketing was dropped to avoid problems of collinearity. Notice in Table 3, Panel B, that when compared to other business majors, finance students are still significantly more narcissistic and less empathetic, both at the 5% level. Even among their colleagues in the business areas, students studying finance seem to follow the same pattern of being more selfish and less understanding of other's needs.

6.5 Perspective: Finance versus Economics

In our final analysis we wanted to compare finance students to economics

students. In almost all respects finance is an applied form of economic analysis. However, there is one difference. While both majors use the standard neo-classical model of self-interest as a primary basic assumption, finance has no social or community oriented application. At some point in the study of economics most students encounter debates about welfare functions, community planning and social economic intervention. However, there is no such debate in the study of financial analysis. Students are called upon to deal with only one question: how to maximize individual and firm profit? Therefore, if there is a similar conditioning effect from the study of finance, as has been suggested by Frank (2004) about economics students, there could be noticeable differences between students from the two fields.

We used the same form for our regression analysis of narcissism and empathy. Economics students were classified as non-business students in the general population in the prior regression models. We did not consider them business students for two reasons. First, the Economics Department holds titles in the College of Arts and Sciences, as well as the College of Business. Second, the College of Business, no matter what department, shares a basic introductory course schedule that is required of all undergraduate business majors. Economics students at the university where the study was conducted are not required to participate in this introductory business course focus.

Of the economics students surveyed, all were senior non-business students. For this particular analysis we once again eliminated freshman, running the regression with non-business seniors (excluding economics students) and business seniors (excluding finance students) as the baseline comparison. We used the following two regression equations:

$$(11) \quad Narcissism_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \beta_5 Fin + \beta_6 Econ$$

$$(12) \quad Empathy_i = \beta_1 GPA_i + \beta_2 Math_i + \beta_3 Age_i + \beta_4 EC_i + \beta_5 Fin + \beta_6 Econ.$$

Notice in Table 3, Panel C, the difference among finance and economics students. Finance students have relatively the same significance in measures as in the prior regressions. However, while economics students predictably hold selfish attitudes at a significant level of 5%, they sharply contrast with finance students in the empathy regression. Economics students, though not at a statistically significant level, have a positive coefficient in empathy. We can infer that economics students may hold selfish attitudes, but unlike their finance counterparts, they have more positive attitudes toward understanding and finding unity with others.

7. CONCLUSION

It was our purpose in this project to investigate whether or not there was a correlation between studying business and the development of attitudes that would lead to selfish behavior. Substantial academic literature and research has documented that business students tend to cheat more and act in a more selfish manner than the general undergraduate population. Our study suggests that there is a distinct change over time between freshman business majors and upperclassmen toward the development of selfish attitudes, predominantly in Finance majors.

References

- Ajzen, I., & Fishbein, M. (Eds.) (1980). Understanding Attitudes and Predicting Social Behavior. Englewood Cliffs, NJ: Prentice-Hall.
- Baird, J.S., Jr. (1980). "Current trends in College Cheating," *Psychology in the Schools*, 17: 515-522.
- Becker, G.S. (1968) "Crime and Punishment: An Economic Approach," *Journal of Political Economy* 78: 169-217.
- Brown, B. S. (1995) "The Academic Ethics of Graduate Business Students: A Survey." *Journal of Education for Business*, 70: 151-157.
- Bunn, D., S. Caudill, and D. Gropper. 1992. Crime in the Classroom: An Economic Analysis of Undergraduate Student Cheating Behavior. *Journal of Economic Education* 23(Summer): 197-207.
- Dewey, J. (1916). Democracy and Education. New York: Macmillan.
- Dewey, J. (1938). Experience and Education. New York: Macmillan.
- Durkheim, Emile. (1925). Moral Education. Paris. Presses Universitaires de France.
- Frank, R. H. (2004). What Price The Moral High Ground. Princeton University Press.
- Goldberg, L.R., (1999). A Broad-Bandwidth, Public-Domain, "Personality Inventory Measuring the Lower-Level Facets of Several Five-Factor Models," in I. Mervielde, I. Deary, F. De Fruyt and F. Ostendorf, eds., Personality Psychology in Europe, Tilburg University Press, Volume 9, Tilberg, The Netherlands.
- Kerkvliet, J. (1994) "Cheating by Economics Students: A Comparison of Survey Results," *Journal of Economic Education* 25 (Spring):121-33.
- Khaneman, D., Knetsch, J. and Thaler, R. (1986), "'Fairness As a Constraint on Profit Seeking'," *American Economic Review*, 76: 728-741.
- Hetherington, E.M., & Feldman, S.E. (1964). "College Cheating as a Function of Subject and Situational Variables," *Journal of Educational Psychology*, 55: 212-218.
- McCabe, D. L. (1992). "The Influence of Situational Ethics on Cheating Among College Students," *Sociological Inquiry*, 62: 365-374.
- McCabe, D. L.; Trevino, L. K. (1995) "Cheating among business students: A challenge for Business Leaders and Educators," *Journal of Management Education*, 19: 205-214.

Nowell, D., and D. Laufer. (1997). "Undergraduate cheating in the fields of business and Economics," *Journal of Economic Education* 28 (Winter): 3-12.

Phares, E. & Erskine, N. (1984). "The Measurement of Selfism," *Educational and Psychological Measurement*, 44: 597-608.

Pratt, C. B., & McLaughlin, G. W. (1989). "Ethical Inclinations of Public Relations Majors," *Journal of Mass Media Ethics*, 4: 68-91.

Sims, R.L. "The Relationship between Academic Dishonesty and Unethical Business Practices." *Journal of Education for Business*, 68: 207-212.

Umeseh, U. N., and R. A. Peterson. (1991) "A Critical Evaluation of the Randomized Response Method. *Sociological Methods and Research*," 20 (1): 104-37.

Appendix

Please help us understand your ideas about life. If you tend to disagree with the statement, circle a number on the left side of the scale; if you tend to agree, circle a number on the right side. If you are neutral, circle the "4". Please circle one number in each row. Please do not answer any question that makes you feel uncomfortable. Be honest with yourself and think very carefully how you these questions fit you. Thanks.

- | | | |
|----|--------------------------------------------------------------------------------------------------------|--------------|
| a. | Thinking of yourself first is no sin in this world today. | Narcissistic |
| b. | I make people feel welcome. | Empathy |
| c. | I think that one of the best things about helping others is that it makes me look good. | Filler |
| d. | It is more important to live for yourself rather than for other people, parents, or for posterity. | Narcissistic |
| e. | I anticipate the needs of others. | Empathy |
| f. | I believe that donating goods or money works best when it is tax-deductible. | Filler |
| g. | I regard myself as someone who looks after his/her personal interests. | Narcissistic |
| h. | I love to help others. | Empathy |
| i. | I believe I should receive more recognition for the time and energy I spend on charity work. | Filler |
| j. | I am concerned about others. | Empathy |
| k. | It's best to live for the present and not worry about tomorrow. | Narcissistic |
| l. | I have a good word for everyone. | Empathy |
| m. | One of the best things about doing charity work is that it makes me look good. | Filler |
| n. | I look down on others. | Filler |
| o. | Getting ahead in life depends mainly on thinking of yourself first. | Narcissistic |
| p. | I am sensitive to the feelings of others. | Empathy |
| q. | I feel that if I help someone, they should help me in the future. | Filler |
| r. | I make people feel comfortable. | Empathy |
| s. | Call it selfishness if you will, but in this world today, we all have to look out for ourselves first. | Narcissistic |
| t. | I turn my back on others. | Filler |
| u. | In striving to reach one's true potential, it is sometimes necessary to worry less about other people. | Narcissistic |
| v. | I take time for others. | Empathy |
| w. | Not enough people live for the present. | Narcissistic |

Table 1. Descriptive Statistics

<i>Panel A. Cluster Analysis</i>			
<i>Narcissistic Clusters</i>			
	Frequency	Percent	
Narcissism = 0	191	44.3	
Narcissism = 1	240	55.7	
Total	431	100	
<i>Empathetic Clusters</i>			
	Frequency	Percent	
Empathy = 0	160	36.8	
Empathy = 1	275	63.2	
Total	435	100	
<i>Panel B. Control Variable Data</i>			
	GPA	Math Courses	Age
Mean	3.301	3.788	21.565
Std. Dev.	0.493	3.278	2.359
<i>Panel C. Observations</i>			
Major	Students		
Finance	97		
Management	73		
Accounting	32		
Marketing	42		
Total Business	244		
Non-business	197		
Total	441		

Table 2. Binary Probit Regressions of Equations 1-4 (Full Sample)

	Independent Variables											Obs.	log likelihood
	Constant	GPA	Math Courses	Age	Extra Credit	Business Major	Finan	Mgnt	Acct	Market	Fresh		
<i>Panel A. Equations 1 & 2</i>													
Narcissism	1.600*** (1.95)	-0.32** (2.41)	-0.015 (0.74)	-0.032 (1.14)	0.266 (1.03)	0.156 (1.18)						401	-275.4
Empathy	-0.063 (0.08)	0.059 (0.46)	0.010 (0.53)	0.018 (0.64)	-0.200 (0.75)	-0.090 (0.68)						405	-267.5
<i>Panel B. Equations 3 & 4</i>													
Narcissism	1.752** (2.11)	-0.354* (2.64)	-0.015 (0.74)	-0.033 (1.15)	0.244 (0.93)		0.336** (2.07)	0.088 (0.48)	-0.185 (0.71)	-0.029 (0.13)		404	-277.6
Empathy	-0.297 (0.36)	0.126 (0.97)	0.010 (0.50)	0.020 (0.69)	-0.230 (0.85)		-0.296** (1.84)	0.190 (1.01)	-0.258 (0.98)	0.241 (1.02)		408	-269.4
<i>Panel C. Equations 5 & 6</i>													
Narcissism	2.937* (2.71)	-0.410* (3.00)	-0.018 (0.91)	-0.071*** (1.85)	0.218 (0.84)						-0.591** (2.45)	399	-274.7
Empathy	0.082 (0.08)	0.067 (0.51)	0.016 (0.79)	0.007 (0.21)	-0.194 (0.73)						0.014 (0.06)	403	-265.5

Notes: z-statistics appear in parentheses. Significance at the 1%, 5%, and 10% are shown by *, **, and *** respectively.

Table 3. Binary Probit Regressions of Equations 7-12 (Freshmen Excluded)

	Independent Variables										log likelihood	
	Constant	GPA	Math Courses	Age	Extra Credit	Finan	Mgnt	Acct	Market	Econ		Obs.
<i>Panel A. (All Majors) Equations 7 & 8</i>												
Narcissism	4.159*	-0.556*	-0.023	-0.096**	0.007	0.285***	0.058	-0.239	-0.240		347	-237.6
	(3.57)	(3.33)	(1.03)	(2.46)	(0.02)	(1.65)	(0.29)	(0.85)	(0.98)			
Empathy	-0.159	0.064	0.017	0.019	-0.167	-0.294***	0.128	-0.067	0.280		350	-230.4
	(0.15)	(0.38)	(0.79)	(0.57)	(0.58)	(1.73)	(0.63)	(0.23)	(1.08)			
<i>Panel B. (Business Majors) Equations 9 & 10</i>												
Narcissism	4.286**	-0.597*	-0.010	-0.097	-0.299	0.540**	0.312	0.004			227	-154.6
	(2.47)	(2.74)	(0.38)	(1.56)	(0.83)	(2.12)	(1.16)	(0.01)				
Empathy	-0.356	0.100	0.023	0.044	-0.377	-0.588**	-0.151	-0.366			228	-151.1
	(0.21)	(0.46)	(0.89)	(0.73)	(1.04)	(2.22)	(0.53)	(1.04)				
<i>Panel C. (All Majors) Equations 11 & 12</i>												
Narcissism	4.091*	-0.574*	-0.026	-0.094**	0.063	0.264***				0.861**	347	-237.6
	(3.54)	(3.44)	(1.16)	(2.42)	(0.22)	(1.67)				(2.11)		
Empathy	0.062	0.011	0.013	0.019	-0.128	-0.432*				0.254	350	-230.4
	(0.06)	(0.07)	(0.61)	(0.56)	(0.44)	(2.77)				(0.64)		

Notes: z-statistics appear in parentheses. Significance at the 1%, 5%, and 10% are shown by *, **, and *** respectively.