A 20-item chi-square test of independence was administered to a selected sample of college students that was stratified 507 male and 507 female. Male and female responses showed a significant difference on 18 of the 20 items. The 2 items on which attitudes of both sexes were the same were the role of government in business and a solution to the racial problem. Males were more liberal than females on 11 of the 18 items that showed distributions significantly different from appropriate sex norms. In examining the college class variable, nearly all significant deviations were found at the freshman and graduate levels. Of the 7 significantly deviant items, freshmen were more liberal on those dealing with philosophical and educational issues and more conservative on personal-moral issues. Graduate students showed significant deviation on 14 of the 20 items, and were conservative on philosophical and educational issues but more liberal on political, social, and personal-moral issues. Sophomores and seniors did not deviate significantly on any of the items. There seemed to be no meaningful deviation pattern that could be directly connected with age. The report also includes differences by undergraduate college major as they were indicated by 19 of the 20 items. (WM)
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AMERICAN COLLEGE STUDENT VALUES
THEIR RELATIONSHIP TO SELECTED PERSONAL AND ACADEMIC VARIABLES
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Before discussing the variables associated with this part of the study a word about interaction would be appropriate since it is an important concept to keep in mind when evaluating the results of the project.

The concept of a "random sample" in its true sense is a theoretical one just as the defined distributions, such as the normal distribution, are theoretical. One can only attempt to approach a random sample as nearly as circumstances will allow. Some degree of randomness is lost with every control imposed upon a sample. The mere fact that we claim to have stratified our sample on type and size of institution, geographic area and sex imposes some loss in the randomness. However, for the purpose of precision we felt it was important to impose these controls in an attempt to "match" the overall percentages of the American student population which may not have been met in the size sample taken from this overall population.

When breaking down the obtained sample further on the variable to be studied many selection factors are at work "biasing" the resulting subsamples. As a consequence these subsamples may exhibit significant differences from the total norm that are not necessarily attributable to the classification as such. For example, when obtaining the subsamples associated with the undergraduate college major, several of them became very "out-of-proportion" on the sex variable as compared to the original sample. Five of the categories roughly maintained the 50-50 male-female ratio while the other five changed to about a 75-25 ratio. One would expect the one-sided subsamples to be similar to the appropriate sex norm but even this may not always be the case because of selection factors at work resulting from certain types of students selecting business, economics, etc. as a major. Also, the alteration of the overall percentages of the other variable types may be introducing a "biasing" in the subsample with consequent loss of randomness to some degree.

The gist of all this is that it is difficult, if not impossible to be dogmatic in concluding that differences are a result of interaction between the variables or because of the selection factors of the subsample. Because of the nature of the study and the sample obtained the effects of the interaction were not examined. However, it is important to bear in mind the possibility of its existence when examining the results of the project. The tables included in the description of the samples in the four studies reviewed here give one an intuitive basis for some sort of compensation.
Sex Differences

The chi-square test of independence was used in examining the sex variable since we were interested in whether males differed from females rather than if the two sexes differed from the norms. The 0.01 level of significance was used to determine difference with this variable as well as each of the other variables in the study.

The selected sample was stratified 50% male and 50% female. The sample returned maintained this ratio within 1%.

Eighteen of the twenty PVI items showed a significant difference between the male and female responses. The two items on which male and female attitudes were the same concerned the role of the government in business and a solution to the racial problem.

The males were more liberal than the females on eleven of the eighteen items that showed distributions significantly different from the norms. The items included such issue types as those concerning morality and religion; for example, cheating on tests, sex relations, use of alcohol, beliefs in God and the Bible, man's responsibilities and the equality of man. Other issues on which males took a more liberal stand concerned communists, labor, education and academic freedom.

The females tended to be more liberal on items concerning war, foreign policy, crime and ethical conduct. They were also more liberal in their attitudes regarding science and the school curriculum.

College Class Differences

The chi-square test for goodness of fit was used in examining the college class variable. The distributions of responses exhibited by each class were compared to the norms established by Dr. Teglovic. Nearly all the significant deviation from these norms was found at the freshman and graduate levels.

Of the seven items showing a significant deviation from the norms, the freshmen were more liberal on those dealing with the philosophical and educational issues and more conservative on the personal-moral issues.

Graduate students showed significant deviation on fourteen of the twenty items. Of these they were conservative on philosophical and education issues and more liberal on political, social and personal-moral issues.

Juniors showed significant deviation on only two items. They indicated a liberal deviation on the item dealing with cheating on tests and the one dealing with their belief in the Bible.
Sophomores and seniors did not deviate from the norms significantly on any of the items.

Undergraduate College Major Differences

Of the ten college major categories listed, eight deviated significantly from the norms more than the number of times that might reasonably be attributed to chance. Nineteen of the twenty PVI items were instrumental in indicating these differences.

1. Applied Arts: Agriculture, Forestry, Home Economics, Industrial Arts, etc. These students deviated from the norms only once, which could have been a chance occurrence. They indicated a more moderate to conservative attitude than the norm group with respect to their belief in the Bible.

2. Business, Commerce, Economics, Accounting, Law, etc. Significant deviation was found on twelve of the twenty items. The difference was always in a conservative or more moderate direction. The issues on which they were conservative were those involving political or social topics. They were more moderate on the personal-moral and religious issues. On one item, the purpose of science, the group was heterogeneous.

3. Education: Physical Education, Special Education, etc. Significant deviation from the norms occurred on fifteen of the twenty items. Seven were in a conservative direction and seven showed more moderate distributions. They were conservative on religious and personal-moral issues and more moderate on issues of the social, political and educational types. On one item, the purpose of science, the group was heterogeneous.

4. English, Foreign Languages, Journalism, Liberal Arts, Literature, Speech, etc. Students majoring in these areas deviated from the norms on four of the twenty items, always in a liberal direction. Three of the items were political in nature and one was personal-moral.

5. Fine Arts, Music, Drama, etc. This group showed significant deviation from the norms on only two items. The items were the two that deal with the role of government; one in international relations and the other in business. In the first they were more moderate than the norm group and in the second their percentage of responses in the extreme positions was higher than for the norms.

6. Health Professions: Medicine, Nursing, Pharmacy, etc. The students in these areas deviated significantly from the norms on
twelve of the twenty items. Eleven of these were in a conservative direction. Among these eleven were all the items on the PVI of a personal-moral nature. The students majoring in the health professions were more liberal than the norm group only in their attitude toward who should be given the right to vote.

7. Philosophy, Religion, Bible, Theology, etc. Majors in these fields deviated significantly on eight items. The deviation was somewhat heterogeneous in nature; usually it was away from the general concentration area of the norm group responses. It is rather interesting to note that these eight items include all but one of the PVI items that could be classified as political and none that could be classified as philosophical.

8. Sciences, Engineering, Mathematics, etc. This group of students deviated significantly on only five items. Four were in a conservative direction. The subject of the issues was diversified (one each political, educational, social, religious). Their attitude toward academic freedom, however, was more liberal than the norm group.

9. Social Sciences: Sociology, Psychology, History, Government, etc. The students majoring in the social science fields showed significantly different response distributions on eighteen of the twenty items, more than any other category of the college major variable. Sixteen of the deviations were in a liberal direction. The other two deviant items tended to have the responses concentrated in both of the extreme positions. These were political in nature.

10. Other. The other category was used to classify students who did not indicate one of the first nine choices. It was not labelled "none" since we wanted students to indicate a preference if one had developed at all. Those students who were thus classified (by not designating one of the listed major fields) did not deviate from the norm group on any of the twenty PVI items. As a group they displayed no pattern that could associate them with any of the nine categories previously considered.

Age Differences

There appeared to be no significant pattern of deviation which could be directly connected with age. The norm distributions were generally determined by the seventeen to twenty-three year olds since they represented over 80 percent of the student sample. However, gross examination of the raw data and correlational statistics did not indicate that students older than this were consistently more conservative or more liberal. Of course, it would be dangerous to generalize this conclusion outside the academic community--or even to dogmatically maintain the conclusion within the academic community because of the
relatively small number of older students in the sample. One would need a sample of a different type to thoroughly study this relationship—which may or may not be a worthwhile venture because of the small percentage of the total student population which they represent.

Conclusions

Thus, with the possible exception of the age of the student the other variables investigated in this portion of the overall project do seem to be related to the values held by the American college student. The results do not directly contradict the findings of previous studies—but a direct comparison cannot be readily made due to the difference in the scoring methods of the instruments (specifically that the PVI does not yield a total or accumulated score as most of the other instruments do, but a score for each issue investigated). There is indication in some places, however, that this method of inquiry may be "sorting out" some value differences that were not detectable in the accumulated score method.