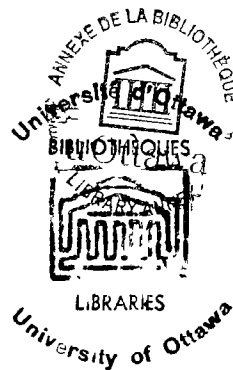


THE IMPLICATIONS OF RANK ORDERING ON THE  
CLARK-TROW TYPOLOGY OF UNIVERSITY STUDENTS

by J. A. Doucet

Thesis presented to the School of  
Graduate Studies in partial ful-  
fillment of the requirements for  
the degree of Ph.D. in Education



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## CURRICULUM STUDIORUM

J. A. Doucet was born January 30, 1939, in Grand Etang, Nova Scotia. He received his Bachelor of Science degree in Geology from St. Francis Xavier University, Antigonish, Nova Scotia, in 1960. He received his Bachelor of Education degree from Mount Allison University, Sackville, New Brunswick, in 1964. He received his Master of Education degree from Mount Allison University, Sackville, New Brunswick, in 1966. The title of his interim paper (1975) was, An Empirical Investigation of College Student Subtypes and the Implications of Rank Ordering on the Clark-Trow Typology.

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## INTRODUCTION

As socializing institutions universities have the task of influencing students so that they leave the campus with new or improved knowledge, skills, attitudes, and values. The faculty acts on behalf of the organization to train, develop, modify, or in some way act upon the individuals who enter university, in more or less formal ways.

The task of a university is vastly aided when a clear understanding exists about the qualities of the student body. The use of typologies has provided a basis from which to gain an insight into the differences of orientations held by students. An appreciation of these differences sheds light on the developmental variances witnessed among students as they progress through a university education.

Various cross-sectional studies conducted at a number of university campuses have demonstrated the correlation between student behavioral patterns in coping with the university environment and the self perception held by students about the university culture. Furthermore several longitudinal studies have demonstrated that students will, over their college years, modify and at times change completely, their orientations as their developmental growth takes root and their awareness expands.

There is a dearth of research addressing the problem of identifying the indicators of orientation changes. This absence is due largely to the incompleteness of our understanding of the variables which contribute to the total description of student types. Descriptions of university undergraduate students achieved by the use of typologies have tended to be limited in interpretation given the restrictions implicit in each typological cell around which the theoretical position of the complete model is developed.

This report, utilizing an undergraduate population from Canadian universities, is directed to a reappraisal of a typology model of undergraduate university student subtypes. This reappraisal is considered appropriate since, to date, researchers have restricted the typology's use solely to the identification of first choices of student subtype orientations. The present investigation will have as its central aim to assess whether an undergraduate student categorized by his selection of a first choice of orientation from among all the orientations provided in the model will have a particular tendency to select a specific second choice of orientation. The research hypotheses addressing this question will be derived from a theoretical rationale incorporating an analysis of the relationship of the elements that define the cells of the typology paradigm.

It is believed that a knowledge of the existence of such relationships will expand the utility of the typology model particularly in its capacity to define more accurately undergraduate subtypes. This necessity is considered critical when the results of the typology's measure become the independent variable against which the effects of other variables are investigated. Secondly this report, while adding to a more complete understanding of undergraduate university student subtypes and therefore the differences between subtype groupings may, furthermore, find utility in the determination of a basis to predict future student orientation changes or adjustments should present second choices of orientation reflect an early indication of such possible movements.

The report is divided into four chapters followed by a summary and conclusions. The first chapter presents a review of the relevant literature on typologies of college student centering on the typology to be extended in this study. The research problem is cited along with a theoretical rationale from which the research hypotheses are derived. The second chapter describes the measuring instrument, defines the population to be tested and elaborates on the research design used in the study. The third chapter presents the results of the empirical investigation. In the fourth chapter the results are interpreted and discussed. The report

concludes with a summary and a statement on conclusions and suggestions for further research.

## CHAPTER I

### REVIEW OF THE LITERATURE

This chapter first presents the basis for the development of typologies of university students. From the relevant literature a review and comparison of the main typologies and their uses are provided next. Central to this review is the typology of university students devised by Clark and Trow.<sup>1</sup> A number of studies dealing with this typology are cited with a view to establishing the background to the justification for this study. This is followed by a statement of the research problem and purpose of this investigation. A theoretical rationale is next advanced to form the basis from which the research hypotheses are derived.

#### 1. Basis for the Development of University Student Typologies.

A question that sociologists continually ask is whether the variations that occur in the behaviors and attitudes of human beings are to be attributed simply to individual or idiosyncratic differences or whether there are more general factors which operate to bring about similar behaviors

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<sup>1</sup> B. R. Clark and M. Trow, Determinants of College Student Subculture, Berkeley, California, University of California, Center for the Study of Higher Education, 1960, 1-71 p.

and attitudes among particular categories of people. For example, concepts such as culture, role, value systems, social types, social strata, and sub-cultures are often used to explain variations in human conduct and opinion.

Recent studies of university life have focused on the search for general social and cultural factors that are predictive of differences in behavior and attitudes among college students. Psychologists have employed various personality types which emerge from standardized psychological tests, but among sociologists the concept "culture" has been used more and more to describe and analyze universities and university students. It has been noted that "research on campus culture is one of the youngest and fastest growing fields within the study of higher education".<sup>2</sup>

One persistent intellectual strain which employs the culture concept, either implicitly or explicitly, is the effort to demonstrate the variability among universities or the uniqueness of a particular university. The unit of analysis is the total university and the objective is to demonstrate either that the culture of a specific university differs from other universities or that universities may be

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<sup>2</sup> Robert H. Kroepsch, "Preface", in The Study of Campus Cultures, T. L. Lansford, (Ed.), Berkeley, California, Center for the Study of Higher Education, University of California, 1963, p. v.

thought of as having a dominant theme or character which can be treated as a variable in comparing universities. The former is more characteristic of the earlier historical writings about specific universities, while the latter is found more frequently in recent social scientific literature.

When the dominant cultural theme of a university is viewed as a dependent variable, the investigator asks what historical and demographic factors have produced the university culture now being observed. The Riesman and Jencks'<sup>3</sup> reported ethnography of three universities is illustrative of this type of research which treats the university culture as a dependent variable. Describing the University of Massachusetts, Boston College, and San Francisco State College, the authors have traced the development of each in its geographic, political, and social milieu.

The dominant cultural theme may also be treated as an independent variable by examining its influence on the attitudes and behaviors of the students. The classic study which illustrates the use of the dominant university culture as an independent variable is Theodore Newcomb's Bennington study<sup>4</sup> demonstrating the effect that prewar Bennington's

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<sup>3</sup> David Riesman and Christopher Jencks, "The Viability of the American College", in The American College, by Nevitt Sanford, New York, Wiley, 1962, p. 74-192.

<sup>4</sup> Theodore M. Newcomb, Personality and Social Change, New York, Dryden Press, 1943, 1-225 p.

radical political ideology had on the political attitudes of its students.

Another usage of the culture concept is exemplified by Bushnell<sup>5</sup> in his study on Vassar College wherein he emphasizes the existence of two cultures on the campus: the student culture and the faculty culture. While Becker's<sup>6</sup> initial emphasis was on the common denominator of student culture that will be operative on any given campus given the likelihood of similar responses to similar problems, he nevertheless introduced the possibility of cultural differences beyond the campus to campus and group to group variabilities. Inferred from his findings is that different student cultures may develop and be perpetuated on the same campus, representing different collective responses to the problem areas faced in common by all students.

This latter point leads directly to another use of the culture concept, one that has received the most widespread attention in recent years, this being the notion of student subcultures. The subculture approach focuses on the dissimilarities of university students, not as individual

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5 John H. Bushnell, "Student Culture at Vassar", in The American College, Nevitt Sanford, (Ed.), New York, Wiley, 1962, p. 489-514.

6 Howard S. Becker, "Student Culture", in The Study of Campus Culture, Terry Lansford, (Ed.), Center for the Study of Higher Education, University of California, 1963, p. 12.

personalities, but as members of groups sharing common attitudes, values, orientations, and behaviors. Since this particular investigation is based on the theoretical positions implicit in university student subcultures, a comprehensive review of the authorities in this field is consequently necessary.

Newcomb et al.<sup>7</sup> established a typology of university students initially based on coding of Bennington students' responses when asked to describe the kinds of subgroups they had observed based on sets of people who share certain interests, attitudes or values. The following six-part typology resulted: The Five Colors, The Creative Individualist, The Child Ones, The Political Activists, The Social Group, and The Leader.

Shumer and Stanfield<sup>8</sup> empirically classified eight types of students based on factor analysis of University of Massachusetts students' preferences for different activities or behaviors available to them on campus. The resulting typology differentiated among the following role orientations: Academic and Scholarly, Intellectual, Consummatory

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7 T. M. Newcomb et al., Persistence and Change: Bennington College and Its Students After Twenty-Five Years, New York, Wiley, 1967, ix-217 p.

8 H. Schumer and P. Stanfield, Assessment of Student Role Orientations in a College, Unpublished paper read at the 74th Annual Meeting of the American Psychological Association, Chicago, 1966.

Collegiate, Instrumental Collegiate, Orientation to Greek-Letter System, General Vocational, Social Development, and Ritualistic.

Warren<sup>9</sup> based his ten orientation types on factor analysis of judgements by students at the University of Southern California with the resulting classification: Academic, Autonomous, Social Protest, Intellectual, Traditional, Vocational, Uncommitted, Undirected, Self-Centered, and Conformist.

From an empirical classification on factor analysis scores of University of Delaware students, Pemberton<sup>10</sup> identified the following six fold typology of student orientations based on a variety of student personality scales, attitude, and background surveys: Academic-Theoretical, Academic Conformity, Nonconformity, Social-Group, Technical-Vocational, and Social Service.

Keniston<sup>11</sup> identified seven student types in his classification which was based on impressionistic observation.

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9 J. R. Warren, "Patterns of College Experiences", in U.S. Department of Health, Education, and Welfare Co-operative Research Project S-323, Claremont, California, 1966, xi-107 p.

10 W. A. Pemberton, Ability, Values, and College Achievement, Newark, Delaware, University of Delaware Press, 1963, xiv-241 p.

11 K. Keniston, "The Faces in the Lecture Room", in The Contemporary University, R. S. Morison, (Ed.), Boston, Houghton Mifflin, 1966, p. 315-348.

He called these types, The Professionalist, The Activist, The Disaffiliate, The Big Man on Campus, The Apprentice, The Underachiever, and the Gentlemen-in-Waiting.

These investigations have first clearly revealed that the culture on a university campus is not monolithic. What can be regarded as a homogeneous culture for certain purposes--for example, for a general and gross comparison of one culture with another--on closer inspection may be seen as a plurality of heterogenous subgroups, each valuing different interests and rewarding different activities. Secondly, while the previously noted studies show the development of differing titles to factors in university student typologies it is significant to note that Feldman and Newcomb<sup>12</sup> in their comparison of the five typologies have established that these typologies, generated on bases different from that of the Clark and Trow<sup>13</sup> typology, nevertheless contain the categories that parallel those of the latter. These parallels are shown in Appendix 2. Furthermore, Feldman and Newcomb<sup>14</sup> have concluded that the parsimonious qualities of the Clark-Trow<sup>15</sup>

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12 K. A. Feldman and T. M. Newcomb, The Impact of College on Students, Volume I, San Francisco, Jossey Bass, 1970, p. 234.

13 Clark and Trow, op. cit., 1-71 p.

14 Feldman and Newcomb, op. cit., p. 232.

15 Clark and Trow, op. cit., 1-71 p.

typology, as demonstrated in their comparison, have rendered the latter typology the most heuristic one. The significance of this conclusion is supported by Barton when, in addressing the analytic tool function of a typology, he emphasizes the importance of the typology's parsimonious qualities so that its main utility as a mechanism may be

[...] to organize meaningfully a wide range of data, to help understand whole networks of related variables, to facilitate communication about some segment of reality.<sup>16</sup>

Finally, additional support for the Clark-Trow<sup>17</sup> typology may be recognized by its abundant use in research studies dealing with university undergraduates during the 1960's to the present.

## 2. The Clark-Trow Typology.

The focus of the Clark-Trow Typology is drawn from (a) interest in the impact of the university on students, and (b) the contention that this impact is realized or mediated largely through the action and influence of peer groups. By dichotomizing two variables which are seen to be causally

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16 A. H. Barton, "The Concept of Property-space in Social Research", in The Language of Social Research - A Reader in the Methodology of Social Research, P. P. Lazarsfeld and M. Rosenberg, (Eds.), Glencoe, Illinois, The Free Press, 1955, p. 50.

17 Clark and Trow, op. cit.

related to college impact on students a four fold typology of university student subcultures is derived. These variables are (a) the degree to which students are involved with ideas, and (b) the extent to which students identify with their university or college. The result gives rise to the Clark-Trow<sup>18</sup> paradigm as represented in Figure 1.

The authors have described each of the four college student subcultures as follows:

A. Vocational Subculture: The vocational students usually have little attachment to the college where they pick up ten credits one semester, six in another, fifteen in the next, according to what they can afford in time and money. For them, college is an adjunct of the world of jobs [...] they are resistant to intellectual demands beyond what is required to pass the courses. To many of these hard-driven students, ideas and scholarships are as much a luxury and distraction as are sports and fraternities [...] the symbol of this vocationally oriented subculture is the student placement office.

B. Academic Subculture: Present on every college campus dominant on some while marginal and almost invisible on others, is the subculture of "serious students", the academic subculture. The essence of this system of values is its identification with the intellectual concerns of the serious faculty members. These are the students who work hard, get the best grades, but also talk about their course work outside of class and let the world of ideas and knowledge reach them [...] These students pursue knowledge; their symbols are the library and laboratory and seminar [...] For these students, their attachment to the college is to the institution which supports intellectual values and opportunities for learning. Increasingly, the products of this subculture look forward to graduate work.

C. Collegiate Subculture: The most widely held stereotype of college life pictures the "collegiate

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18 Clark and Trow, op. cit., p. 9.

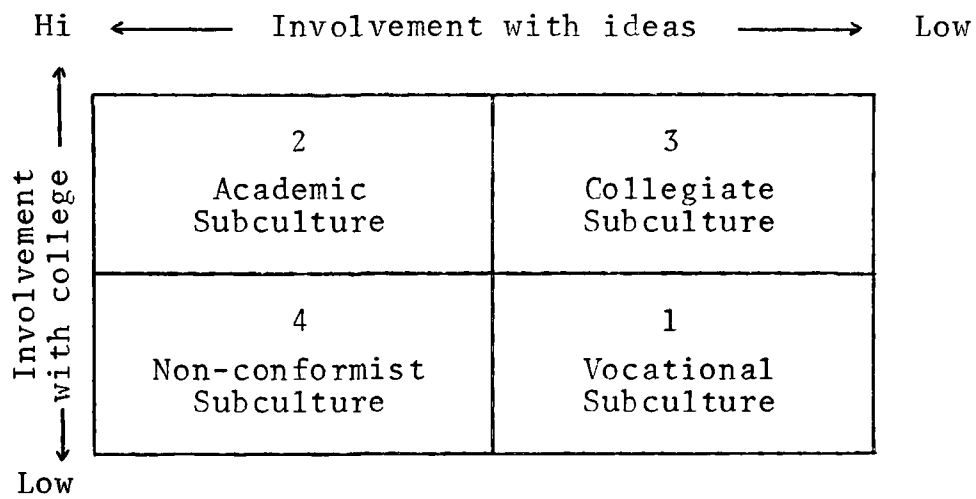


Figure 1.- Clark-Trow Model

culture", a world of football, fraternities and sororities, dates, cars and drinking, and campus fun. And a good deal of student life on many campuses revolves around the collegiate culture: it both provides substance for the stereotypes of movies and cartoons and models itself on those stereotypes. In content the system of values and activities is not hostile to the college, to which, in fact, it generates strong loyalties and attachments. It is, however, indifferent and resistant [sic] to serious demands emanating from the faculty, or parts of it, for an involvement with ideas and issues over and above that required to gain the diploma [...] Part-time work, intense vocational interests, an urban location, commuter students, all work against the full flowering of a collegiate subculture as do student aspirations for graduate or professional school, or more generally, serious intellectual or professional interests on the part of students and faculty.

D. Non-conformist Subculture: Some kind of non-conformist culture exists in many of the best small liberal-arts colleges and in a niche of the undergraduate world on the large university and state-college campuses. These students are often deeply "concerned", in part with the ideas they encounter in the classroom, but more largely with issues current in the art, literature, and politics of the wider adult society [...] These students use off-campus groups and currents of thought as points of reference over against the official college. Often critical of the "establishment" they seek to be independent. The distinctive quality of this student style is a rather aggressive non-conformism, which usually includes a critical detachment from the college they attend and a general hostility to the college administration. The forms this style takes vary from campus to campus, but where it exists it has a visibility and influence far beyond its usually tiny, fluid membership. Its significance lies in offering a home, an alternative, to the rebellious student seeking a distinctive identity in keeping with his own temperament and experience [...] The non-conformist students pursue an identity, not as a by-product but as the primary and often self-conscious aim of their education.<sup>19</sup>

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19 Ibid., p. 4-9.

In providing these definitions Clark and Trow drew a particular distinction between student orientations toward university that are held by individual students and student subcultures as group norms or shared notions of what constitutes right action and attitude toward a range of issues and experiences confronted in university. The authors explain that

We can distinguish four broad patterns of orientations toward college which give content and meaning to the informal relations of students. When these patterns of orientation define patterns of behavior, sentiment and relationship we can usefully think of them as subcultures.<sup>20</sup>

The former, in short, are seen as giving content to the latter. While the notion of subculture suggests membership in an interacting group, the notion of orientation, though not excluding that possibility, is not predicated on such interaction. Thus, groupings based on similarity of orientation incorporate subtypes rather than necessarily sub-cultural groups. This latter refinement serves as a basis for delimiting the concept of subcultural orientation and thus the concept of subtypes for the purpose of this study.

From the definitions of each subculture as condensed by the dichotomized two dimensional paradigm it is seen that

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<sup>20</sup> M. Trow, "Student Cultures and Administrative Action", in Personality Factors on the College Campus: Review of a Symposium, R. L. Sutherland et al., (Eds.), Austin, Texas, Hogg Foundation, 1962, p. 205.

the vocational subculture cell will include those students who are low both on involvement with ideas and involvement with the college. The academic subculture on the other hand represents students who are high on each dimension. Students in the collegiate subculture are seen to be high on the involvement with college dimension but low on the involvement with ideas dimension. In contrast, the students who are members of the non-conformist cell are high on the involvement with ideas dimension and low on the involvement with college dimension.

Researchers using the Clark-Trow typology as their point of reference in analyzing different variables in the area of university student types have repeatedly utilized the College Student Questionnaire (CSQ) Part II, included in this study as Appendix 1, to operationalize the typology. This instrument, to be described in its entirety in Chapter II of this report, among other things, asks the respondents to rank themselves according to their perceived choices from among the four orientations abstracted from the Clark-Trow college student subculture typology and presented in descriptive paragraphs.

Apostal addressing the question of university undergraduate student personality types and preferred university subcultures has concluded that

the use of the Clark-Trow typology has led to reflections concerning its value in describing the environmental makeup of colleges and universities. This typology appears to do an adequate job of identifying the relative predominance of its subcultures that might be found on a campus at any one time. Because of the differential needs of students throughout their college careers, however, it is hypothesized that the relative predominance of these subcultures for a particular class may change over time.<sup>21</sup>

While this conclusion lends support to the Clark-Trow typology it fails to specify the degree of interaction within the subcultural groups identified by the typology. Furthermore, while hypothesizing the probability of changes in subcultural endorsements over time, the question of the probable direction of change is not addressed nor is the typology model's possible utility in this connection appraised.

Williams<sup>22</sup> investigated whether specific personality traits could be associated with groups of entering freshmen who endorsed the Clark-Trow viewpoints. Assuming that many freshmen would change their viewpoints by the end of their freshman year, he further investigated these viewpoints in

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21 R. A. Apostol, "Personality Type and Preferred College Subculture", in Journal of College Student Personnel, Vol. 11, No. 2, 1970, p. 107-110.

22 G. D. Williams, "The Clark-Trow Viewpoints: Associated Personality Traits and Changes During the Freshman Year", Journal of College Student Personnel, Vol. 13, No. 4, 1972, p. 341-346.

terms of the birds-of-a-feather hypothesis, i.e., the expectation that students who changed to another viewpoint would exhibit personality characteristics similar to the non change viewpoint group to which they moved. Overall personality differences among the Clark-Trow viewpoint groups were significant ( $p < .05$ ) for both males and females. From his sample of 532 students at Penn State University, 52% of the males endorsed the same orientation at the beginning and end of the freshman year contrasted to 54% of the females who also did not change. For the changers, the birds-of-a-feather hypothesis was not supported. This study coupled with the previous one provides support for the necessity of differentiating clearly between university undergraduate student groupings which may be referred to as a subcultural group and groupings which exist simply as a function of common orientations as proposed for use in the present investigation. Williams'<sup>23</sup> study presumes interaction among the members of each of the four groups identified by the Clark-Trow typology. Subsumed here is a number of mediating variables, such as propinquity, similarity of major concentrations, resident versus non-resident students, which if absent will tend to mitigate against the support of the birds-of-a-feather hypothesis. Since these variables were not controlled there is

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23 Idem, ibid.

no basis to expect support for the hypothesis. The latter study, however, does provide support for the Clark-Trow typology's capacity to point up personality differences among the students who assigned themselves to each of the four groups provided by the typology model. Furthermore it indicates, as did the Apostol<sup>24</sup> study, the likelihood of orientation changes over a university career. Similarly also it does not assess the model's utility in suggesting such changes nor in indicating the possible direction of change.

Waterman and Waterman<sup>25</sup> used the CSQ instrument as operationalized from the Clark-Trow typology in a cross institutional study of six universities. Having grouped the students on this basis and by means of single classification analyses of variance for unequal sample sizes, separate analyses were performed for each of four satisfaction variables--satisfaction with major field, satisfaction with faculty, satisfaction with administration, and satisfaction with students. The results of their study yielded two basic personality dimensions associated with student satisfaction and university experiences. The first of these dimensions

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24 Apostol, op. cit.

25 A. S. Waterman and C. K. Waterman, "Cross-Institutional Study of Personality Variables Relating to Satisfaction with College", in American Psychological Association Proceedings, 78th Annual Convention, 1970, p. 451-452.

is termed academic orientation, whereby satisfaction is associated with the earning of high marks, with plans for graduate work and with the intention of pursuing academic careers. The second dimension associated with satisfaction was termed traditionalism, whereby high satisfaction found for students who make an early selection of their major field and who perceive their parents as strongly approving of their choice. As part of their conclusions the authors note the possibility that an explanation to the variances in satisfaction may be found by a consideration of the rank ordering of the students' orientation choices particularly a consideration of the second choice of orientation. Implicit here, though not tested, is the prospect that finer discrimination among student subtypes may result from the added information contained in the rank ordering of orientation choices.

Lange<sup>26</sup> provides a comparative study of a random sample of university students who identified themselves according to the Clark-Trow subtypes. Each subtype was then compared on twenty-nine variables covering attitudes, student perceptions of pressures in the college environment, specific student behaviors, and educational, vocational, social, and personal goals. The findings indicate that the non-conformists

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26 A. J. Lange, "An Analysis of Clark-Trow Subtypes", in Journal of College Student Personnel, Vol. 13, No. 4, 1972, p. 347-351.

were the most easily identifiable subculture, figuring in 37 percent of the significant t-values compared to 29 percent for the collegiates, 20 percent for academics, and 14 percent for vocationalists. The vocationalists did not figure on many significant t-values. They differed most from the non-conformists reflecting more dependent conformist attitudes and behaviors. The vocationalists and academics did not differ significantly on any of the twenty-nine variables while the collegiates differed most from the non-conformists. While these significant similarities and differences are noted no attempt is made to relate these findings to the theory of the Clark-Trow model nor is any examination made of any relationship between these findings and the rank ordering of orientation choices as selected by the subjects. Specifically, first no examination is made as to whether the vocationalists, as identified by their first choice of orientation preference selected the non-conformist orientation as their least preferred orientation. Secondly no examination is made to see if the vocational student subtypes selected the academic orientation as their second choice of orientations preference.

Lange<sup>27</sup> and others have recently supported earlier findings<sup>28</sup> that Clark-Trow vocational and academic subtypes appear to be very similar, this time when measured against the fifteen scales of the Omnibus Personality Inventory (OPI). Although this similarity exists, the authors also showed that a significant difference existed between the two groups on the dimension of tolerance for complexity with the academics being high and the vocationals low on that dimension. Again, as noted in the previous Lange<sup>29</sup> study, while significant similarities are noted between the academic and vocational subtypes this time when measured against fifteen scales of the OPI, the theory of the Clark-Trow model is not advanced to explain this phenomenon.

Richardson<sup>30</sup> utilized the Clark-Trow typology to arrive at groupings of student types. He then hypothesized that where there is high congruence between the type of student and the climate of the university, satisfaction will be high. Conversely he hypothesized that when the congruence

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27 A. J. Lange, et al., "OPI Differences among Clark-Trow Subgroups", in Journal of College Student Personnel, Vol. 15, No. 6, 1974, p. 498-501.

28 A. J. Lange, op. cit.

29 Idem, ibid.

30 T. E. Richardson, "Satisfaction with College: Its Relationship to Student College Fit", in College Student Journal, Vol. 4, No. 1, 1970, p. 19-23.

between student type and university climate is low there will be low satisfaction. His hypotheses were supported ( $p < .05$ ) although there were relatively small increments of measured differences. The square of the correlation ratio indicated that the proportion of variance directly attributable to the effect of congruence ranged from less than 1 percent on one of the four satisfaction scales to 8 percent on another one. The contribution of these differences may therefore be considered to be of modest magnitude. Richardson's<sup>31</sup> findings that students reflected greater satisfaction with faculty, administration, major, and other students as their congruence or fit with the learning environment increased suggests that good fit has a correlate of match between student predilection for a certain type of college experience (orientation) and actual embodiment of preferred qualities on the (environment) campus attended. Implications for social-psychological balance are closely related to the question of fit as seen in Richardson's conclusion that

[...] if students do indeed adjust to a situation such as higher education by accepting prevailing values, embracing values at variance with the institution, or clinging to old preferences with little modification--as social-psychological balance theory proposed--this adjustment poses satisfaction differentials for the individuals involved.<sup>32</sup>

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31 Idem, ibid.

32 Idem, ibid., p. 22.

Underlined here is the important task of arriving at complete descriptions of student subtypes of which orientation is a significant dimension. Although the relatively small increment of measured differences in the Richardson<sup>33</sup> study demands circumspect generalization the empirical evidence of the investigation is nevertheless significant.

In terms of research studies specifically addressing variables related to the subtypes defined by Clark-Trow<sup>34</sup> but without an a priori categorization of these subtypes, Korn<sup>35</sup> found a significant relationship ( $p < .05$ ) between university undergraduate students' "decisiveness of selection of majors" and "clarity of career plans". Astin and Panos<sup>36</sup> approaching the same question from a different direction found a significant relationship ( $p < .01$ ) between "college students' academic self concept" indicative of variables on which academically oriented students would be expected to score highly, and, "clarity of career plans" and "career aspirations" variables on which vocationally oriented

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33 Idem, ibid.

34 Clark and Trow, op. cit.

35 H. A. Korn, "Careers: Choice, Change, or Inertia?", in No Time For Youth, J. Katz and Associates, (Eds.), San Francisco, Jossey Bass, 1968, p. 187-238.

36 A. W. Astin and R. J. Panos, The Educational and Vocational Development of College Students, Washington, D.C., The American Council on Education, 1969, xii-211 p.

students would be expected to score highly. These findings would tend to support the Clark and Trow<sup>37</sup> conclusion that while the "academic" and "vocational" subtypes differ on major dimensions they nevertheless incorporate the common attribute of concern for their eventual career by relating their education, which may be seen as the mean, to their career, which may be seen as the end. Clark and Trow have emphasized that this common attribute between the two subtypes is becoming increasingly reinforced in the university environment due mainly to two phenomena. First they note Barzun's conclusion that

The chief characteristic of man's work in our time is that all occupations tend to become professions. And these professions, following the example of medicine and law in past centuries, tend to become academic subjects. That is, the practices become codified, they are written up in textbooks, courses are given, specialties proliferated, and degrees multiplied.<sup>38</sup>

Secondly Clark and Trow<sup>39</sup> have concluded that each of the "academic" and "vocational" subtypes will also tend to be affected by forces from without the university environment. In the case of the "academic" subtype they note that economic conditions will tend to make this subtype focus more sharply

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37 Clark and Trow, op. cit., p. 37-40.

38 J. Barzun, "Where are the Disciples?", in Antioch Review, Vol. 20, 1960, p. 6.

39 Clark and Trow, op. cit., p. 16-19.

on his career preparation. Alternately they note that the increasing sophistication of society generally will tend to arouse the interest of the "vocational" subtype to the values of a more liberalized education.

### 3. Summary of Review.

From the review of the relevant literature it is seen that the Clark-Trow student subtype typology is acknowledged as being the most heuristic of its type. Investigators using the typology, however, have not always differentiated between the subsumed implications of subcultural groupings versus groupings defined specifically as a function of the students' perceived orientation to university life. While each of these may theoretically be determined by the operationalized Clark-Trow typology it is clear that the results must be interpreted in the light of whether one is dealing with one type of grouping or the other.

One study directed to an investigation of the likelihood of orientation change over a university career provides strong evidence that substantial numbers of students do, in fact, change their orientations.

Several research studies utilizing the operationalized Clark-Trow model have indicated that subtypes, categorized solely as a function of their first choice of ranked orientations tend to have an affinity toward some and a

repugnance toward other subtype orientations. Specifically it was demonstrated that "academic" and "vocational" subtypes, while different on some dimensions, seem to be the most similar of the four possible orientations on other dimensions. Also shown was that the "collegiate" subtype differed most from the "non-conformist" subtype. Additionally findings indicated that the "non-conformist" subtype was the most easily identifiable.

Furthermore from the research studies previously cited it is observed that, invariably, researchers have limited the interpretation of the orientation ranking process provided by the operationalized Clark-Trow model to the first rank ordered choice of orientations thus discarding the information contained in the balance of the ranking process. As a result the respondent was thus defined by and accordingly restricted to the elements and factors contained solely in the first of the four ranked choices of orientations. While some researchers have given passing consideration to this question the relationship among orientations contained in the operationalized Clark-Trow model remains untested.

#### 4. Statement of the Research Problem.

Of specific importance for this report, and as noted in the review of the relevant literature, no assessment has

ever been made of the information contained in the complete ranking process of the respondents' perceived orientation choices. As a consequence of this lack, no investigation has ever been carried out on the possible relationship among orientation choices nor whether certain relationships are predictable. As a result the utility of the typology model has been limited to categorizing undergraduate university subtypes solely according to their first choice of orientations. Accordingly, the defining characteristics of such subtypes have inevitably been restricted to only the elements contained in the cell defining the subtype's first choice of orientation thus discarding the information provided by the manner in which the subtypes rank each of the remaining orientations. Consequently attempts to explain differences within and among subtype groups have been similarly restricted.

The specific research problem posed by this study will thus be as follows: since the Clark-Trow model postulates that university undergraduate subtypes as defined by the model incorporate blends<sup>40</sup> of more than one orientation and since the operationalized model<sup>41</sup> permits the respondents

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40 B. Clark, Educating the Expert Society, San Francisco, Chandler, 1962, p. 210.

41 Appendix 1, p. 113.

to rank their choices of orientation according to their order of preference, is it therefore possible, on the basis of the model as explicated in the salient elements defining the cells of the model, to predict second choices of ranked subtype orientations from known first choices of ranked subtype orientations?

#### 5. Theoretical Rationale and Research Hypotheses.

The theoretical rationale addressing the research problem is presented first. A set of four research hypotheses are then generated from the theoretical rationale and presented.

Clark and Trow in addressing the determinants of university student subcultures have indicated that

There are two broad sets of factors which shape the nature of students' orientations and relationships in college. The first has to do with who the students are and where they come from - what equipment, so to speak, they bring with them to college [...] This is moral, intellectual, emotional, cultural - when they enter college [...] They are affected secondly by the nature of the colleges they attend. Here we focus on the character of colleges, their historical development, their value climates, their structural features, and the shaping environment thus provided for student life.<sup>42</sup>

Understood here is the assumption that there exists considerable heterogeneity in the society from which students

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42 Clark and Trow, op. cit., p. 2-3.

will emerge, which assumption is well supported in the literature. Analytically, both Parsons<sup>43</sup> in sociology and Kluckhohn<sup>44</sup> in anthropology have incorporated this view into their analysis of North American society and culture. While they do not deny the underlying cognitive unity that permeates all sectors of society, they both have emphasized the variation in beliefs, values and attitudes found to lie within that basic unity.

Expanding on this concept Clark and Trow postulate further that

An individual student may well participate in more than one of the subcultures available on his campus, though in most cases one of them will embody his dominant orientation - will be, so to speak, his normative home on campus.<sup>45</sup>

This "normative home" will therefore become the one from the fourfold model which the student will identify as his first choice. This choice thus represents the orientation which best exemplifies the student's perception of the best fit between himself, his values and his attributes on one hand, and the campus environment with which he must cope on the other hand. This does not suggest, however, that all

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43 T. Parsons, (Ed.), Essays in Sociological Theory, Glencoe, Illinois, Free Press, 1954, xii-564 p.

44 F. Kluckhohn, "Dominant and Variant Value Orientation", in Personality in Nature, Society, and Culture, C. Kluckhohn et al. (Eds.), New York, Alfred A. Knopf, 1953, p. 342-357.

45 Clark and Trow, op. cit., p. 4.

students in any one orientation will be completely homogeneous in all their attributes. Since several elements are needed to define each of the four orientations, it is entirely conceivable that individuals endorsing the same orientation will do so for differing reasons--some emphasizing one element or a combination of elements, while others will emphasize a different element or a different combination of elements. Throughout, however, a main thread unites the individuals who endorse a similar orientation.

Referring to the interpretation of the typology model, Clark states that one will move closer to a more complete description of the totality of the individual's orientation with the recognition that

[...] these subcultures are systems of norms and values which overlap and flow into one another on any campus [...] they are reflected in individuals in various blends.<sup>46</sup>

This recognition provides a basis to attach importance to the orientation which the student will identify as his second rank ordered choice of orientations. Additionally it confirms the relevance of the operationalized model's utility in the consideration of the added information contained in the orientation blends resulting from the combination of first and second ranked orientation choices.

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46 Clark, op. cit.

Since according to Clark and Trow the student's first choice of subtype orientation does not exhaust the complete reality of, nor totally describe, his entire orientation, the student will approach his selection of the orientation which best suits his second choice with considerable attention.

Accordingly a knowledge of the salient elements which describe the first rank ordered choices of orientation should be predictive of the second rank ordered choice of orientations since the elements of the first choice tend to define the predisposition of the student for his selection of a second rank ordered subtype orientation in order to establish a blend between the two orientations. Stein,<sup>60</sup> acknowledging the relevance of considering the relationship among cells of a typology and hence the relationship among the defining characteristics of the cells has stated that

[...] These descriptions provide a more meaningful basis for differentiating among individuals than is provided when one focuses solely on the discrete variables on which they differ and so loses sight of the persons involved.<sup>47</sup>

Because of the diffused psychological and sociological forces at work as the student rank orders his first and second choices of subtype orientations, the nature of the

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47 M. I. Stein, "Explorations in Typology", in Theories of Personality: Primary Sources and Research, G. Lindzey and C. S. Hall, (Eds.), New York, Wiley, 1966, p. 198.

prediction of the second choice of orientation as a function of the first choice of orientation may be more appropriately qualified as synchronistic rather than causal. Contrasting synchronicity to causality, Jung has stated that

Synchronicity is a modern differentiation of the obsolete concept of correspondence, sympathy, and harmony. It is based not on philosophical assumptions but on empirical experience and experimentation.<sup>48</sup>

The students who rank themselves first as "academics" have as their main locus of orientation the attainment of a sound education. To that end they are prepared to work diligently and to make full use of all university resources which will assist them in that process. They value the curriculum and identify with the intellectual concern of faculty members. Accordingly this subtype will tend to view the collegiate orientation negatively given the latter's primary orientation to non intellectual pursuits and its indecisiveness on career preparation. Also this subtype will tend to view the non-conformist orientation negatively given the latter's disdain for working within the curriculum along with their lack of concern about the fit between their academic work and their eventual career. In contrast, they will tend to value the vocational orientation given its central concern for career preparation and its dedication

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<sup>48</sup> C. G. Jung, Synchronicity: An Acausal Connecting Principle, Princeton, N.J., Princeton University Press, 1973, p. 115.

to achievement within the system. While maintaining a high standard of achievement is of primary concern to the "academics" for the short run, they are nevertheless also concerned with the utility of their academic accomplishments. In this latter sense their eventual career is very much at the forefront. Accordingly they will tend to view the vocational orientation as the orientation which is the most consistent and complementary to their main orientation.

Research Hypothesis 1:

Students ranking themselves first as "academics" on the Clark-Trow model have a tendency to rank the "vocational" orientation more highly than any other orientation.

The students who rank themselves first as "vocationals" have as their central preoccupation the use of the university as their training ground for a life career. This subtype epitomizes a deep sense of purpose in directing all their efforts to an adequate and direct preparation for the world of work. Accordingly they view the collegiate orientation negatively given the latter's indecisiveness on career preparation and their overwhelming concern for extracurricular activities. Also this subtype will tend to view the non-conformist orientation negatively because of the latter's lack of concern with a career preparation and its general alienation to the system. In contrast they will tend to value the academic orientation given its main purpose of working with the university system and the utility they

attach to their education for the long term vis-à-vis their eventual career.

Research Hypothesis 2:

Students ranking themselves first as "vocationals" on the Clark-Trow model have a tendency to rank the "academic" orientation more highly than any other orientation.

The students who rank themselves first as "collegiates" represent a blend of subtypes which is unique to the model. This uniqueness derives from the fact that they may embody a high degree of components which flow from their high involvement with the social activities dimension of the university environment or, alternately, flow from a central preoccupation with minimizing all academic effort. Viewed as a group, this subtype represents an orientation whose principal aim is to maximize their involvement in social or extracurricular activities with only secondary attention given to academic and career concerns. While a fundamental characteristic of the collegiate subtypes is their reluctance to accept the adult norms of responsible study and concern for their eventual career as embodied in the academic and vocational orientations, the members of this subtype will a priori reject the non-conformist orientation given the latter's disdain for system type extracurricular activities and their generalized alienation from any institutionalized concerns. In contrast, endorsers of the collegiate orientation will tend to view

either the academic or vocational orientations positively or negatively depending on their relative strengths on each of the dichotomized dimensions of involvement with ideas and involvement with college. Accordingly, the collegiate subtype strain which is relatively stronger on the social dimension of involvement with college will tend to value the academic orientation since this orientation, while not primarily devoted to social pursuit, nevertheless incorporates a strong allegiance to the institution on the involvement with college dimension. The collegiate subtype strain which is relatively stronger on minimizing intellectual effort on the involvement with ideas dimension will tend to value the vocational orientation since this orientation is more consistent with the notion of a reduced academic requirement.

Research Hypothesis 3:

(a) Students ranking themselves first as "collegiates" on the Clark-Trow model have a tendency to rank the "academic" orientation more highly than the "non-conformist" orientation.

(b) Students ranking themselves first as "collegiates" on the Clark-Trow model have a tendency to rank the "vocational" orientation more highly than the "non-conformist" orientation.

The students who rank themselves first as "non-conformists" are defined primarily by their exclusive concern to the pursuit of wisdom and their non-conformism finds expression in their desire to choose their own way of searching for truths. A priori they reject the notion of involvement

with non-intellectual college activities and therefore value the collegiate orientation negatively. A priori they also reject any attachments to utilitarian notions of a university education and therefore value the vocational orientation negatively. In contrast, however, they will value the central locus of the academic orientation which is the search for knowledge for its own sake.

Research Hypothesis 4:

Students ranking themselves first as "non-conformists" on the Clark-Trow model have a tendency to rank the "academic" orientation more highly than any other orientation.

In summary this chapter provided a review of the literature on university undergraduate student orientation typologies centering on the Clark-Trow typology. It was noted that the instrument which operationalizes this typology, the CSQ Part II, permits respondents to rank order their perceived orientation choices. Additionally it was observed that researchers have not made use of the total information contained in the rank ordering provision having restricted the typology's use to the identification of only the first rank ordered orientation choice. Based on the position defined by Clark and Trow that undergraduate university subtypes incorporate orientation blends, a rationale was developed to explore the typology model's capacity to identify subtype orientation blends by examining the relationship

among the elements describing the orientations and by using the added information comprised in the orientation rank ordering provisions. From the rationale four research hypotheses were derived identifying the subtype blends comprised in first and second choices of orientations.

## CHAPTER II

### RESEARCH DESIGN

The present chapter first describes the measuring instrument used noting studies done to assess its validity and reliability. The sample chosen for the experimental study is then defined. It also describes the procedures followed for the administration of the research instrument along with providing information on the method of scoring for the rank ordering of the four orientations and for the eleven scales. The chapter concludes with an elaboration of the statistical design employed in this study.

#### 1. College Student Questionnaires.

Based on the Clark-Trow typology, Peterson<sup>1</sup> has devised an instrument known as the College Student Questionnaires (CSQ) which categorizes the respondents according to their individual allegiances by order of rank to the vocational, academic, collegiate, or non-conformist subcultures. The CSQ comprises two differing instruments identified as Part I and Part II. The CSQ Part I was designed for use with entering first year undergraduate students prior to

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<sup>1</sup> R. E. Peterson, On a Typology of College Students, Princeton, New Jersey, Educational Testing Service, 1965, i-39 p.

the formal beginning of the academic year. Divided into four sections, Part I contains two hundred items dealing with (a) educational and vocational plans and expectations, (b) activities, achievements, and perceptions during secondary school years, (c) characteristics of parents and family, and (d) student attitudes and values.

The CSQ Part II is designed for use with any group of university undergraduate students beyond the freshman year. Since the CSQ Part II is the measuring instrument utilized in this study it is included in full in Appendix 1. Divided into three sections the CSQ Part II comprises 200 items. Section 1 contains thirty-four items of multiple choice type dealing with the students' biographical and educational background along with questions on their educational and vocational plans. Section 2 comprises one hundred items dealing with involvement in college activities. Section 3 comprises sixty-six items dealing with student attitudes. The items in Sections 2 and 3 are of the Likert-type variety.

One hundred and ten items from Sections 2 and 3 comprise the pool from which eleven 10-item scales are extracted. The scales in the CSQ Part II were constructed in a logical or a priori manner. The concepts implied by the labels given the scales were judged to be implicit in the pool of questionnaire items assembled by Martin Trow. Since the CSQ was conceived as an instrument for describing groups rather than

individuals, it was concluded that the number of items per scale could be relatively small. The initial 15 item experimental scales were reduced to 12 items each on the basis of an internal consistency item analysis by eliminating the three items in each scale that had the lowest item-total score correlation using a random sample of 500 cases from a pool of 6,680 undergraduates. In subsequently reducing the 12 item scales to the current 10 item versions, decisions were based on three kinds of item data. First, additional internal consistency analyses were performed. Secondly, comparisons were made between the responses of freshmen and seniors. Finally, consideration was given to the degree to which items yielded meaningful differences among diverse institutions.

The scales are divided into two parts. The first part includes six scales. These are,

1. Satisfaction with Faculty,
2. Satisfaction with Administration,
3. Satisfaction with Major,
4. Satisfaction with Students,
5. Study Habits,
6. Extracurricular Involvement.

The sixty items for these six scales are derived from items in Section 2 of the instrument. This set of scales is commonly referred to as the "student functioning" set of scales.

The second part of the set of scales includes the following five scales:

7. Family Independence,
8. Peer Independence,
9. Liberalism,
10. Social Conscience,
11. Cultural Sophistication.

The fifty items for these latter five scales are derived from items in Section 3 of the instrument. These latter five scales, taken together, are described as student "attitude measures".

Peterson<sup>2</sup> has investigated the differences among American university student subtypes based on the variations of mean scores on the eleven CSQ scales. His analysis revealed significant differences ( $p < .001$ ) among the four Clark-Trow subtypes on each scale except the satisfaction with major scale. Each difference, inclusive of that found in the latter scale, was in the direction that could be predicted on the basis of the definitions of the scales.

The procedures used to classify the students according to the Clark-Trow typology, i.e., as either vocationalists, academics, collegiates, or non-conformists, is arrived at first by condensing the descriptions of each of the four subtype orientations. Labelled in the questionnaire as "personal philosophies of higher education", the four statements communicate the nub of each type of orientation. The students are asked, after reading through the four statements,

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<sup>2</sup> Peterson, op. cit., p. 36-45.

to rank themselves according to the most accurate, second most accurate, third most accurate, and least accurate description implicit in each of the four statements. Thus it is seen that while the Clark-Trow typology defines types of student subcultures, the CSQ instrument operationalizes the subculture typology into student orientations toward higher education as previously indicated in Chapter I.

The CSQ results can be considered both from the standpoint of responses to individual items and from the standpoint of scale scores, i.e., sums over groups of items.

In the case of responses to individual items, it is assumed that in a research setting there is little reason to doubt that students would not give consistent answers to factual questions about biographical backgrounds and that with non factual items the shift in response may represent real change rather than error in reporting. Accordingly no test-retest studies of Section 1 of the CSQ have been made.

With reference to retest reliability estimates, on a series of biographical items, Astin<sup>3</sup> has reported that for almost all of the factual items in his Freshman Information Form, over 90% of the students have identical answers upon retest. In the case of his three nonfactual items

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<sup>3</sup> A. W. Astin, Who Goes Where to College, Chicago, Science Research Associates, 1965, ix-125 p.

(future plans), percentages of agreement were lower, ranging from 84% for "highest degree planned" (multiple-choice), through 70% for "probable major field of study", to 64% for probable future occupation" (both free responses). Furthermore, for three of the items which were scored as ordinal scales, size of high school class, father's educational level, average high school grade, analogous to three CSQ items, test-retest correlations were .98, .98, and .91 respectively. Gough<sup>4</sup> addressing the reliability of the non-scale items of the CSQ reports that it may be assumed to be in the order of .90 or above on the basis of prior work with biographical and attitudinal data of this kind.

Peterson<sup>5</sup> has provided reliability estimates for the eleven CSQ scales based on a random sample of five hundred cases drawn from a larger pool of 6,680 undergraduates who completed the experimental version of the CSQ Part II in the spring of 1968. These are reported in Table I.

The matter of validity must be looked at both from the point of view of the general items and also of the scale items contained in the instrument. All the items in the CSQ

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4 H. G. Gough, "CSQ References", in Buros Measurement Yearbook, 7th Edition, Vol. 1, p. 60-61.

5 R. E. Peterson, Technical Manual, College Student Questionnaire, Princeton, New Jersey, Educational Testing Service, 1968, p. 27-28.

Table I.-  
CSQ Part II Reliability Coefficients

Scale Designation	Alpha Coefficients	Spearman Brown Corrections
Satisfaction with Faculty	.79	.76
Satisfaction with Administration	.84	.81
Satisfaction with Major Field	.65	.61
Satisfaction with Students	.66	.62
Study Habits	.72	.68
Extracurricular Involvement	.66	.62
Family Independence	.71	.67
Peer Independence	.62	.57
Liberalism	.64	.60
Social Conscience	.71	.67
Cultural Sophistication	.77	.74

are regarded as having face validity in the sense that each question is intended to obtain no more nor less information than what is implicit in its wording. Evidence outside the field of educational research for the generally adequate validity of biographical questionnaire has been provided by Keating et al.<sup>6</sup> They reported validity coefficients ranging from .90 to .98 for work on history data collected in a research setting. Parten,<sup>7</sup> in summarizing her review of the accuracy with which personal data are given (judged against objective records) indicated that validity coefficients clustered in the vicinity of .90. One study has been carried out which bears directly on the construct validity of four items that are duplicated in both CSQ, Part I and Part II. These are the items that were designed as a brief method for operationalizing a typology of college students proposed by Clark and Trow.<sup>8</sup> Endorsement by entering freshmen of one or another of the four statements was seen to be related in ways predictable from the Clark-Trow model to a host of

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6 E. Keating et al., "Validity of Work Histories Obtained by Interview", in Journal of Applied Psychology, Vol. 34, 1950, p. 61-71.

7 M. Parten, Surveys, Polls and Samples, New York, Harper, 1950, p. 731.

8 M. Trow, "Student Cultures and Administrative Action", in Personality Factors on the College Campus: Review of a Symposium, R. L. Sutherland et al., (Eds.), Austin, Texas, Hogg Foundation, 1962, p. 203-225.

biographical and attitudinal factors assessed by CSQ Part I. The validity of the scale items is arrived at by investigating whether the scale scores empirically relate to other factors in ways that are predictable on the basis of the constructs that are said to be measured by each of the scales. Utilizing (1) the correlations between scores on a given scale and some forty-seven other biographical and attitudinal characteristics and (2) comparisons of mean scores for selected subgroups of students and for selected institutions on the same sample used to arrive at the reliability, high validity is noted. Kees and McDougall<sup>9</sup> have reported that the differential personality characteristics as measured by the Omnibus Personality Inventory and as applied to students placing themselves in the vocational, academic, collegiate, and non-conformist groups tend to confirm their existence and thus validate the questionnaire as a research instrument.

Kees<sup>10</sup> in his longitudinal study found that freshmen who appointed themselves to each of the four Clark-Trow subgroups reflected differences which were significantly

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9 D. J. Kees and W. P. McDougall, "A Validation Study of the Clark-Trow College Subculture Typology", in Journal of College Student Personnel, Vol. 12, 1971, p. 193-199.

10 D. J. Kees, "The Clark-Trow Typology Revisited", in Journal of College Student Personnel, Vol. 15, No. 2, 1974, p. 140-144.

( $p < .001$ ) in the direction predicted by the model. Furthermore, the study revealed that a similar group of students tested five years later reflected a nearly identical distribution of membership in the four subcultures demonstrating the instrument's reliability.

## 2. Sample Description.

The subjects for this investigation were taken from full time post freshman undergraduate students registered at three Canadian universities: the University of Ottawa, Saint Francis Xavier University, and Dalhousie University. Each of these universities operates under a charter granted by the respective provinces in which they are situated.

The University of Ottawa attracts undergraduate students mainly from the provinces of Ontario and Quebec with approximately equal numbers of French and English speaking students from both urban and rural communities. Saint Francis Xavier University attracts students mainly from each of the four Atlantic provinces with the large majority coming from rural areas of these provinces. Dalhousie University's undergraduate student population, while including mainly students from Canada's six eastern provinces, largely comprises students from the Atlantic region with a main concentration coming from the urban areas of Halifax and Dartmouth, Nova Scotia.

A wide selection of courses from the faculties of Arts, Science and Commerce was a priori chosen on the basis that these courses attracted a broad cross-section of students representative of the post freshman undergraduate student population. In each case the students from the selected classes were informed by the investigator of the nature of this study and volunteers were invited to complete the necessary questionnaire at any of the specified supervised sittings at each of the respective universities.

Table II provides an institutional breakdown of the number of invitations extended, the number of subjects who volunteered to complete the questionnaire, and the resulting number of usable returns from among the pool of volunteers in each institution.

From the 1,526 invitations extended, 1,045 accepted to act as volunteers and from these 1,018 usable returns resulted and thus constituted the total sample for this investigation.

Table III provides biographical data on the total sample on an institutional basis. As indicated on this latter table the total sample includes 662 sophomore students or 65.0 percent of the total, 220 juniors or 21.6 percent of the total, and 136 seniors or 13.4 percent of the total.

Table II.-  
Institutional Breakdown of Sample.

Institution	Number of Invitations extended		Number of volunteers		Number of usable returns	
	male	female	male	female	male	female
University of Ottawa	246	252	179	189	175	186
St. Francis Xavier University	263	237	191	153	184	150
Dalhousie University	251	277	169	164	165	158
Totals	760	766	539	506	524	494

Table III.-  
Total Sample Biographical Data

Institution	Class Year						Living Accommodation					
	Sophomore		Juniors		Seniors		Living in University Residence		Renting off-campus		Living with parents	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
University of Ottawa	143	155	14	14	18	17	36	45	54	59	85	82
St. Francis Xavier University	96	87	50	57	38	16	90	74	43	39	51	37
Dalhousie University	91	90	44	51	30	17	51	47	47	48	67	63
Totals	330	332	108	112	86	50	177	166	144	146	203	182

### 3. Administration of Questionnaires.

The CSQ questionnaire was administered in the months of March and September 1975, requiring a total of thirty-three sittings. At each sitting the volunteers were informed that the questionnaire was part of a research project and the required instructions were read. Since the questionnaire is untimed, subjects could leave as soon as they had finished. On the average the sittings were of an hour and one half duration.

Because a number of items in the CSQ refer to the United States implicitly as the birthplace of the subjects, adjustments had to be made to accommodate these subjects who were not Americans. Accordingly subjects were asked to alter items<sup>11</sup> 175, 177, 181, and 191, to read "Canada" instead of "United States". The few non-Canadian subjects were informed to substitute their own country of origin instead. This same procedure was applied to the "American" reference in the paragraph that follows item 130.<sup>12</sup> In the case of item 168,<sup>13</sup> subjects were asked to replace "Peace Corps" and "Vista" by "CUSO" for Canadians and by similar agencies for non-Canadians.

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11 Appendix 1, p. 117-118.

12 Appendix 1, p. 113.

13 Appendix 1, p. 116.

#### 4. Method of Scoring.

The scales in the CSQ are of the Likert-type. Each item has four alternatives and score values range from one through four. Since each scale comprises ten items, the respondent's scale score will therefore lie within the range of 10 to 40, arrived at by summing up the values of each of the ten items. With regard to missing data the procedure adopted is to compute no scale score when the subject has omitted three or more of the ten items. When either one or two items are omitted, the mean of the answered item values multiplied by the number of omitted items is added to the sum of the answered items to obtain a total score estimate.

The scales are ordinal measures and therefore order groups of subjects in higher-than or lower-than relationships on the dimensions measured by the scales. Since the scales are not interval scales, equal score differences do not necessarily signify equal differences in terms of the trait measured by the scale. Table IV identifies the items for each of the eleven scales.

The method of scoring the results of the CSQ Part II section dealing with the selection of first choices of orientation and the subsequent rank ordering of second, third, and fourth choices of the remaining orientations is arrived at first by separating each subject on the basis

Table IV.-

Identification of Questionnaire Items in each CSQ Scale.

Scale 1	Scale 2	Scale 3	Scale 4	Scale 5	Scale 6	Scale 7	Scale 8	Scale 9	Scale 10	Scale 11
(SF) <sup>a</sup>	(SA) <sup>b</sup>	(SM) <sup>c</sup>	(SS) <sup>d</sup>	(SH) <sup>e</sup>	(EI) <sup>f</sup>	(FI) <sup>g</sup>	(PI) <sup>h</sup>	(L) <sup>i</sup>	(SC) <sup>j</sup>	(CS) <sup>k</sup>
Item Numbers										
55	43	119	105	77	35	148	158	171	172	180
56	50	120	106	78	36	149	159	173	174	183
58	52	121	107	79	37	150	160	176	175	184
61	53	122	108	81	38	151	161	179	177	187
66	57	123	109	83	39	152	162	182	178	190
67	59	124	111	88	40	153	163	185	181	195
70	64	125	113	89	41	154	164	188	186	196
72	65	126	115	90	42	155	165	192	189	197
73	71	127	117	91	51	156	166	194	191	198
74	84	128	118	93	54	157	167	200	193	199

a Satisfaction with Faculty  
 b Satisfaction with Administration  
 c Satisfaction with Major  
 d Satisfaction with Students  
 e Study Habits  
 f Extracurricular Involvement

g Family Independence  
 h Peer Independence  
 i Liberalism  
 j Social Conscience  
 k Cultural Sophistication

of his first choice of orientation. For each of the resulting four groups of cases, i.e., the vocationals, academics, collegiates and non-conformists, a count is made of every possible combination of second, third and fourth choices from the rank ordering procedure provided in the instrument. Thus a case by case frequency distribution of second, third and fourth choices of orientation is obtained for each of the four groups.

#### 5. Statistical Design.

The subjects, separated on the basis of their first rank ordered choices of orientation, formed four sample groupings. These were the academic subtype sample, the vocational subtype sample, the collegiate subtype sample and the non-conformist subtype sample. The levels of the independent variable for each of the four subtype samples are the remaining three subtype orientations to which each subject assigns a rank.

The subjects' ranking of each of the remaining three subtype orientations forms the basis for the Friedman test<sup>14</sup> which is a non-parametric analogue of the analysis of variance F test for the one-way repeated measures design.

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<sup>14</sup> M. Friedman, "The Use of Ranks to Avoid the Assumption of Normality Implicit in the Analysis of Variance", in Journal of the American Statistical Association, Vol. 32, 1939, p. 675-701.

The Friedman test is applied separately to each of the four subtype sample groupings. The level of significance was set at 0.05 and the research hypotheses were tested in the null form.

In summary this chapter described the research instrument with particular emphasis on the scales comprised in the CSQ Part II. The research population was identified as full time post freshman undergraduate students registered in Central and Eastern Canadian universities from which a sample of 1018 subjects was tested. The manner of administering the research instrument and the method of scoring its various parts were next described along with a presentation of the statistical procedures utilized to test the null hypotheses.

## CHAPTER III

### PRESENTATION OF RESULTS

This chapter first presents the results of the distribution of undergraduate student subtypes from the population sampled. The results of the eleven characteristic trait scales scores are next reported because of their relevance in addressing the research instrument's capacity to discriminate among Canadian undergraduate subtypes as well as providing an additional reference basis from which to analyze segments of the total results. Following, the results of the rank ordering of second, third, and fourth choices of undergraduate student subtype orientations are presented. Finally, the results of the Friedman test applied to each of the four null hypotheses are presented.

#### 1. Results of the Distribution of Undergraduate Student Subtypes.

The distribution of undergraduate student subtypes for each of the three institutions sampled is shown in Table V.

From a total N of 1018 Table V shows that 361 subjects or 35.5% of the total N was drawn from Ottawa University, 334 subjects or 32.8% of the total N was drawn from St. Francis Xavier University, and 323 subjects or 31.7% of the total N was drawn from Dalhousie University. Also

Table V.-  
Distribution of Student Subtypes per Institution

Subtypes	Ottawa Univ.	St.F.X. Univ.	Dalhousie Univ.	Totals	% of Total N
Vocational	105	71	79	255	25.0
Academic	89	52	45	186	18.3
Collegiate	133	194	177	504	49.5
Non Conformist	34	17	22	73	7.2
Totals	361	334	323	1018	
% of Total N	35.5	32.8	31.7		

from Table V it is seen that the number of subjects identifying themselves as vocational subtypes amounted to 255 or 25.0% of the total N, the number of subjects identifying themselves as academic subtypes amounted to 186 or 18.3% of the total N, the number of subjects identifying themselves as collegiate subtypes amounted to 504 or 49.5% of the total N, and the number of subjects identifying themselves as non-conformist subtypes amounted to 73 or 7.2% of the total N.

## 2. Distribution of the Eleven Scale Scores by Subtypes.

An implicit assumption for this study is that the CSQ Part II can adequately separate undergraduate student subtypes as measured by the scale scores on the eleven characteristic trait scales. This assumption has been adequately verified on other than Canadian samples as previously reported in this study. While this report is not directed to an additional verification of the aforementioned assumption, it is felt appropriate, nevertheless, to report these results since the population for this study is Canadian based. The results are therefore presented in Appendix 4, Table XII to Table XLIV inclusively. Since subjects not completing the scale item requirements as defined in Chapter II of this study are not included, the total N for each scale is thus reduced accordingly. While this applies

to all the scales, the "Satisfaction with Major" scale has an additionally reduced total N since all subjects not enrolled in major programs are automatically excluded.

Tables XII, XIII and XIV of Appendix 4 provide respectively the distribution of the "Satisfaction with Faculty" scale scores, an analysis of variance table, and a Scheffe post hoc analysis. A similar tabular order of presentation is followed for each of the next ten scale scores. As shown in these tables overall significant differences ( $p < .05$ ) is indicated on each of the eleven scales. The tables reporting on the Scheffe test results locate where the differences lie. In all cases, differences are in the direction implicit to the Clark-Trow model.

### 3. Results of Rank Ordering of Second, Third and Fourth Choices of Undergraduate Student Subtype Orientation.

Each subject was first categorized on the basis of his first choice of subtype orientation, i.e., academic, vocational, collegiate or non-conformist thus forming the four groups reported in Table V. The resulting distribution of subtypes according to the Clark-Trow model is depicted in Figure 2.

For each of the resulting four groups a case by case frequency distribution of second, third and fourth choices of subtype orientations are reported in Appendix 5,

	High	Involvement with College	Low
Involvement with Ideas	Academic (186)	Collegiate (504)	
	Non-conformist (73)	Vocational (255)	
Low			

Figure 2.-

Total Distribution of Student Subtypes  
According to the Clark-Trow Model.

Tables XLV to XLVIII inclusively. As indicated in each of the latter tables each possible combination of subtype orientation rank ordering is provided along with an institution by institution breakdown of the frequency of each combination selection as well as the total frequency of each combination selection.

#### 4. Results of the Hypothesis Tests.

Separately for each of the four subtype groups defined in Appendix 5, Tables XLV to XLVIII inclusively the Friedman non-parametric analogue of the analysis of variance F-test was applied to test each of the four null hypotheses. From the Friedman test simultaneous confidence intervals for simple contrasts of means of ranks were obtained with the level of significance set at .05. The results are reported in Tables VI to IX inclusively.

##### Null Hypothesis 1

This null hypothesis is rejected since significant differences ( $p < .05$ ) are indicated between the means of the second rank ordered choice (Vocational) and the third rank ordered choice (Collegiate) as well as between the means of the second rank ordered choice (Vocational) and the fourth rank ordered choice (Non-conformist) as shown in Table VI. Accordingly the research hypothesis 1 is supported.

Table VI.-  
Academic Subtypes

Rank Order of Other Subtype Orientations				
Vocational (1)	Collegiate (2)	Non-conformist (3)		Frequency
1	2	3		126
1	3	2		21
2	1	3		21
2	3	1		5
3	1	2		7
3	2	1		6
M1 = 1.28      M2 = 1.99      M3 = 2.73				

The value of chi squared was 196.00 with two degrees of freedom. This is significant at the .05 level. A post hoc examination of the data produced the following simultaneous confidence intervals:

$$\mu_1 - \mu_2 : -0.71 \pm 0.25^*$$

$$\mu_1 - \mu_3 : -1.45 \pm 0.25^*$$

Thus both are significant at the .05 level.

In addition to the above two simultaneous contrasts which relate specifically to the hypothesis being tested the third possible simultaneous confidence interval between  $\mu_2$  and  $\mu_3$  is indicated as follows:

$$\mu_2 - \mu_3 : -0.74 \pm 0.25^*$$

Table VII.-  
Vocational Subtypes

Rank Order of Other Subtype Orientations			
Academic (1)	Collegiate (2)	Non-conformist (3)	Frequency
1	2	3	171
1	3	2	19
2	1	3	47
2	3	1	6
3	1	2	7
3	2	1	5
<hr/>			
M1 = 1.30	M2 = 1.89	M3 = 2.81	

The value of chi squared was 295.58 with two degrees of freedom. This is significant at the .05 level. A post hoc examination of the data produced the following simultaneous confidence intervals:

$$\mu_1 - \mu_2 : -0.59 \pm 0.22^*$$

$$\mu_1 - \mu_3 : -1.51 \pm 0.22^*$$

Thus both are significant at the .05 level.

In addition to the above two simultaneous contrasts which relate directly to the hypothesis being tested the third possible simultaneous confidence interval between  $\mu_2$  and  $\mu_3$  is indicated as follows:

$$\mu_2 - \mu_3 : -0.93 \pm 0.22^*$$

Table VIII.-  
Collegiate Subtypes

Rank Order of Other Subtype Orientations			
Vocational (1)	Academic (2)	Non-conformist (3)	Frequency
1	2	3	207
1	3	2	28
2	1	3	197
2	3	1	35
3	1	2	13
3	2	1	24
<hr/>			
M1 = 1.61	M2 = 1.71	M3 = 2.68	

The value of chi squared was 200.98 with two degrees of freedom. This is significant at the .05 level. A post hoc examination of the data produced the following simultaneous confidence intervals:

$$\mu_1 - \mu_3 : -1.07 \pm 0.15^*$$

$$\mu_2 - \mu_3 : -0.97 \pm 0.15^*$$

Thus both are significant at the .05 level.

In addition to the above two simultaneous contrasts which relate specifically to the hypothesis being tested the third possible simultaneous confidence interval between  $\mu_1$  and  $\mu_2$  is indicated as follows:

$$\mu_1 - \mu_2 : -0.10 \pm 0.15^{N.S.}$$

Table IX.-  
Non-conformist Subtypes

Rank Order of Other Subtype Orientations				Frequency
Academic (1)	Collegiate (2)	Vocational (3)		
1	3	2		43
1	2	3		16
2	1	3		1
3	1	2		2
2	3	1		7
3	2	1		4
M1 = 1.27      M2 = 2.64      M3 = 2.08				

The value of chi squared was 69.23 with two degrees of freedom. This is significant at the .05 level. A post hoc examination of the data produced the following simultaneous confidence intervals:

$$\mu_1 - \mu_2 : -1.37 \pm 0.41^*$$

$$\mu_1 - \mu_3 : -0.81 \pm 0.41^*$$

Thus both are significant at the .05 level.

In addition to the above two simultaneous contrasts which relate specifically to the hypothesis being tested the third possible simultaneous confidence interval between  $\mu_2$  and  $\mu_3$  is indicated as follows:

$$\mu_2 - \mu_3 : 0.56 \pm 0.41^*$$

### Null Hypothesis 2

This null hypothesis is rejected since significant differences ( $p < .05$ ) are indicated between the means of the second rank ordered choice (Academic) and the third rank ordered choice (Collegiate) as well as between the means of the second rank ordered choice (Academic) and the fourth rank ordered choice (Non-conformist) as shown in Table VII. Accordingly the research hypothesis 2 is supported.

### Null Hypothesis 3

The null hypothesis (a) is rejected since significant difference ( $p < .05$ ) is indicated between the mean of the second rank ordered choice (Vocational) and the fourth rank ordered choice (Non-conformist) as shown in Table VIII.

The null hypothesis (b) is also rejected since significant difference ( $p < .05$ ) is indicated between the mean of the third rank ordered choice (Academic) and the fourth rank ordered choice (Non-conformist) as shown in Table VIII. Accordingly the research hypotheses 3(a) and 3(b) are supported.

### Null Hypothesis 4

The null hypothesis is rejected since significant differences ( $p < .05$ ) are indicated between the means of the second rank ordered choice (Academic) and the third rank ordered choice (Collegiate) as well as between the means of the second rank ordered choice (Academic) and the fourth rank

ordered choice (Vocational) as shown in Table IX. Accordingly the research hypothesis 4 is supported.

In summary this chapter first reported the results of the distribution of undergraduate student subtypes. This was followed by a presentation of the results of the distribution of scale scores by subtype groupings. Next the results of the subjects' rank ordering of second, third and fourth choices of subtype orientations were presented. Separately each hypothesis was tested in the null form at the .05 level of significance and the test results reported.

## CHAPTER IV

### INTERPRETATION OF FINDINGS

This chapter first notes the extent of the generalizations possible about the population from which the sample is derived. Following, an assessment of student subtypes classified on the basis of their first rank ordered orientation choices is provided. Next, subtype distribution comparisons among institutions and against the existing United States norms are interpreted. Discussions then center on the results of the test applied to each of the four hypotheses. Finally a discussion on possible modifications to the existing Clark-Trow typology model is tentatively advanced.

#### 1. Assessment of Student Subtypes Based on First Rank Ordered Orientation Choices.

As noted in the description of the sample used in this investigation the subjects were drawn from among the population of full time post freshman undergraduate students registered in Canadian universities. The three universities from which the sample was drawn comprised the University of Ottawa, St. Francis Xavier University and Dalhousie University. These universities are located in the region of Canada from Ontario eastward drawing students mainly from the

provinces of Ontario, Quebec, New Brunswick, Prince Edward Island, Nova Scotia and Newfoundland. It is consequently felt that generalizations made on the findings of this study must be limited to the population within the geographic area of Canada defined by those provinces. The extent of such generalizations is considered appropriate since first, the total sample of 1018 represents approximately 2 percent of the total population and secondly, the universities used in the sample attract significant numbers of students from each of the provinces of the defined geographic region.

From the total N of 1018 as shown in Table V and on the basis of orientation selection resulting from first rank ordered orientation choices, 255 selected the vocational orientation, 186 selected the academic orientation, 504 selected the collegiate orientation and 73 selected the non-conformist orientation. Table X provides a comparison by percentage of subtype distributions, first, across the three universities included in the sample, secondly, across subtypes in the total sample and thirdly, across the existing United States norms.

As seen in Table X a comparison between the Total Sample column and the United States Norms column indicates a minimum difference of .3 percent in the case of the vocational subtypes to a maximum difference of 3.6 percent in the case of the academic subtypes. This small range of

Table X.-

Comparison by Percentages of Student Subtype  
Distributions Against United States Norms.

Student Subtypes	University of Ottawa	St. F.X. University	Dalhousie University	Total Sample	United States Norms <sup>a</sup>
Vocational	29.1	21.3	24.5	25.0	25.3
Academic	24.7	15.6	13.9	18.3	21.9
Collegiate	36.8	58.0	54.8	49.5	46.8
Non-conformist	9.4	5.1	6.8	7.2	5.9
N	361	334	323	1018	

<sup>a</sup> R. E. Peterson, Supervisor's Manual for Administering the College Student Questionnaire, Princeton, New Jersey, Education Testing Service, 1968, p. 50-52.

differences tends to suggest the appropriateness of the United States norms for purposes of comparisons on Canadian based samples.

The mean scores obtained by each of the four orientation subtypes<sup>1</sup> on each of the eleven CSQ Part II scales are presented graphically in Appendix 6. These mean scores are plotted on a chart normalized from the United States data pool. The heavy center lines in the chart are at the means of the respective distributions, and in all instances the distance between horizontal lines represents one standard deviation. From the plotted results it is seen that the scale score means for each of the academic, vocational, and collegiate orientation subtypes tend to fall well within one standard deviation above or below the 50th percentile. The scale score means of the non-conformist orientation subtype also fall within the above range with the exception of the means for the Family Independence, Peer Independence, Satisfaction with Faculty and Extracurricular Involvement scale scores. The results on the Family and Peer Independence scales would suggest that the Canadian non-conformist subtypes exhibit greater independence from their family and their peer groups than their American counterparts. The results on the Satisfaction with Faculty scale would suggest that the

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1 Appendix 4, p. 132-164.

Canadian non-conformist subtypes are more dissatisfied with their faculty members than their American counterparts. Also the results on the Extracurricular Involvement scale suggest a lower participation in such involvements by the Canadian non-conformist subtypes than their American counterparts. An explanation for these differences may be found in the consideration that present day non-conformist subtypes represent a more homogeneous grouping than in the 1960's. Accordingly it may be expected that collective attitudes on certain dimensions will tend to be higher.

With the exceptions of the variations noted above, the findings reported in Appendix 6 provide an additional indication for the appropriateness of the United States norms for purposes of comparisons on Canadian based samples. Furthermore, these findings suggest that the CSQ Part II is not an inappropriate instrument for use in a Canadian setting. Evidence for this is seen in the overall differences among the means of the scores of orientation subtypes on each of the eleven scales provided in the instrument. Additionally the differences among the means were in the direction predicted by or implicit in the definitions of the cells of the operationalized Clark-Trow Model.

The aforementioned findings tend to confirm the assumption implicit in the hypotheses advanced in this report that the CSQ Part II has the capacity to separate orientation

subtypes on the basis of their first rank ordered orientation choices using a Canadian based sample of undergraduate post-freshman students. While this instrument has been validated in a number of research studies using American samples as noted in Chapter I of this report, no reference of its use with a Canadian sample existed heretofore.

## 2. Discussion of the Results of Testing the Four Hypotheses.

### Hypothesis 1:

As shown in Table VI from a total N of 186 subjects who ranked themselves first as "academics", 147 indicated the vocational orientation as their second choice, 26 indicated the collegiate orientation as their second choice and 13 indicated the non-conformist orientation as their second choice. From the post hoc examination of the results of the Friedman test as shown in Table VI the research hypothesis 1 is supported since significant differences are confirmed between the mean of the vocational rank ordered second choices and the means of each of the collegiate and non-conformist rank ordered second choices. This findings confirms the expectation that the academic subtypes as defined by the Clark-Trow model significantly tend to select the vocational orientation as their second choice. Accordingly it may be concluded that the academic subtypes incorporate characteristics of the vocational subtypes thus suggesting

the nature of their orientation blend.

Hypothesis 2:

As noted in Table VII from a total N of 255 subjects who ranked themselves first as "vocationals", 190 selected the academic orientation as their second choice, 53 selected the academic orientation as their second choice and 12 selected the non-conformist orientation as their second choice. From the post hoc examination of the results of the Friedman test as shown in Table VII the research hypothesis 2 is supported since significant differences are confirmed between the mean of the academic rank ordered second choices and the means of each of the collegiate and non-conformist rank ordered second choices. These results confirm the expectations that the vocational subtypes as defined by the Clark-Trow model significantly tend to select the academic orientation as their second choice. It may therefore be concluded that the vocational subtypes incorporate characteristics of the academic subtypes thus suggesting the nature of their orientation blend.

From the test results of hypotheses 1 and 2 it is seen that each of the academic and vocational orientation subtypes significantly tends to reciprocate on their second rank ordered choices of orientations. Taken together these findings provide empirical validation of the sociological and psychological forces present in a university environment

which inevitably lead the academic subtypes to reward characteristics typical of the vocational subtypes and reciprocally lead the vocational subtypes to reward characteristics typical of the academic subtypes.<sup>2,3</sup> Furthermore the rejection of the null hypotheses corresponding to research hypotheses 1 and 2 bring direct empirical verification to observations<sup>4,5,6,7</sup> noted in the review of the literature about the common affinity toward certain variables shared by each of the academic and vocational orientation subtypes.

Based on these findings it appears appropriate to conclude that present day "academics" and "vocationals" as defined by the Clark-Trow model are respectively blends of

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2 J. Barzun, "Where are the Disciples?", in Antioch Review, Vol. 20, 1960, p. 6.

3 B. R. Clark and M. Trow, Determinants of College Student Subculture, Berkeley, California, University of California, Center for the Study of Higher Education, 1960, 1-71 p.

4 A. J. Lange, "An Analysis of Clark-Trow Subtypes", in Journal of College Student Personnel, Vol. 13, No. 4, 1972, p. 347-351.

5 A. J. Lange, et al., "OPI Differences among Clark-Trow Subgroups", in Journal of College Student Personnel, Vol. 15, No. 6, 1974, p. 498-501.

6 H. A. Korn, "Careers: Choice, Change, or Inertia?", in No Time For Youth, J. Katz and Associates, (Eds.), San Francisco, Jossey Bass, 1968, p. 187-238.

7 A. W. Astin and P. J. Panos, The Educational and Vocational Development of College Students, Washington, D.C., The American Council on Education, 1969, xii-211 p.

each of the two subtype orientations. While students will perceive themselves to be more of one orientation than the other and accordingly rank order that orientation as their first choice, they will significantly tend to choose the other orientation as their second choice and rank order it accordingly. Consequently, students classifying themselves as either "academics" or "vocationals" according to the Clark-Trow model tend to be more completely described by considering them to be respectively of the academic-vocational blend or, alternatively, of the vocational-academic blend. Hypothesis 3(a) and 3 (b):

As shown in Table VIII from a total N of 504 subjects who ranked themselves first as "collegiates", 232 indicated the academic orientation as their second choice, 235 indicated the vocational orientation as their second choice and 37 indicated the non-conformist orientation as their second choice. From the post hoc examination of the results of the Friedman test as shown in Table VIII the research hypotheses 3(a) and 3(b) are supported since in each case significant differences are confirmed respectively between the mean of academic rank ordered second choices and the mean of non-conformist rank ordered second choices, and between the mean of vocational rank ordered second choices and the mean of non-conformist rank ordered second choices. Taken together, the rejection of the null hypotheses corresponding to research

hypotheses 3(a) and 3(b) confirms the expectation that the collegiate subtypes as defined by the Clark-Trow model significantly tend to select either the academic or vocational orientation as their second choices. Furthermore, although not specifically tested by hypothesis 3(a) and 3(b), the results of the distribution of rank ordered second choices as shown in Table VIII indicate a virtual 50 percent split and therefore no significant differences between academic rank ordered second choices and vocational rank ordered second choices. Accordingly it may be concluded that the collegiate subtypes incorporate characteristics of either the academic or vocational subtypes thus suggesting the nature of their respective orientation blends.

Kolb addressing the American university scene in 1967, states that

The collegiate culture has diminished in strength, even though the number of students has increased. In the prestigious institutions it exists only as a remnant, while in other institutions it has been replaced to a considerable degree by a serious and grim vocationalism.<sup>8</sup>

It is impossible to determine precisely the relevance of the aforementioned conclusion to the Canadian university scene since Canadian norms on this question are not present

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<sup>8</sup> W. L. Kolb, "Changing the Collegiate Culture", in The College and the Student, L. E. Dennis and J. F. Kauffman, (Eds.), Washington, D.C., American Council on Education, 1967, p. 67.

in the literature. It is nevertheless significant to note that the findings of this study as shown in Table VIII demonstrate a distribution of all subtype orientations inclusive of the collegiate orientation, to be highly similar to the existing American norms in terms of the proportion of each subtype. This would tend to suggest that any diminution of the numbers of collegiate subtypes, proportionately or absolutely, within the Canadian population would have occurred from an initially higher base than that reflected in the American norms. However, an initially higher base of collegiate subtypes would presuppose that historically Canadian university environments would have contained a higher proportion of the components contributing to a comparatively higher collegiate subtype appeal. Since there is no evidence that this was the case, a more plausible interpretation may be advanced by considering that changes within the collegiate culture have been in the nature of the orientation blend which typifies the present day collegiate subtype. While high involvement in extracurricular activities continues to be the dominant variable which significantly differentiates the collegiate subtype from each of the other possible orientation as shown in Table XXIX of Appendix 4, the very nature of extracurricular activities has undergone dramatic changes

on university campuses in the last ten years.<sup>9,10,11</sup> The notion of "in loco parentis" which was central to student uprisings in the early 1960's has been generally replaced by an attitude of "laissez faire" in most areas of university non-academic activity.<sup>12</sup> As a result the collegiate subtype's involvement in extracurricular activities has tended to move in a direction of more terminal decision making and assumption of increased personal responsibility,<sup>13,14</sup> forces which, according to Heath<sup>15</sup> tend to provide an opportunity for expanded awareness and hence maturity. Therefore the present day collegiate subtype tends to be more completely

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9 B. Kidd, "Sportsmen or Gladiators? What's the Aim of Sports Education", in Canadian Dimension, Vol. 7, No. 4, 1970, p. 10.

10 J. Renick, "The Use and Misuse of College Athletics", in Journal of Higher Education, Vol. 65, No. 7, 1974, p. 545-552.

11 T. J. Neher, "Student Involvement in Community College Policy Making", in Journal of College Student Personnel, Vol. 14, No. 5, 1973, p. 407-413.

12 T. R. Harvey, "Some Future Directions for Student Personnel Administration", in Journal of College Student Personnel, Vol. 15, No. 4, 1974, p. 243-247.

13 E. M. Chandler, "Student Affairs Administration in Transition", in Journal of College Student Personnel, Vol. 14, No. 5, 1973, p. 392-398.

14 M. P. Nolan and J. J. Fargen, "Personality Differences Between Able Sophomore University Students of 1961 and 1971", in The Journal of Educational Research, Vol. 69, No. 1, 1975, p. 11-13.

15 D. H. Heath, Growing up in College, San Francisco, Jossey Bass, 1968, p. 20-48.

described by considering the direction in which he perceives an attraction to other orientations. As suggested in the theoretical rationale leading to hypothesis 3(a) and 3(b), the collegiate subtype tends to reject the non-conformist orientation since this orientation rejects any notion of participation in extra-curricular activities. Generalized support for this is reported in Appendix 4 wherein it is seen that collegiate subtypes in the present sample were significantly different from the non-conformist subtype on nine of the eleven characteristic trait scales. This finding also confirms Lange's<sup>16</sup> observation that the collegiate subtype differs most from the non-conformist subtype. As further suggested in the theoretical rationale, the collegiate subtypes tend to select the academic or, alternatively, the vocational orientation as their second choice of orientation depending upon their relative strengths of "highs" or "lows" on the two dichotomized dimensions of "involvement with ideas" and "involvement with college" on the Clark-Trow model. The direction of each of these movements may be appropriately interpreted to reflect a reduction of their reluctance to accept the more adult or mature norms<sup>17,18</sup> of an increased

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16 Lange, op. cit.

17 Clark and Trow, op. cit., p. 16.

18 Heath, op. cit.

academic effort as presented by the academic orientation or, alternatively, of an increased concern with career preparation as presented by the vocational orientation.

Based on these considerations and as a result of the rejection of the null hypotheses corresponding to research hypotheses 3(a) and 3(b) it appears appropriate to conclude that the collegiate subtypes, having a significant tendency to choose either the academic orientation or the vocational orientation as their second rank ordered choices of orientation, will be more completely described by considering them to be respectively of the collegiate-academic blend or, alternatively, of the collegiate-vocational blend.

Hypothesis 4:

As noted in Table IX from a total N of 73 subjects who ranked themselves first as "non-conformists", 59 selected the academic orientation as their second choice, 8 selected the collegiate orientation as their second choice and 6 selected the vocational orientation as their second choice. From the examination of the results of the Friedman test as shown in Table IX the research hypothesis 4 is supported since significant differences are confirmed between the mean of the academic rank ordered second choices and the means of each of the collegiate and vocational rank ordered second choices. The rejection of the null hypothesis corresponding to research hypothesis 4 confirms the expectation that the

non-conformist subtypes as defined by the Clark-Trow model tend to select the academic orientation as their second choice. An examination of the differences among scale score means as reported in Appendix 4 tends to confirm earlier research findings<sup>19</sup> that the non-conformist subtype is the most easily identifiable of all subtypes since significant differences are indicated between the non-conformist subtypes and each of the other subtypes on a minimum of eight of the eleven characteristic trait scales. The extent of these differences suggests a low predisposition on the part of the non-conformist subtypes toward the embodiment of the more salient characteristics of other subtype orientations. This finding suggests that the non-conformist subtypes will approach the selection of second rank ordered choices of orientation in a manner which will reflect the least perceived incompatibility among salient orientation elements rather than a selection predicated on a substantial measure of attractiveness. The a priori rejection of the collegiate and vocational orientations by the non-conformist subtypes is well supported in the literature addressing this matter. Clark and Trow have stated that

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19 Lange, op. cit.

The distinctive quality of this student style is a rather aggressive non-conformism, a critical detachment from the college they attend and its faculty, and a generalized hostility to the college administration.<sup>20</sup>

This "detachment" has been singled out by other researchers<sup>21</sup> as the factor which precludes any interest in collegiate or vocational concerns. The academic orientation presents less of a threat for the non-conformist subtypes since the former's central characteristic is an involvement with ideas. However, the academic orientation, though less repugnant than either the collegiate or vocational orientation, is still suspect to the non-conformist subtypes who, according to Clark and Trow,<sup>22</sup> wish to be involved with ideas not uniquely initiated by or limited to the parameters of the official curriculum. Accordingly it appears appropriate to conclude that the nature of the non-conformist-academic blend confirmed by the rejection of the null hypothesis corresponding to research hypothesis 4 must be restrictively interpreted to reflect the negative quality of least incompatibility.

A limitation to the conclusions generated from the results of testing hypothesis 4 is suggested as a result of

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20 Clark and Trow, op. cit., p. 7.

21 D. Whittaker and W. A. Watts, Personality and Value Attributes of Intellectually Disposed, Alienated Youth, paper read at the 74th Annual Meeting of the American Psychological Association, Chicago, 1966.

22 Clark and Trow, op. cit.

the relatively small N of the non-conformist subtype group. Peterson<sup>23</sup> has suggested that a minimum N of 50 or 15 percent of the total N is desirable for each subtype group. Since the N for the non-conformist group only reaches 73 thereby meeting only one of the two criteria, due caution must be noted with regard to the interpretations made.

### 3. Discussion of Possible Modifications to the Existing Clark-Trow Model.

A significant body of literature, both descriptive and empirical, in the late 1960's and into the 1970's has addressed the changing role of universities in response to the heightened expectations of society generally and of the universities' present clientele specifically, with regard to a more direct relevance between higher education and the world of work. Kerr<sup>24</sup> had earlier acknowledged that universities should have as one of their principal aims the adequate preparation of undergraduate students for the world of work. More recently Parsons and Platt<sup>25</sup> have reported on

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23 R. E. Peterson, On a Typology of College Students, Princeton, New Jersey, Educational Testing Service, 1965, p. 12.

24 C. Kerr, The Uses of the University, Cambridge, Mass., Harvard University Press, 1963, vii-140 p.

25 T. Parsons and G. Platt, The American University, Cambridge, Mass., Harvard University Press, 1973, xi-463 p.

the growing concern being placed on career orientation by university undergraduate students resulting from the diminishing capacity of North American society to guarantee satisfying employment upon graduation. While these acknowledged theorists provide strong evidence for the inclusion of preoccupation with career preparation as a central orientation concern with undergraduate university students, there is empirical research evidence which indicates that certain student subtypes will tend to value this concern more highly than others. Astin and Panos<sup>26</sup> have provided confirming data on the factors in the university environment which affect the undergraduate students' career development. Korn<sup>27</sup> has concluded on the basis of his research in undergraduate university student career plans that groupings of characteristic traits embodied by student types tend to determine the degree of concern toward career preoccupation.

The findings that certain university undergraduate subtypes are highly concerned with their eventual careers while others are less concerned is reflected in the determinants of the orientations comprised in the Clark-Trow model<sup>28</sup> and, accordingly, in the Peterson operationalized

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26 Astin and Panos, op. cit.

27 Korn, op. cit.

28 Clark and Trow, op. cit., p. 4-9.

version of it. An analysis of the paragraphs<sup>29</sup> which operationalize the typology identify specifically the subtypes whose orientations will reflect a high or, alternatively, a low concern with their eventual career. The vocational orientation described therein includes the statement that "persons holding this philosophy are usually quite committed to particular fields of study and are in college primarily to obtain training for careers in their chosen fields".<sup>30</sup> The academic orientation description emphasizes that this orientation, among other qualifications, "does not ignore career preparation".<sup>31</sup> By contrast the section<sup>32</sup> which operationalizes the collegiate and non-conformist orientation either omits any reference to a concern for one's career or, alternatively, degrades its importance as seen by the qualification to the non-conformist orientation that "there is little interest in business or professional career, in fact, there may be a definite rejection of this kind of aspiration".<sup>33</sup> Accordingly it is seen that the operationalized Clark-Trow typology as contained in the CSQ Part II

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29 Appendix 1, p. 113.

30 Idem, ibid.

31 Idem, ibid.

32 Idem, ibid.

33 Idem, ibid.

sets out the dichotomized notion of concern for one's career accurately reflecting the degree of its presence in the cells of the Clark-Trow typology model. However, since the variable "involvement with career" is seen as part of the cell descriptions of the model rather than identified as one of the dimensions of the model it is therefore relegated to a minor descriptor rather than a major one. Thus the existing Clark-Trow model only comprises the two dichotomized dimensions of "involvement with ideas" and "involvement with college" thereby limiting the model to the four student subtype orientation cells. Two of these cells, the academic and vocational orientations, include the descriptive element of high involvement with career while the other two cells, the collegiate and non-conformist orientations, incorporate the element of low involvement with career. Accordingly the operationalized version of the model reflects this limitation.

Based on the review of the relevant literature addressing the increased attention being given to the variable "involvement with career" by society, students and universities since the development of the Clark-Trow model,<sup>34</sup> it is considered appropriate to suggest tentatively that this variable should be placed as a separate dimension in the model. As seen in Figure 3 this modification to the model

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34 The Clark-Trow model was reported in 1960 and operationalized in 1965.

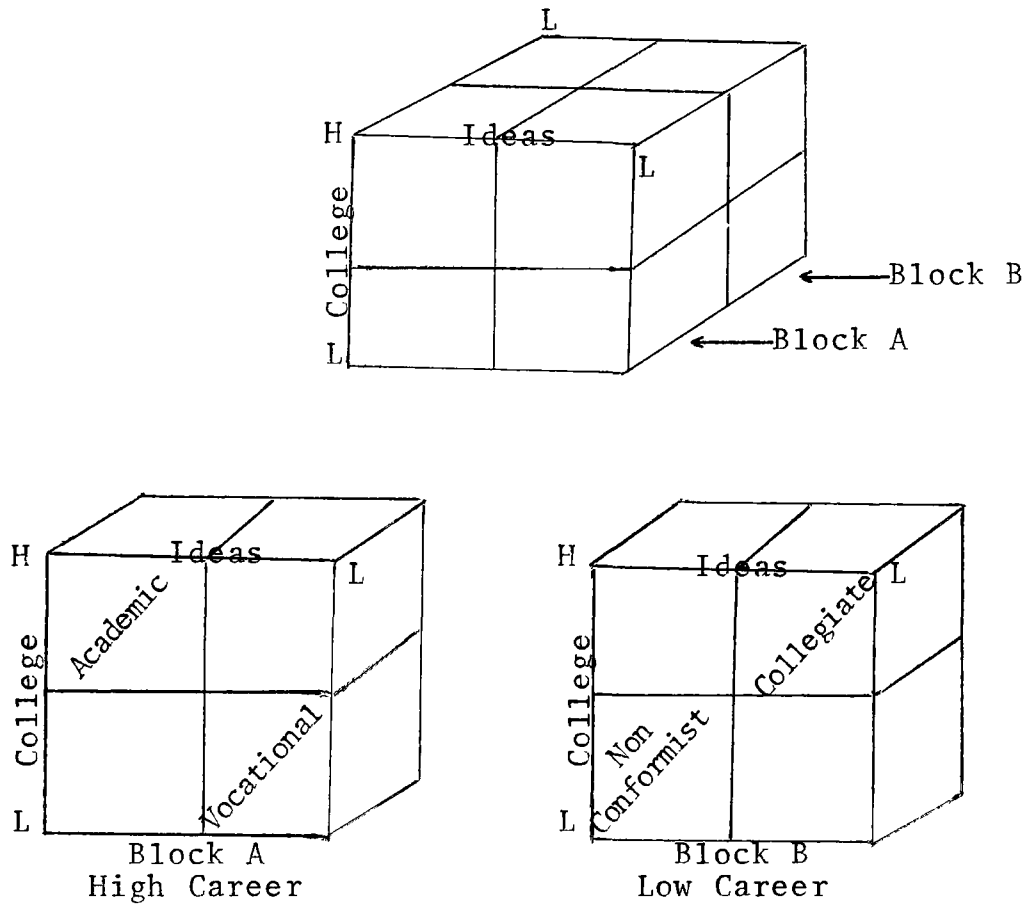


Figure 3.- The Modified Clark-Trow Model

Legend:

- H - High
- L - Low
- Ideas - Involvement with ideas dimension
- College - Involvement with college dimension
- Career - Involvement with career dimension

would change the existing two dimensional model to a three dimensional one, preserving the original two dichotomized dimensions of "involvement with ideas" and "involvement with college" and adding the third dichotomized dimension of "involvement with career". As indicated in Block A of Figure 3 the vocational and academic orientations share in the high "involvement with career" dimensions while the collegiate and non-conformist orientations share in the low "involvement with career" dimensions. Each of the other two dimensions of the model is unaffected by this addition.

Apart from clarifying the relationship among the existing cells of the model, the new dimension of "involvement with career" tends to add precision to the vocational cell which, heretofore, has been defined simply by the "lows" on each of the two existing dimensions of "involvement with ideas" and "involvement with college". Furthermore, the addition of this dimension provides the model with a capacity for describing four new potential student subtypes as shown in the suggested three dimensional modification in Figure 3. The clarifications to the existing four cells of the Clark-Trow model along with the dimensional "highs" and "lows" of the four new potential subtypes identified as (W), (X), (Y), and (Z) are shown in Table XI.

While the main purpose of this section is to attempt a clarification to the existing four cells of the Clark-Trow

Table XI.-  
Cell Definitions of the Proposed Modified  
Clark-Trow Typology Model

Subtypes	Dimensions		
	Involvement with ideas	Involvement with college	Involvement with career
Academic	High	High	High
Vocational	Low	Low	High
Collegiate	Low	High	Low
Non-conformist	High	Low	Low
(W)	High	High	Low
(X)	Low	Low	Low
(Y)	Low	High	High
(Z)	High	Low	High

model as demonstrated in Table XI, a tentative analysis of each of the new cells would tend to suggest the following: first, subtype (W) could represent an "academic" subtype whose preoccupation with intellectualism would preclude any utilitarian considerations; second, subtype (X) could represent a highly apathetic subtype with no perceived purpose for attending university; third, subtype (Y) could represent a strain of the "collegiate" subtype with a high degree of desire for upward mobility; fourth, subtype (Z) could represent a type of "vocationalist" whose career orientation is toward a profession which demands high standards of academic achievement.

The rejection of each null hypothesis, in this report, while not testing the aforementioned modification to the existing Clark-Trow model, tends to suggest the appropriateness of such a modification. As noted in the theoretical rationale and supported by the research findings cited, the notion of "involvement with career" was advanced as one of the determining factors in the selection of second choices of orientations. However, since the present instrument is restricted to an operationalized version of the existing Clark-Trow model it therefore precludes its adequacy for specifically testing the full impact of the "involvement with career" dimension. Furthermore, the present instrument does not provide a capacity for discriminating the possible

subtypes which might fall in the four new cells dimensionally identified and tentatively described in Table XI. For these reasons the proposed modification to the Clark-Trow model remains tentative.

In summary this chapter presented a discussion on the interpretation of the findings. It first demonstrated that the CSQ Part II is not inappropriate for use with a Canadian university undergraduate population. Based on the supported research hypotheses the Clark-Trow model's capacity to define subtype orientation blends was next discussed. Finally, a discussion of a tentative modification to the typology model was presented.

## SUMMARY AND CONCLUSIONS

This report evolved from a review of the literature on typological models utilized to categorize and therefore describe undergraduate university student subtypes. Of general concern was the appropriateness of such models to reflect accurately the salient characteristics of student subtypes from which predictable patterns of behavior might be subsequently derived. Furthermore it was felt that administrative, policy and curricular decision making in university communities is often misguided by the incompleteness of knowledge about the orientation characteristics of undergraduate student bodies. Of equal concern was the virtual absence of research studies using Canadian university undergraduate populations to address these questions at a time when, increasingly, many decisions relating to the accommodation of change must stand the test of accountability both within and without the university.

Through a reappraisal of the Clark-Trow student subtype typology model four research hypotheses were advanced to explore the model's capacity to predict subtype orientation blends. The sample comprised 1018 Canadian university post freshman undergraduate students. The CSQ Part II was utilized to obtain the subjects' rank ordering of orientation preferences. Each hypothesis was tested in the null form at

the .05 level of significance and rejected.

The findings in this report strongly suggest that the totality of undergraduate university student orientations is best described and, therefore, the students potentially better understood, if their orientations are viewed as blends of their first and second stated choices of orientation preferences. Furthermore the findings tentatively suggest a possible modification to the existing Clark-Trow model by the addition of a third dichotomized dimension to more appropriately account for the students' "involvement with career" concerns.

Also the findings indicate that the CSQ Part II based on the Clark-Trow typology has the capacity to identify these orientation blends. Within the previously stated limits of the generalizations considered appropriate for this report these findings have implications for decision making at various levels of university administration. A knowledge of the orientation blend mix among students should contribute to the setting of university objectives. Alternatively such a knowledge may also justify a review of existing objectives should these not be considered congruent with the present student mix. Furthermore, the universities' admission process should be sensitive to the orientation blend mix so that recruitment and public relations policies may be made to reflect the student mix desired in view of the institutions'

stated objectives. Internally a knowledge of prevailing orientation blends within a given student body ought contribute to decisions on budgetary allocations where it may be felt that such allocations would tend to prompt orientation changes in a preferred direction. Examples of these would include such diverse activities as faculty recruitment and shifts in monetary allocations from athletic type programs to culturally oriented programs. Internally also, but of a non-monetary nature, decisions in residence living arrangements, such as policies on the determination of roommates, floor mates, or grouping arrangements, should be constructively aided by a proper knowledge of the orientation blend mix particularly since propinquity has been identified in research studies as one of the most significant forces for either orientation reinforcement or orientation change.

The findings of this study suggest prospects for several areas of further research. These are indicated as follows:

- (1) A longitudinal study could be undertaken to assess whether present second rank ordered orientation choices represent an early indication of eventual subtype orientation change. Since approximately one-third of the data collected bears the permanent student identification number of the subjects who participated in this study, such a longitudinal study would be very feasible.

- (2) Since no Canadian norms exist on the distribution of undergraduate subtype orientations, replications of this study utilizing samples from other areas of Canada would contribute to the eventual development of such norms.
- (3) Further cross-sectional replications of this study could test the capacity of the existing model to predict third rank ordered orientation choices. Post hoc examinations of the third possible simultaneous confidence interval as reported in Tables VI to IX inclusively support this possibility.
- (4) The development of a revised instrument to test the appropriateness of the tentatively suggested modifications to the Clark-Trow typology is considered important in view of the increased attention in the literature being given to "involvement with career" as a significant dimension in contributing to the determination of undergraduate student subtype orientation.

## BIBLIOGRAPHY

Apostal, R. A., "Personality Type and Preferred College Subculture", in Journal of College Student Personnel, Vol. 11, No. 2, 1970, p. 107-110.

This study attempted to determine if relationships exist between student personality types and the students' preferred college subcultures. The CSQ was used to measure subcultural endorsement and personality types were classified according to Holland's theory of vocational choice. The sample included 993 sophomore students from the University of Maine. Significant relationships ( $p < .05$ ) were found to exist between personality type and preferred college subculture.

Astin, A. W., Who Goes Where to College, Chicago, Science Research Associates, 1965, ix-125 p.

This book constitutes an assessment of the freshman classes entering a national sample of 246 institutions in the fall of 1961. Exhaustive data on the 127,000 freshmen at the time of matriculation were analyzed and provide insights into the factors which may be basic to future orientation choices.

-----, and R. J. Panos, The Educational and Vocational Development of College Students, Washington, D.C., American Council on Education, 1971, xii-211 p.

This book comprises a study aimed at assessing the significance of institutional diversity in the production of skilled manpower by comparing the effects of different college environments on the undergraduate student's educational aspirations and career plans. The specific objective was to identify institutional characteristics and educational practises that affect the student's chances of completing college, going to graduate school, and pursuing a career in a particular field.

Clark, B. R., Educating the Expert Society, San Francisco, Chandler, 1962, xi-301 p.

The author provides a sociological appraisal of the role of colleges and universities in preparing young adults for the society that awaits them. In his analysis he utilizes the Clark-Trow typology of college student types previously elaborated in conjunction with Martin Trow.

-----, and M. Trow, Determinants of College Student Subculture, Berkeley, California, University of California Center for the Study of Higher Education, 1960, 1-71 p.

The authors provide a theoretical analysis of the social forces and conditions that shape subcultural orientations among college students. Having determined a typology of college students this then forms the locus for a set of processes which intervene between the outcomes of college and the larger social systems which constitute the environment for higher education.

Feldman, K. A., and T. M. Newcomb, The Impact of College on Students, Vol. I and Vol. II, San Francisco, Jossey-Bass, 1970, xii-474 p. and iv-171 p.

These two volumes, one of text and one of tables, present and interpret the findings from almost fifteen hundred published and unpublished reports on college students and higher education covering the period from 1930 to 1970. Their analysis is directed to conclusions and suggestions about the impact-positive, neutral, or negative, which the various aspects of a college have on the students.

Friedman, M., "The Use of Ranks to Avoid the Assumption of Normality Implicit in the Analysis of Variance", in Journal of the American Statistical Association, Vol. 32, 1939, p. 675-701.

This study develops a method of statistical treatment to data which deals with qualitative characteristics which can be ranked but not measured. The method is shown to be applicable to data classified by two or more criteria to determine whether the factors used as criteria of classification have a significant influence on the variate classified. The test statistic is distributed as chi squared with  $k-1$  degrees of freedom. The efficiency of this method was validated against the analysis of variance test.

Gottlieb, D., and B. Hodgkins, "College Student Subcultures: Their Structure and Characteristics in Relation to Student Attitude Change", in The School Review, Vol. 71, 1963, p. 266-289.

The authors focus on a theoretical analysis stemming from the basic assumptions of student-body heterogeneity and the existence of the college community as a distinctive socio-cultural system. Using the Clark-Trow typology they report on an empirical investigation which confirms that a differential rate of change occurs within the same college student body, which is linked in part to both the social origins of the students and their adjustment to the academic milieu in which they find themselves.

Heath, D. H., Growing up in College, San Francisco, Jossey-Bass, 1968, xiv-326 p.

This book, partly research and partly theoretically oriented, examines what types of environmental determinants affect healthy development in young adults. A theory of maturity is developed.

Kees, D. J., "The Clark-Trow Typology Revisited", in Journal of College Student Personnel, Vol. 15, No. 2, 1974, p. 140-144.

In this study, undergraduate university students who appointed themselves to each of the four Clark-Trow subtypes were compared with a freshman class five years earlier. Reliability of the model was affirmed. Orientation shifts noted in the study, however, must remain suspect since the period of the study spans the abnormally high student activist era.

-----, and W. P. McDougall, "A Validation Study of the Clark-Trow College Subculture Typology", in Journal of College Student Personnel, Vol. 12, 1971, p. 193-199.

This study is essentially directed to validating the Clark-Trow model as a meaningful instrument in studying college student subtypes. The results demonstrate high validity.

Kerr, C., The Uses of the University, Cambridge, Mass., Harvard University Press, 1963, vii-140 p.

The history of universities is traced to locate events which are considered critical to present day trends in universities and "multiversities". Ascribed as causal to student uneasiness is the declining quality of undergraduate education and the growing demand of research on faculties. Emphasized is the balanced role of universities.

Lange, A. J., "An Analysis of Clark-Trow Subtypes", in Journal of College Student Personnel, Vol. 13, No. 4, 1972, p. 347-351.

This study sought to identify significant differences among four college freshman subtypes, based on the Clark-Trow model, on 29 variables measuring selected attitudes held prior to college entrance and at the end of the freshman year, perceptions of the environment at the end of the freshman year, and perceived attainment of personal, social, vocational, and educational goals. The sample comprised 158 randomly selected freshman students. The results generally were in the direction predicted ( $p < .05$ ), which apart from confirming the hypotheses tended to validate the CSQ.

-----, et al., "OPI Differences among Clark-Trow Subgroups", in Journal of College Student Personnel, Vol. 15, No. 6, 1974, p. 498-501.

This study utilized 99 randomly selected endorsers of each of the four Clark-Trow subtypes to test the possibility that significant differences exist between college student subgroups as measured by the Omnibus Personality Inventory (OPI). The results indicated that intellectual disposition variables consistently yielded significant differences ( $p < .05$ ) among subgroups. Also several ego-function variables probably related to academic function also revealed significant differences among the subgroups.

Nolan, M. P., and J. J. Fargen, "Personality Differences Between Able Sophomore University Students of 1961 and 1971", in The Journal of Educational Research, Vol. 69, No. 1, p. 11-13.

Based on empirical evidence this longitudinal study tends to confirm differences in attitudes held by students on the manner of perceiving their relationship with the university during the ten year span. While not suggesting shifts in predominating orientations it confirms significantly different expressions within orientations.

Parsons, T., and G. M. Platt, The American University, Cambridge, Mass., Harvard University Press, 1973, xi-463 p.

Using a frankly evolutionary perspective, the authors analyze the recent social history of Western society as providing steadily increasing opportunities for institutionalized individualism. The industrial revolution, the democratic revolution, and most recently, the educational revolution are seen as progressive steps toward greater individual freedoms. Of particular significance is their analysis of the dynamic interplay between intelligence and influence in the university community.

Peterson, R. E., On a Typology of College Students, Princeton, New Jersey, Educational Testing Service, 1965, i-39 p.

The author provides a report on four years of continuous research, development, and deliberation which contributed to the preparation of the College Student Questionnaires based on the theory of the Clark-Trow typology of college students.

Waterman, A. S., and C. K. Waterman, "Cross-Institutional Study of Personality Variables Relating to Satisfaction with College", in American Psychological Association Proceedings, 78th Annual Convention, Chicago, 1970, p. 451-452.

This study assesses the factors which relate to satisfaction with university which are specific to certain institutions and which variables yield generalized relationships across different types of campus environments. Commenting on the CSQ the authors suggest that future use of the instrument might be aided by using all the information contained in the ranking procedure for orientation selection.

APPENDIX 1  
COLLEGE STUDENT QUESTIONNAIRE  
PART II

## Section 1

## EDUCATIONAL AND VOCATIONAL PLANS

1. Sex:
  1. Male
  2. Female
2. Age at last birthday:
  1. 16 or under
  2. 17
  3. 18
  4. 19
  5. 20
  6. 21
  7. 22
  8. 23
  9. 24 or older
3. Class in college:
  1. Freshman
  2. Sophomore
  3. Junior
  4. Senior
  5. Fifth year of a five-year bachelor's program
  6. Graduate
  7. Evening student only
  8. Other (e g , special or temporary student, etc.)
4. Are you:
  1. Single and "unattached"
  2. Going steady
  3. Pinned (or other equivalent)
  4. Engaged
  5. Married, no children
  6. Married, one or two children
  7. Married, three or more children
  8. Widowed
  9. Divorced, separated
5. Are you a full-time or a part-time student this term?
  1. Full-time
  2. About three-quarters time
  3. About one-half time
  4. About one-quarter time or less
6. Where are you living this term?
  1. College dormitory or apartment
  2. Fraternity or sorority house
  3. Cooperative
  4. Boarding house
  5. At home with parents
  6. With relatives or family friends
  7. Private room off campus
  8. Private apartment off campus
  9. Other
7. Are you on academic probation (or other equivalent) this term?
  1. Yes
  2. No
8. At the present time are you:
  1. Officially enrolled in a major field of study (e g , School of Engineering, Department of History, Elementary Education, etc )
  2. Decided on a major, but not yet *officially* enrolled in the field or department
  3. Not officially in a major field and have not yet decided on a major field (**skip to question 22**)

If your answer to question 8 was either alternative 1 or 2, please read the following instructions carefully.

**Major field:** What is your present major field or the field in which you plan to major at some future time? Check only one from the list of subjects and fields given below. For example, if your major is history, mark the box numbered 3 in the column numbered 12. (There should be only one mark in columns 9 through 17 on the answer sheet.)

- 9 Biological science
- 1 Anatomy
  - 2 Bacteriology
  - 3 Biochemistry
  - 4 Botany
  - 5 Genetics
  - 6 Physical anthropology
  - 7 Physiology
  - 8 Zoology
  - 9 Other biological science
- 10 Physical science
- 1 Astronomy
  - 2 Chemistry
  - 3 Geography
  - 4 Geology
  - 5 Geophysics
  - 6 Physics
  - 7 Other physical science
- 11 Mathematics
- 1 Mathematics
  - 2 Statistics
  - 3 Computer science
- 12 Social science
- 1 Cultural anthropology
  - 2 Economics
  - 3 History
  - 4 Political science
  - 5 Psychology
  - 6 Sociology
  - 7 Social welfare
  - 8 Social science field or combination major
  - 9 Other social science
- 13 Humanities and Arts
- 1 Art
  - 2 Drama
  - 3 English, speech
  - 4 Journalism
  - 5 Modern language(s)
  - 6 Music
  - 7 Philosophy
  - 8 Humanities field or combination major
  - 9 Other
- 14 Education (Mark only if education rather than a subject field is your present or future major subject)
- 1 Kindergarten or kindergarten-primary
  - 2 Elementary
  - 3 Secondary
  - 4 Physical education
  - 5 Other
- 15 Business
- 1 General, management
  - 2 Accounting
  - 3 Finance
  - 4 Business law
  - 5 Marketing
  - 6 Office management
  - 7 Data processing
  - 8 Secretarial study
  - 9 Other
- 16 Engineering
- 1 General
  - 2 Aeronautics, astronautics
  - 3 Chemical
  - 4 Civil
  - 5 Electrical
  - 6 Industrial
  - 7 Mechanical
  - 8 Mineral, petroleum
  - 9 Other
- 17 Other profession or vocation
- 1 Agriculture
  - 2 Architecture, landscape arch
  - 3 City, regional planning
  - 4 Criminology, law enforcement
  - 5 Forestry, conservation
  - 6 Home economics, nutrition
  - 7 Librarianship
  - 8 Nursing
  - 9 Other technical or vocational specialty (e.g., drafting, cosmetology, etc.)
- 18 How long ago did you decide on this field? Do not consider specialties within a field (e.g., teaching or engineering specialties)
- 1 In the past six months
  - 2 Between six months and a year ago
  - 3 About a year ago
  - 4 About two years ago
  - 5 Three years ago
  - 6 Four years ago
  - 7 Five to seven years ago
  - 8 More than seven years ago

If your answer to question 8 is either alternative 1 or 2—be sure you have made only one mark on your answer sheet for questions 9 through 17.

- 19 Of the following, who would you say influenced you the most in your choice of major field (regardless of how tentative your choice is)?
- 1 Father
  - 2 Mother
  - 3 Other adult acquaintance(s)
  - 4 Elementary school teacher(s) and/or principal
  - 5 High school teacher(s)
  - 6 High school counselor, dean or principal
  - 7 College teacher(s)
  - 8 College counselor, dean or other non-teacher
  - 9 Close friend(s)
- 20 How do your parents (or guardians) feel about the major field you have chosen or are presently considering?
- 1 They strongly approve
  - 2 They mildly approve
  - 3 They are indifferent
  - 4 They disapprove of my choice somewhat
  - 5 They strongly disapprove
  - 6 They are not aware of my present thinking on this matter
- 21 When you made your present choice of major, from how many possible fields did you choose, i.e., as well as you can remember, how many fields were you interested in when you decided (however tentatively) on your present choice? If you are presently trying to decide on a major, how many different fields are you considering?
- 1 One—the only field I have ever really been interested in
  - 2 Two
  - 3 Three
  - 4 Four or more
- 22 After obtaining your bachelor's degree, do you expect to continue your education in a graduate or a professional school?
- 1 Definitely yes
  - 2 Probably yes
  - 3 Probably not (**skip to question 26**)
  - 4 Definitely not (**skip to question 26**)
  - 5 Haven't thought enough about this matter to say (**skip to question 26**)
- 23 If you are planning to go on to a *professional* school after receiving your bachelor's degree, what kind of school will it be according to your present thinking?
- 1 Architecture
  - 2 Business
  - 3 Education
  - 4 Engineering
  - 5 Law
  - 6 Medical
  - 7 Social work
  - 8 Speech drama, music, or other performing art school
  - 9 Other professional or graduate school
- 24 When did you first consider the question of pursuing graduate or professional training? (Mark only one)
- 1 In the past six months
  - 2 Between six months and a year ago
  - 3 About a year ago
  - 4 About two years ago
  - 5 Three years ago
  - 6 Four years ago
  - 7 Five to seven years ago
  - 8 More than seven years ago
- 25 Do you plan to work for a doctoral degree?
- 1 Yes
  - 2 No, the doctorate is not given in my intended field
  - 3 No, I plan to work only for an MA or MS degree (master of arts or master of science)
  - 4 No, I plan to do only the graduate work necessary for a teaching credential or license
  - 5 No, for reasons other than those listed above
- 26 Have you decided, even tentatively, what occupation or vocation you want to pursue after college?
- 1 Yes
  - 2 No, not even tentatively
- 27 In thinking about your occupational future, do you feel that in the long run you will have a preference for
- 1 An academic life (teaching, research, other scholarly work)
  - 2 A business life
  - 3 A professional life (doctor, lawyer, engineer, etc.)
  - 4 A life of a trained technician or craftsman
  - 5 A life centering upon some aspect of the creative arts
  - 6 A life centering upon a home and a family
  - 7 Other
  - 8 I have not given sufficient thought to this matter to say
- 28 If you could have your own choice in the matter in which kind of firm, organization, or situation would you prefer to work after you finish your schooling? Mark only one of the nine alternatives
- 1 Own business (or farm)
  - 2 Small business firm
  - 3 Medium to large firm or corporation
  - 4 Own professional office (e.g., law office, dental office)
  - 5 An educational institution (e.g., high school, college)
  - 6 A public or private research organization
  - 7 A public or private welfare agency
  - 8 Government service (other than research, welfare, or military)
  - 9 Other firm, organization or situation

- 29 As far as you personally are concerned, which **one** of the requirements below is the most important in *any* job or profession you would consider going into?
- 1 Opportunity to use my special abilities and talents
  - 2 Prospects of an above average income
  - 3 Freedom to be creative and original
  - 4 Opportunity to work with people rather than with things
  - 5 Opportunity to be helpful to others and/or useful to society in general
  - 6 Stable, secure future
  - 7 Compatibility with the kinds of people with whom I would be working
  - 8 Avoidance of work under relatively high pressure
  - 9 Relative freedom from supervision by others
- 30 **For women only:** Fifteen years from now would you like to be
- 1 A housewife with no children
  - 2 A housewife with one or more children
  - 3 An unmarried career woman
  - 4 A married career woman without children
  - 5 A married career woman with children
  - 6 Right now I am not certain
- 31 What has been your main source of financial support during the present academic year? (Mark only one)
- 1 Parents (or one parent)
  - 2 Wife or husband
  - 3 Job
  - 4 Scholarship
  - 5 Loan
  - 6 Previous personal earnings and savings
  - 7 GI Bill, ROTC, or other governmental assistance (other than scholarship or loan)
  - 8 Family trust fund, insurance plan, or other similar arrangement
  - 9 Other
- 32 Are you on a scholarship this term?
- 1 No
- If your answer is yes, if you *are* on a scholarship this term, indicate what kind (If you presently have more than one scholarship, indicate the one that is the largest or most important )
- 2 Made available by this college
  - 3 Made available by the *alumni* of this college
  - 4 Made available by this state
  - 5 Made available by the federal government
  - 6 Made available by the American Legion
  - 7 National Merit
  - 8 General Motors
  - 9 Made available by some other private individual, organization corporation, or industry
- 33 On the average, how many hours per week are you spending in part-time (or full-time) work this term? (Mark only one)
- 1 None
  - 2 Less than 6
  - 3 6 to 10
  - 4 11 to 15
  - 5 16 to 20
  - 6 21 to 25
  - 7 26 to 30
  - 8 More than 30
- 34 How much money, approximately, do you estimate you will spend during the present academic year? Count everything—tuition, board, room, clothing, recreation, transportation to and from home, incidentals, etc (Mark only one)
- 1 Less than \$700
  - 2 \$700 to \$999
  - 3 \$1,000 to \$1,299
  - 4 \$1,300 to \$1,599
  - 5 \$1,600 to \$1,899
  - 6 \$1,900 to \$2,399
  - 7 \$2,400 to \$3,000
  - 8 Over \$3,000

**END OF SECTION I**

## Section II

## COLLEGE ACTIVITIES

- 35 How extensively in the past year have you been involved in the activities of student government organizations (student legislative body, election commission, etc )?
- 1 Not at all
  - 2 One such organization
  - 3 Two such organizations
  - 4 Three or more (or have held one or two highly responsible and time-consuming offices)
- 36 How closely do you generally follow the news about varsity and/or intramural athletics?
- 1 Not at all
  - 2 Not very closely
  - 3 Fairly closely
  - 4 Very closely
- 37 To what extent have you participated in varsity or intramural sports during the past year?
- 1 Not at all
  - 2 One sport
  - 3 Two sports
  - 4 Three or more sports
- 38 To what extent in the past year or so have you participated in organized activities sponsored by churches, synagogues, religious foundations, etc (regular services excluded)?
- 1 Not at all
  - 2 To a small extent
  - 3 Fairly extensively
  - 4 Very extensively
- 39 To what extent in the past year have you participated in the activities of on-campus professional organizations or organizations primarily for students in your field of major academic or career interest (e g , American Society for Public Administration, teacher organizations, various engineer-major societies, etc )?
- 1 Not at all
  - 2 To a small extent
  - 3 Fairly extensively
  - 4 Very extensively
- 40 How extensively in the past year have you been involved in school spirit organizations and activities (e g , rally committee, welcoming committees, student guides, etc )?
- 1 Not at all
  - 2 To a small extent
  - 3 Fairly extensively
  - 4 Very extensively
- 41 What is your estimate of the total number of hours you have devoted to *organized* extracurricular activities in an 'average' week during the past year?
- 1 None
  - 2 Less than five
  - 3 Between five and ten
  - 4 More than ten
- 42 To what extent in the past year have you participated in the organized activities of your living group (e g , dormitory, fraternity, sorority)?
- 1 Do not live in an organized living unit (i e , I live at home, or in a private apartment, etc )
  - 2 To a small extent
  - 3 Fairly extensively
  - 4 Very extensively
- 43 Would you agree that most of the existing rules and regulations on this campus are logical and necessary?
- 1 Strongly disagree
  - 2 Disagree, but not strongly
  - 3 Agree, but not strongly
  - 4 Strongly agree
- 44 How much competitiveness for grades have you found among students in your classes this past year?
- 1 A great deal of competitiveness
  - 2 A fair amount of competitiveness
  - 3 Only a little
  - 4 No competitiveness at all
- 45 In which *one* of the following areas have you received your greatest personal satisfaction at this college during the past year? (Mark only one)
- 1 Coursework in general
  - 2 Coursework in my major field
  - 3 Individual study, research, writing art work etc
  - 4 Organized extracurricular activities student government, athletics, clubs, etc
  - 5 "Bull-sessions" with fellow students
  - 6 Social life, dating parties, etc
  - 7 Close friendships with students
  - 8 Getting acquainted with a wide variety of students
  - 9 Self-discovery, self-insight discovery of new interests, talents, etc

- 46 From the list below, which has been your biggest problem or source of worry at this college during the past year? (Mark only one)
- 1 I have had *no* major problems
  - 2 *Finances*
  - 3 *Handling the content of my courses*
  - 4 *Meeting members of the opposite sex*
  - 5 *Relations with one or more particular members of the opposite sex*
  - 6 *Deciding on a major field or specialty within a field*
  - 7 *Some aspect of parent and/or family relations*
  - 8 *Trying to "find myself in the sense of personal meaning and identity, where I am headed, what I am seeking in life, etc*
  - 9 *Other problem not mentioned above*
- 47 Are you a member or a pledge of a social fraternity or sorority (or other equivalent house or club)?
- 1 There are none on this campus
  - 2 No, but they exist on this campus, and I *am* interested in joining one
  - 3 No, and although they exist on this campus, I am *not* interested in joining
  - 4 I was a member, but I am no longer a member
  - 5 I am currently a pledge
  - 6 Yes, I am currently an *active* member
  - 7 Yes, but I am now *inactive*
- 48 Do you have one or more roommates, or do you live alone?
- 1 Live alone
  - 2 One student roommate
  - 3 Two or more student roommates
  - 4 Live with spouse, parents, or other non-students
  - 5 Other arrangement
- 49 Have you changed your plans about major field of study since you entered college (all colleges you have attended)? Do not consider changes in specialty within a given field
- 1 No, because I have not yet made serious plans about a major field of study
  - 2 No, my original plans about major field of study have *not* changed
  - 3 Yes, I have changed plans once
  - 4 I have changed plans twice
  - 5 Three times
  - 6 I have changed plans more than three times
- 50 Do you agree or disagree that this college or university exercises *too much* authority over student life outside the classroom?
- 1 Strongly agree
  - 2 Agree but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 51 What is your opinion about the necessity for organized extracurricular activities on any college campus?
- 1 For the most part they are irrelevant and distracting
  - 2 No opinion
  - 3 They are reasonably necessary
  - 4 They are very necessary
- 52 On the basis of either direct experience or conversations with student friends, what is your impression of the *quality* of help on problems of a personal nature presently available from personnel deans (dean of students, deans of men, deans of women) at this college?
- 1 They are no help
  - 2 Not usually very helpful
  - 3 More often helpful than not
  - 4 Consistently very helpful
- 53 Again from either direct experience or hearsay, what is your general impression of the *courtesy* and *efficiency* with which student problems are taken care of by various administrative or personnel divisions on this campus (e.g., admissions, registrar, loans, housing, etc.)?
- 1 Impression mostly negative, many improvements definitely needed
  - 2 Impression somewhat negative, a number of improvements could be made
  - 3 Impression reasonably positive
  - 4 Impression very positive student problems handled very courteously and efficiently
- 54 How interested are you in what the student government does on this campus?
- 1 Not particularly interested
  - 2 Somewhat interested
  - 3 Quite interested
  4. Very much interested
- 55 What proportion of the faculty members who have taught you during the past year would you say are superior teachers?
- 1 Very few
  - 2 Less than half
  - 3 More than half
  - 4 Almost all
- 56 In general, are you enjoying your studies in college this term as much as you had expected to?
- 1 No, I am definitely enjoying them less than I had expected
  - 2 No, but I am only mildly disappointed
  - 3 My expectations for this term are reasonably well satisfied
  - 4 I am enjoying my studies this term much more than I had expected

- 57 How do you feel about the assistance (or lack of assistance) in thinking through your educational and vocational plans which you have received at this college (from teachers, counselors, deans, etc )?
- 1 Very dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied
- 58 So far this year how successful would you say your instructors at this college have been in challenging you to produce to the limit of your intellectual and creative capacities?
- 1 They have been wholly unsuccessful
  - 2 Several have been somewhat successful
  - 3 Several have been quite successful
  - 4 Almost all have succeeded in continuously challenging my intellectual capacities
- 59 Would you say that individual students on this campus have a voice in formulating the regulations which affect them?
- 1 No, they have no voice
  - 2 They have a rather weak voice
  - 3 A moderately strong voice
  - 4 Yes, a very strong voice
- 60 Do you find yourself bored in class these days?
- 1 Almost all of the time
  - 2 Fairly often
  - 3 Occasionally
  - 4 Almost never
- 61 How many faculty members at this college have provided personal evaluations of your work which made you think that you might become a creative or productive worker in their fields?
- 1 None
  - 2 One
  - 3 Two or three
  - 4 More than three
- 62 What is your approximate over-all (cumulative) grade average since you have been in college? Make a letter grade estimate from whatever grading system is used at your college (Mark only one)
- 1 D+ or lower
  - 2 C-
  - 3 C
  - 4 C+
  - 5 B-
  - 6 B
  - 7 B+
  - 8 A-
  - 9 A
- 63 What was your approximate grade average *last term*? Use the alternatives in the preceding question (Mark only one)
- 64 In your experience (direct or hearsay) so far at this college, how satisfied have you been with the fairness and impartiality by which rules regulating student personal conduct have been enforced?
- 1 Greatly dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Reasonably satisfied
  - 4 Very satisfied
- 65 Would you agree that the college administration here generally treats students more like children than like adults?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 66 Of the instructors you have had this past year about what proportion would you say came to know you by name?
- 1 Almost none
  - 2 Less than half
  - 3 More than half
  - 4 Almost all
- 67 What proportion of the faculty members you have observed at this college would you say are genuinely interested in students and their problems?
- 1 Very few
  - 2 Less than half
  - 3 Over half
  - 4 Almost all
- 68 What is your opinion about the prevailing regulations governing on-campus appearances and speeches by controversial persons?
- 1 The prevailing regulations are appropriate
  - 2 The prevailing regulations are inappropriate
  - 3 I know nothing about any such regulations
- 69 During the present term would you say that you have a close, personal relationship with any of the faculty at this college?
- 1 No, with none
  - 2 Yes, with one
  - 3 Yes, with two
  - 4 Yes, with more than two faculty members

- 70 Have you had the feeling in the past year or so that some of your instructors have judged (e.g., graded) you more on the basis of extraneous or irrelevant factors than on the basis of the quality of your work?
- 1 Quite often
  - 2 Once in a while
  - 3 Very rarely
  - 4 Never
- 71 To what extent would you say this institution is under pressure from outside sources to offer a kind of educational experience which is *contrary* to the kind of educational experience you are seeking?
- 1 There are very strong pressures of which I disapprove
  - 2 There are moderate pressures of which I disapprove
  - 3 There are pressures, but they are weak
  - 4 I am aware of no such outside influence
- 72 What has been your general impression of the tolerance for student argument and disagreement on the part of the instructors you have come in contact with this year?
- 1 Some of them have definitely penalized student disagreement
  - 2 Some of them have not particularly welcomed disagreement
  - 3 Most of them have accepted student disagreement
  - 4 Most of them have definitely valued and encouraged reasonable student disagreement
- 73 During the past academic year, how *competent*, in your opinion, have you found your instructors to be in their own special fields?
- 1 I felt that several were not sufficiently competent
  - 2 I felt that two or three were not sufficiently competent
  - 3 One was not sufficiently competent
  - 4 All were competent in my judgment
- 74 On the whole, how satisfied are you with the opportunity you have had in the past year to meet with your instructors privately about course work and your own progress?
- 1 Mostly dissatisfied
  - 2 Fairly satisfied
  - 3 Quite satisfied
  - 4 Extremely satisfied
- 75 To what extent would you say this college recognizes and is interested in you as an individual person?
- 1 I feel that at this institution I am little more than a number on an IBM card
  - 2 Very seldom am I aware of interest in me as an individual
  - 3 Frequently I *am* aware of such an interest
  - 4 Many persons and organizations on this campus continually express interest in me as an individual
- 76 At the present time are there any faculty members at this college to whom you feel particularly responsible and whom you believe feel particularly responsible for you?
- 1 No, there aren't any
  - 2 Yes, there is one
  - 3 There are two
  - 4 There are more than two
- 77 Speaking generally how efficiently have you performed during exams in the past year?
- 1 Quite uneasy, considerable loss of efficiency
  - 2 Somewhat uneasy, some loss of efficiency
  - 3 Generally have worked fairly efficiently
  - 4 Generally have worked very efficiently
- 78 Compared with most of your classmates at this college, how much would you say you have studied during the present term?
- 1 I have studied much less than most of my classmates this term
  - 2 I have studied slightly less than most of them
  - 3 I have studied slightly more than most of them
  - 4 I have studied much more than most of my classmates this term
- 79 Do you make notes while reading textbooks?
- 1 No, almost never
  - 2 Once in a while (e.g., depending on the subject)
  - 3 I generally do, but I have no particular note-making system
  - 4 I almost always make note while reading, and I have a systematic method for doing so
- 80 In reading textbooks (e.g., in the social sciences or humanities), how would you describe your reading rate?
- 1 Very slow
  - 2 Fairly slow
  - 3 Fairly fast
  - 4 Very fast
- 81 Regardless of whether you live on or off campus, how successful have you been this term in finding a place to study which is comfortable, well lit, heated and ventilated, free from distractions, and which you can think of as "your own"?
- 1 Completely unsuccessful
  - 2 Unsuccessful for the most part
  - 3 Successful in several of the above mentioned respects
  - 4 Completely successful

- 82 Do you ordinarily find writing papers a difficult task, or do you have relatively little difficulty in getting your ideas down on paper?
- 1 I find writing papers a very difficult task
  - 2 I frequently experience some difficulty in writing
  - 3 Usually I do not experience great difficulty
  - 4 I have little or no difficulty in expressing myself in writing
- 83 How well would you say that you understand the various reference facilities of the main library on this campus and how these library services may be potentially useful to you as a student?
- 1 My general understanding of these matters is rather poor
  - 2 My understanding of these matters is incomplete in a number of respects
  - 3 For my purposes, I know about what I need to know about the library here
  - 4 I would say that my knowledge of the library here and its potential use to me is quite complete
- 84 How do you feel about the policies on this campus concerning such things as class attendance, number of "cuts," arriving in class on time, etc.?
- 1 Entirely inappropriate
  - 2 Somewhat inappropriate
  - 3 Appropriate for the most part
  - 4 Entirely appropriate
- 85 In terms of your own personal satisfaction, how much importance do you attach to getting good grades?
- 1 None or not much
  - 2 A moderate amount
  - 3 Quite a bit
  - 4 A great deal
- 86 All things considered, how satisfied are you with the grades you have received during the past academic year?
- 1 Very dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied
- 87 Would you say that the grades you received at the end of the last term
- 1 Grossly under-represented your ability
  - 2 Slightly under-represented your ability
  - 3 Fairly represented your ability
  - 4 Slightly over-represented your ability
- 88 In recent weeks have you found yourself unintentionally napping or daydreaming when you intended to be studying?
- 1 Frequently
  - 2 Occasionally
  - 3 Infrequently
  - 4 Never
- 89 When going into examinations this past year, how often have you felt adequately prepared?
- 1 I have almost always felt *inadequately* prepared
  - 2 More often than not I have not felt prepared
  - 3 More often than not I *have* felt prepared
  - 4 I have almost always felt adequately prepared
- 90 Have you generally kept up to date on your course assignments this past year?
- 1 I have usually been behind on my assignments
  - 2 I have frequently found myself behind on assignments
  - 3 I have usually kept my assignments up to date
  - 4 I have almost always kept my assignments up to date
- 91 Do you use bibliographical note cards (or some similar technique) while preparing papers which require library research?
- 1 I'm not certain that I know what bibliographical note cards are
  - 2 I know what they are, but I don't use them
  - 3 I use them once in a while
  - 4 I consistently use them
- 92 While studying are you easily distracted by other people working nearby, by conversation, by street noises, etc.?
1. Yes, easily distracted
  - 2 Somewhat distractible
  - 3 No, seldom bothered
  - 4 Can concentrate without difficulty almost any place
- 93 Have you kept some sort of study schedule or time budget this year?
- 1 No, have tended to work when the pressure was on
  - 2 No, but have tried to follow some kind of study routine
  - 3 Have kept a schedule, but have not been very good about following it
  - 4 Have kept a schedule and have stuck to it fairly well

- 94 Which of the following categories best describes most of the outside reading (i.e., not required) you have done during the past year? (Mark only one)
- 1 Science, mathematics, and engineering—nonfiction
  - 2 Science fiction
  - 3 Mystery, westerns, adventure fiction, etc
  - 4 History, economics, anthropology, current political and social issues, social criticism, etc
  - 5 Psychology
  - 6 Novels, short stories, drama, poetry, literary criticism, etc
  - 7 Sports, leisure, "how to do," etc —nonfiction
  - 8 Other
  - 9 Did little or no outside reading
- 95 On the average, how often during the past academic year have you dated? Count only prearranged meetings with the opposite sex
- 1 Not at all
  - 2 Less than once a month
  - 3 About once a month
  - 4 About twice a month
  - 5 About once a week
  - 6 About twice a week
  - 7 More than twice a week
- 96 In an average week during the past academic year, about how many hours have you devoted to automotive activities (e.g., repairs, washing, racing, etc., exclusive of a regular job working on cars)?
- 1 None, or less than one hour
  - 2 One or two hours
  - 3 Three or four hours
  - 4 Five or more hours
- 97 In an average week during the past academic year, about how many hours have you spent watching television?
- 1 None, or less than one hour
  - 2 One or two hours
  - 3 Three or four hours
  - 4 Five or more hours
- 98 In an average week during the past academic year, about how many hours have you spent in informal discussions about serious topics with other students or acquaintances (i.e., "bull sessions")?
- 1 None, or less than one hour
  - 2 One or two hours
  - 3 Three or four hours
  - 4 Five or more hours
- 99 In an average week during the past academic year, about how many hours have you devoted to reading or studying materials that are related to courses you are taking, but which are not a part of course requirements?
- 1 None, or less than one hour
  - 2 One or two hours
  - 3 Three or four hours
  - 4 Five or more hours
- 100 In an average week during the past academic year, how many hours have you spent playing cards (e.g., bridge, etc.)?
- 1 None, or less than an hour
  - 2 One or two hours
  - 3 Three or four hours
  - 4 Five or more hours
- 101 How much time do you spend altogether traveling (including walking) to and from the college each day?
- 1 I live on campus
  - 2 Less than 15 minutes
  - 3 15 to 29 minutes
  - 4 30 to 44 minutes
  - 5 45 minutes to an hour
  - 6 More than an hour
- 102 This question is to be answered *only* by students who are, or who have been, members of social fraternities or sororities (or equivalent house or club). If you had it to do over again, and aside from the cost, would you
- 1 Join the same fraternity or sorority
  - 2 Join a different one
  - 3 Not join at all
  - 4 Other
- 103 Regardless of whether or not you are a member of a social fraternity or sorority (or other equivalent), how do you feel about social fraternities in general?
- 1 Strongly approve
  - 2 Moderately approve
  - 3 Indifferent
  - 4 Moderately disapprove
  - 5 Strongly disapprove
- 104 If you had an hour of spare time and your choice of the following magazines (none of which you had read), which *one* would you be likely to pick up first?
- 1 *Harper's*
  - 2 *Life*
  - 3 *Mademoiselle*
  - 4 *Readers' Digest*
  - 5 *Saturday Review*
  - 6 *Scientific American*
  - 7 *Sports Illustrated*
  - 8 *The New Republic*
  - 9 *Time*

- 105 Would you agree that there are *too many* students on this campus who are so wrapped up in their intellectual development that they are close to failures as social persons?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 106 Would you agree that there are *too many* students on this campus who go too far with their extremist politics?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 107 Speaking generally, how satisfied are you with the degree of academic honesty and integrity characteristic of most students at this college, e g , as evidenced by the amount of cheating on examinations, taking credit for material written by someone else, etc ?
- 1 Very dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied
- 108 How satisfied are you with the amount of competitiveness for grades you have found among your classmates since you have been at this college?
- 1 Very dissatisfied (i e , they are either much too competitive or much too noncompetitive)
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied (i e , they are as competitive as I would like them to be)
- 109 Speaking generally, how satisfied are you with the degree of concern about political, economic, and social issues shown by most students at this college?
- 1 Very dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied
- 110 How do you think your political views compare with those of most of the faculty here?
- 1 Mine are more conservative
  - 2 Mine are about the same
  - 3 Mine are more liberal
  - 4 I have no idea
- 111 Would you agree that most of the undergraduates on this campus would just as soon *avoid* anything controversial?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 112 How do you feel about the proportions of men and women students at this college? Or, if the student body here is all men or all women, how do you feel about the absence of the opposite sex?
- 1 Very dissatisfied (i e , there are not enough, or there are too many of the opposite sex)
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied (i e , the ratio of boys to girls on this campus is just right, or the absence of the opposite sex here suits me fine)
- 113 Would you agree that there are *too many* students on this campus who carry their nonconformity too far, e g , the clothes, beard, speech patterns, etc ?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 114 Speaking generally, how satisfied are you with the willingness of most students on this campus to associate with other students whose racial, ethnic, or social backgrounds are different from their own?
- 1 Very dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied
- 115 Speaking generally, would you agree that *too many* students on this campus are overly susceptible to popular fads and fashions, such as in dress, hair styles, tastes in music, etc ?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 116 Generally speaking, how satisfied are you with the general level of appreciation of the fine arts which prevails among students on this campus?
- 1 Very dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied

- 117 Would you agree that *too many* students on this campus use personality, "pull," "apple polishing," or bluff to get through courses?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree

- 118 Would you agree that *too many* of the students at this college are more concerned about their social lives—dating, parties, etc—than they are about their academic responsibilities?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree

The next 12 questions are to be answered only by students who are officially enrolled in a specific department, school, college, or program such as Department of History, School of Business Administration, or College of Chemistry

Students in schools of education or technical schools should answer these questions in terms of their chosen specialty, e.g., elementary education or mechanical engineering, if formally enrolled in a specific division or curriculum

Check your answer to question 8 and, if you have marked either alternative 2 or 3, **do not** answer questions 119 through 130

- 119 Would you say there is anything approaching a "group spirit" or a feeling of common identity among the students in your department?
- 1 No, practically none
  - 2 Yes, but it is rather weak
  - 3 Yes, to a moderate degree
  - 4 Yes, it is quite strong
- 120 Would you agree that the department or division in which you are doing your major work tends to reward conformity and punish individualism?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 121 What is your general impression of the intellectual ability of most of the students in your major department or division?
- 1 Most of them are below the average at this college
  - 2 Most of them are near the average at this college
  - 3 Most of them are above the average at this college
  - 4 The students in my field are among the brightest on this campus

- 122 Would you agree that the division in which you are doing your major work has too many purely formal requirements which are more in the nature of initiation rituals than of genuine learning incentives?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree

- 123 How certain are you that your present major field is the one you really want?
- 1 Very uncertain
  - 2 Somewhat uncertain
  - 3 Fairly certain
  - 4 Very certain

- 124 In your major department, how satisfied are you with your present academic standing insofar as you can estimate it?
- 1 Very dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied

- 125 So far this term how interesting have you found the course work in your major field?
- 1 Rather dull for the most part
  - 2 So-so
  - 3 Fairly interesting
  - 4 Very interesting

- 126 In relation to the kind of education you are seeking, how satisfied are you so far with the various competencies and specialties of the faculty in your present major field?
- 1 Very dissatisfied
  - 2 Somewhat dissatisfied
  - 3 Fairly satisfied
  - 4 Very satisfied

- 127 In relation to the kind of education you are seeking, how adequate would you say is the choice of courses and the availability of suitable facilities (e.g., laboratory) in your present major department?
- 1 Very inadequate
  - 2 Somewhat inadequate
  - 3 Fairly adequate
  - 4 Very adequate

- 128 Would you say that the major department or specialty you are in has prestige among this student body as a whole?
- 1 It does not have the prestige that most other majors or specialties have
  - 2 Its prestige is neither particularly high nor particularly low
  - 3 Its prestige is fairly high
  - 4 It has a great deal of prestige on this campus

- 129 How many of your three best friends at this college have the same major that you have?
- 1 None
  - 2 One
  - 3 Two
  - 4 Three
- 130 How much influence did your occupational (career) plans have on the selection of your major field?
- 1 Major determined entirely by occupational plans
  - 2 Major strongly influenced by occupational plans
  - 3 Major somewhat influenced by occupational plans
  - 4 Major not influenced by occupational plans

On every college or university campus students hold a variety of attitudes about their own purposes and goals while at college. Such an attitude might be thought of as a personal philosophy of higher education. The following paragraphs are descriptive statements of four such "personal philosophies" which there is reason to believe are quite prevalent on American college campuses. As you read the four statements, attempt to determine how close each comes to *your own* philosophy of higher education.

**PHILOSOPHY A** This philosophy emphasizes education essentially as preparation for an occupational future. Social or purely intellectual phases of campus life are relatively less important, although certainly not ignored. Concern with extracurricular activities and college traditions is relatively small. Persons holding this philosophy are usually quite committed to particular fields of study and are in college primarily to obtain training for careers in their chosen fields.

**PHILOSOPHY B** This philosophy, while it does not ignore career preparation, assigns greatest importance to scholarly pursuit of knowledge and understanding wherever the pursuit may lead. This philosophy entails serious involvement in course work or independent study *beyond* the *minimum required*. Social life and organized extracurricular activities are relatively unimportant. Thus, while other aspects of college life are not to be forsaken, this philosophy attaches greatest importance to interest in ideas, pursuit of knowledge, and cultivation of the intellect.

**PHILOSOPHY C** This philosophy holds that besides occupational training and/or scholarly endeavor an important part of college life exists outside the classroom, laboratory, and library. Extracurricular activities, living-group functions, athletics, social life, rewarding friendships, and loyalty to college traditions are important elements in one's college experience and necessary to the cultivation of the well-rounded person. Thus, while not excluding academic activities, this philosophy emphasizes the importance of the extracurricular side of college life.

**PHILOSOPHY D** This is a philosophy held by the student who either consciously rejects commonly held value orientations in favor of his own, or who has not really decided what is to be valued and is in a sense searching for meaning in life. There is often deep involvement with ideas and art forms both in the classroom and in sources (often highly original and individualistic) in the wider society. There is little interest in business or professional careers, in fact, there may be a definite rejection of this kind of aspiration. Many facets of the college—organized extracurricular activities, athletics, traditions, the college administration—are ignored or viewed with disdain. In short, this philosophy may emphasize individualistic interests and styles, concern for personal identity, and often contempt for many aspects of organized society.

The following four questions ask you to rank these four statements according to *the accuracy with which each portrays your own point of view*. Be sure to assign a different rank to each "philosophy."

131 Philosophy A

- 1 Most accurate (i.e., of the four statements, this one is the *best* description of my point of view)
- 2 Second most accurate
- 3 Third most accurate
- 4 Least accurate

132 Philosophy B

- 1 Most accurate (i.e., of the four statements, this one is the *best* description of my point of view)
- 2 Second most accurate
- 3 Third most accurate
- 4 Least accurate

133 Philosophy C

- 1 Most accurate (i.e., of the four statements, this one is the *best* description of my point of view)
- 2 Second most accurate
- 3 Third most accurate
- 4 Least accurate

134 Philosophy D

- 1 Most accurate (i.e., of the four statements, this one is the *best* description of my point of view)
- 2 Second most accurate
- 3 Third most accurate
- 4 Least accurate

**END OF SECTION II**

## Section III

## ATTITUDES

- 135 What is your religious preference?
- 1 Protestant
  - 2 Catholic
  - 3 Jewish, orthodox
  - 4 Jewish, conservative
  - 5 Jewish, reform
  - 6 Other religion
  - 7 No formal religion
- } skip to question 137
- 136 What is your Protestant denominational affiliation?
- 1 Baptist
  - 2 Christian Church (Disciples of Christ), Church of Christ
  - 3 Episcopal
  - 4 Lutheran
  - 5 Methodist
  - 6 Presbyterian
  - 7 Unitarian or Universalist
  - 8 United Church of Christ (including Congregational)
  - 9 Other denomination
- 137 How often have you attended religious services in the past year or so?
- 1 Not at all
  - 2 Only on important religious holidays
  - 3 About once a month
  - 4 About twice a month
  - 5 About once a week
  - 6 More than once a week
- 138 Do you feel that you now have an adequate religious faith or personal philosophy which serves as a guide for your personal conduct?
- 1 Yes
  - 2 No
  - 3 Undecided, don't know
- 139 If you were to discover a student at this college *cheating*, what would be your probable reaction?
- 1 I would not be disturbed (and would do nothing)
  - 2 I would be disturbed but would do nothing
  - 3 I would be disturbed, but whether I took any action would depend on who the student was
  - 4 I would express my concern only to the student I discovered cheating
  - 5 I would speak to the appropriate teacher or other authority without naming names
  - 6 I would report the student to the appropriate teacher or other authority
- 140 Which of the following statements comes closer to your views?
- 1 There are bodies of knowledge to be learned, and college faculty are more competent than the student to direct the student's course of study through required courses, prerequisites, etc
  - 2 College students should be given great freedom in choosing their subjects of study and in choosing their own areas of interest within their subjects
- 141 Would you prefer to have your academic work organized to allow
- 1 A predominance of class work, class assignments, regular examinations, etc
  - 2 A predominance of independent reading, writing, and research
- 142 In the average humanities or social science course, do you generally prefer
- 1 Objective examinations (e.g., true-false, multiple choice)
  - 2 Essay examinations
- 143 If class size permitted, which type of instruction would you prefer?
- 1 All or mostly lectures
  - 2 All or mostly discussion
- 144 Do you generally like or dislike assignments requiring original research?
- 1 Dislike
  - 2 Like
- 145 Generally speaking, how do you feel about competing with other people, especially when the stakes are high?
- 1 I tend to dislike competitive situations
  - 2 I feel neutral about competitive situations
  - 3 I tend to enjoy competitive situations

146. Which of the following statements comes closest to your opinion regarding the role of the adult woman in American society? (This question should be answered by both men and women students)

1. Her activities should be generally confined to the home and family
2. She should divide her responsibilities between home and outside work, *providing she has no children*
3. She should divide her responsibilities between home and outside work *only after her children are of school age*
4. She should be allowed to choose to be entirely free of domestic responsibilities in order to work on an equal footing with men at all occupational levels

147 How many children would you eventually like to have? (This question is to be answered by both men and women)

1. None
2. One
3. Two
4. Three
5. Four
6. Five or more

The following group of questions refers to your parental family, not, if you are married, to your own family "Parents" may mean either natural parents or stepparents

148 During the past year, how often have you seen your parents?

1. Every day or almost every day
2. About once a week
3. During holidays and/or occasional weekends
4. Only during summer vacation or not at all

149 Could you become so absorbed in some kind of activity that you would lose interest in your family?

1. Definitely not, impossible
2. Extremely unlikely
3. Some probability
4. Quite or very possible

150 Would you agree that a person should generally consider the needs of his parental family as a whole more important than his own needs?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

151 Would you agree that members of your family should hold fairly similar religious beliefs?

1. Strongly agree
2. Agree, but not strongly
3. Disagree, but not strongly
4. Strongly disagree

152 Would you describe your family as

1. Very closely united
2. Fairly closely united
3. Not particularly united
4. Very disunited

153 Many parents take a great deal of interest in what their sons and daughters do. How important is it to you that you satisfy your parents' wishes?

1. Very important
2. Fairly important
3. Moderately important
4. Not very important

154 Do you feel that in the last year or so you have been growing closer to your family or further away from it?

1. Much closer
2. Slightly closer
3. Slightly away
4. Much further away

155 Do you consult with your parents when you are faced with important personal decisions?

1. I almost always do
2. I usually do
3. I occasionally do
4. I rarely do

156 Do you feel that you *should* consult with your parents on important personal matters?

1. I feel that I definitely should
2. I feel that I probably should
3. I have no particular feelings one way or the other
4. Generally speaking, no

157 How dependent on or independent of your parents do you consider yourself to be at the present time?

1. Quite dependent
2. Somewhat dependent
3. Fairly independent
4. Very independent

- 158 As you think back over this past academic year, how much of your non-class time *per week* (including the weekend) would you say you spent in casual conversations with friends or acquaintances?
- 1 Sixteen or more hours
  - 2 Eleven to fifteen hours
  - 3 Six to ten hours
  - 4 One to five hours
- 159 Other than on dates or with your spouse, do you generally pursue leisure time and recreational activities (movies, exhibits, hobbies, etc ) with a group of friends or by yourself or with one friend?
- 1 Almost always with a group of friends
  - 2 Usually with a group of friends
  - 3 Usually by myself or with one friend
  - 4 Almost always by myself or with one friend
- 160 With regard to the arts, would you say that the preferences and tastes of most of your acquaintances are similar to your own tastes?
- 1 Yes, their tastes in the arts are very similar to my own
  - 2 Their tastes are fairly similar to mine
  - 3 Mine are different in a number of respects
  - 4 No, their preferences tend to be quite different from mine
- 161 As a description of yourself, how accurate is the following statement, "I am one in a group of close friends, and we do most things together"?
- 1 Very accurate
  - 2 Fairly accurate
  - 3 Not particularly accurate
  - 4 Definitely inaccurate
- 162 How often do you maintain a point of view despite other students losing patience with you?
- 1 Rarely
  - 2 Occasionally
  - 3 Quite often
  - 4 Very often
- 163 Would you say that you often seem to ignore the opinions of other students when trying to accomplish something that is important to you?
- 1 No, never
  - 2 Rarely
  - 3 Occasionally
  - 4 Yes, quite frequently
- 164 Do you generally like to do things in your own way and without regard for what other students around you may think?
- 1 Definitely no
  - 2 No, not usually
  - 3 Yes, most of the time
  - 4 Definitely yes
- 165 Do you generally consult with close friends while you are in the process of making some fairly important decision?
- 1 Almost always
  - 2 Usually I do
  - 3 Seldom
  - 4 Almost never
- 166 Could you become so absorbed in some kind of activity that you would lose interest in what your good friends were doing?
- 1 Definitely not, impossible
  - 2 Extremely unlikely
  - 3 Some probability
  - 4 Quite or very possible
- 167 Before you do something, do you try to consider how your friends will react to it?
- 1 Yes, I always do
  - 2 Yes, I usually do
  - 3 Sometimes I do
  - 4 No, usually not
- 168 Do you think that at some time in the future you would like to join the Peace Corps or VISTA?
- 1 Definitely not
  - 2 Probably not
  - 3 Probably yes
  - 4 Definitely yes
- 169 How informed do you presently consider yourself in regard to national and international political affairs?
- 1 Wholly uninformed
  - 2 Not very well informed
  - 3 Fairly well informed
  - 4 Very well informed
- 170 How interested are you in political issues and political affairs?
- 1 I am disinterested in politics
  - 2 I am only occasionally interested in political issues and affairs
  - 3 I am quite interested in political affairs, but I am not, nor do I plan to be, active in politics myself
  - 4 I am very interested, and I am, or would like to be, actively involved in political issues and affairs

171. Do you consider your political point of view to be generally:
1. Quite conservative
  2. Fairly conservative
  3. Fairly liberal
  4. Very liberal
172. Do you become indignant when you read that a high government official has taken money or gifts in return for favors?
1. No
  2. Cannot say
  3. Mildly indignant
  4. Very indignant
173. Would you agree that the government should have the right to prohibit certain groups of persons who disagree with our form of government from holding peaceable public meetings?
1. Strongly agree
  2. Agree, but not strongly
  3. Disagree, but not strongly
  4. Strongly disagree
174. How strongly do you feel that something must be done soon about the rising tide of juvenile crime in this country?
1. I do not feel that the "problem" is as serious as the question makes it out to be
  2. I have not given this matter sufficient thought to say
  3. Fairly strongly
  4. Very strongly
175. Are you concerned about the extent to which economic poverty still exists in the United States (e.g., the fact that in 1966 about one-fifth of American families earned under \$4000 a year)?
1. In my opinion this is not a matter for concern
  2. I have not given this matter sufficient thought to say
  3. Mildly concerned
  4. Highly concerned
176. Do you agree that police are unduly hampered in their efforts to apprehend criminals when they have to have a warrant to search a house?
1. Strongly agree
  2. Agree, but not strongly
  3. Disagree, but not strongly
  4. Strongly disagree
177. Are you concerned that persons who are not white-Anglo-Saxon-Protestant seem to have somewhat less opportunity in America?
1. In my opinion this is a phony complaint or for other reason not a matter for concern
  2. I have not given this matter sufficient thought to say
  3. Mildly concerned
  4. Highly concerned
178. Are you disturbed about what appears to be a growing preoccupation with money and material possessions throughout this country accompanied by a declining concern for national aims, spiritual values, and other moral considerations?
1. No, or the assumption made in this question is mistaken
  2. Cannot say
  3. Mildly disturbed
  4. Very much disturbed
179. Do you agree or disagree with the belief that capital punishment (the death penalty) should be abolished?
1. Strongly disagree
  2. Disagree, but not strongly
  3. Agree, but not strongly
  4. Strongly agree
180. Would you (or do you) enjoy participating in, or listening to, a discussion of philosophies of history?
1. I definitely would not
  2. I probably would not
  3. I probably would
  4. I definitely would
181. Are you concerned about the many elderly people in the U.S. who are left alone to live "on crumbs of welfare measures"?
1. In my opinion this is a phony problem or for other reason not a matter for concern
  2. I have not given this matter sufficient thought to say
  3. Mildly concerned
  4. Highly concerned
182. Would you agree or disagree that the government should do more than it is presently doing to see that everyone gets adequate medical care?
1. Strongly disagree
  2. Disagree, but not strongly
  3. Agree, but not strongly
  4. Strongly agree

- 183 How frequently do you discuss foreign films with your acquaintances?
- 1 Never
  - 2 Rarely
  - 3 Occasionally
  - 4 Quite frequently
- 184 How interested are you in modern art?
- 1 No interest whatsoever
  - 2 Slightly interested
  - 3 Quite interested
  - 4 Very much interested
- 185 Would you agree or disagree that legislative committees should *not* investigate the political beliefs of college or university faculty members?
- 1 Strongly disagree
  - 2 Disagree, but not strongly
  - 3 Agree, but not strongly
  - 4 Strongly agree
- 186 Would you be upset at the sight of children looking at obscene printed material at a magazine stand (or elsewhere)?
- 1 No
  - 2 Cannot say
  - 3 Mildly upset
  - 4 Very much upset
- 187 How many of the following have you read James Joyce, Leo Tolstoy, Thomas Mann?
- 1 None
  - 2 One
  - 3 Two
  - 4 Three
- 188 Do you agree or disagree that labor unions these days are doing the country more harm than good?
- 1 Strongly agree (they are doing the country more harm than good)
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 189 Do you feel that the decision to drop an atomic bomb on the city of Hiroshima was right or wrong?
- 1 Strongly feel that the decision was right
  - 2 I think that the decision was right, but my feelings on this matter are not strong
  - 3 I think that the decision was wrong, but my feelings are not strong
  - 4 Strongly feel that the decision was wrong
- 190 How much pleasure do you usually experience when listening to good live performances of classical music?
- 1 None or very little
  - 2 A moderate amount
  - 3 Quite a bit
  - 4 A great deal
- 191 Are you disturbed when you hear of confessions of extensive rigging of bids or rigging or "administering" of prices in some essential industry in the U S ?
- 1 I am not disturbed by these activities
  - 2 Don't really understand what is involved
  - 3 Mildly disturbed
  - 4 Greatly disturbed
- 192 Would you agree or disagree that conscientious objectors should be excused from military service in wartime?
- 1 Strongly disagree
  - 2 Disagree, but not strongly
  - 3 Agree, but not strongly
  - 4 Strongly agree
- 193 How would you feel (or have you felt) when first hearing about a lynching somewhere in the United States (which happened as recently as 1959—to a man named Parker)?
- 1 Indifferent, or my reaction would depend on who was lynched
  - 2 I'm not certain
  - 3 Mildly shocked
  - 4 Highly outraged
- 194 Do you agree or disagree with the contention that the welfare state tends to destroy individual initiative?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree, but not strongly
  - 4 Strongly disagree
- 195 Do you enjoy *reading* poetry?
- 1 No, I dislike poetry
  - 2 Not very much
  - 3 Yes, to some extent
  - 4 Yes, very much
- 196 How much would you say you know about the history of painting?
- 1 Almost nothing
  - 2 A small amount
  - 3 A moderate amount
  - 4 A good deal

- 197 How many times during the past year or so have you gone to an evening lecture on some serious topic (other than required lectures)?
- 1 Not at all
  - 2 Once or twice
  - 3 Three or four times
  - 4 Five or more times
- 198 How many books do you yourself own (not including textbooks for your present courses, but counting serious paperbacks)?
- 1 Less than ten
  - 2 Ten to 30
  - 3 31 to 75
  - 4 More than 75
- 199 Can you say that in the past year or so you have reacted to some work of art (e.g., a painting, sculpture, musical performance) with deep and intense personal feeling?
- 1 No
  - 2 I don't think so
  - 3 Yes, several times
  - 4 Yes, quite a number of times
- 200 Do you agree or disagree with the belief that individual liberties and justice under law are *not* possible in socialist countries?
- 1 Strongly agree
  - 2 Agree, but not strongly
  - 3 Disagree but not strongly
  - 4 Strongly disagree

Please look over your answer sheet to be certain that

- only one box has been blackened for each question
- there are no stray marks between answer boxes or in the margins

APPENDIX 2

COMPARISON OF CLARK-TROW TYPOLOGY  
WITH FIVE OTHER TYPOLOGIES

TYPES OF STUDENTS AND STUDENT CULTURES (SUBCULTURAL ORIENTATIONS):  
 COMPARISON OF CLARK-TROW TYPOLOGY WITH OTHERS.

<p>Clark and Trow (1966).           Theoretical classification of student subcultures, based on the following two variables: the degree to which students are involved with ideas and the extent to which students identify with their college.</p>	<p>Newcomb, Koenig, Flacks, and Warwick (1967, Flacks (1963).   <u>Types of Students and Subcultures (at Bennington)</u>. Classification initially based on coding of Bennington students' responses when asked to describe the kinds of subgroups they had observed at Bennington; that is, "sets of people who share certain interests, sttitudes, or values."</p>	<p>Schumer and Stanfield (1965, 1966) for a somewhat different classification.   <u>Types of Student Role Orientations</u>. Empirical classification based on factor analysis of University of Massachusetts student preferences for different activities or behaviors available to them on campus.</p>
<p>ACADEMIC CULTURE: students are highly involved with ideas and highly identified with their college.</p>	<p>THE SCHOLARS: low individualism-high intellectuality; described by others as concentrating on academic work, grinds, rational, and critical.</p>	<p>ACADEMIC AND SCHOLARLY ROLE ORIENTATION: concern for acquiring the formal knowledge of courses taken in college.</p>
<p>NONCONFORMIST CULTURE: students are highly involved with ideas but are not highly identified with their college.</p>	<p>CREATIVE INDIVIDUALISTS: high individualism-high intellectuality; described by others as liberal and free thinking, arty, intellectual snobs, irrational, and highly creative.          THE WILD ONES: high individualism-low intellectuality; described by others as beat, bohemia, degenerate, uninhibited, caring little about academic work and a lor about fun.          POLITICAL ACTIVISTS: described by others as reformists, as actively interested in public affairs, civil rights, and the like.</p>	<p>INTELLECTUAL ROLE ORIENTATION: stress on the world of art and ideas without reference to the formal course structure of the academic institution.</p>

COLLEGIATE CULTURE:  
students are not highly  
involved with ideas but  
are highly identified  
with their college.

THE SOCIAL GROUP: low individualism-  
low intellectuality; described by  
others as very interested in social  
life, dating and fun, but not  
particularly interested in academic  
work.

CONSUMMATORY COLLEGIATE ROLE  
ORIENTATION: orientation toward  
both social activity that is  
experiences as intrinsically  
pleasurable.  
INSTRUMENTAL COLLEGIATE ROLE  
ORIENTATION: preference for  
active participation in extra-  
curricular activities as a leader,  
an organizer, or a worker.  
ORIENTATION TO GREEK-LETTER  
SYSTEM: referring to fraterni-  
ties and sororities as well as  
having a "consummatory colleg-  
iate" and an "instrumental col-  
legiate" orientation.

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VOCATIONAL CULTURE:  
students are neither  
highly involved with  
ideas nor highly iden-  
tified with their  
college.

GENERAL VOCATIONAL ROLE ORIENTA-  
TION: emphasis on skills and  
knowledge from course instruc-  
tion that will be applicable  
in future employment.

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LEADERS: described by others as  
others as particularly interested  
in Bennington College government  
preference for organizing commit-  
tees or groups.

SOCIAL DEVELOPMENT ROLE ORIENTA-  
TION: concern with developing the  
self through meeting people and  
helping people.  
RITUALISTIC ROLE ORIENTATION:  
more strongly oriented to home  
than university; preference for  
solitary activity and inactivity;  
not excited by either academic nor  
collegiate environments.

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Clark and Trow (1966). Theoretical classification of student subcultures, based on the following two variables: the degree to which students are involved with ideas and the extent to which students identify with their college.

Warren(1966).Also see Warren(1968). Types of Student Orientations. Empirical classification based on factor analysis of judgments by students (at Claremont Men's College and at University of Southern California) of the degree of similarity among descriptions of eighteen hypothetical students. (Note: five factors proved to be interpretable, with the extremes of each factor-dimension representing a different type of student orientation, thus producing ten orientation-types as shown below.)

Pemberton (1963). Types of Student Orientations. Empirical classification based on factor analysis of scores of University of Delaware students on a variety of personality scales, and attitude and background surveys.

Keniston (1966). Types of Students. Classification based on impressionistic observation.

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ACADEMIC CULTURE: students are highly involved with ideas and highly identified with their college.

ACADEMIC ORIENTATION: strong inclination toward academic activity; identification with on-campus rather than off-campus groups; no questioning about the purpose of college; and rejection of vocational preparation as the major purpose of college.

ACADEMIC-THEORETICAL ORIENTATION: academic and intellectual orientation to college; primary motives for selecting curriculum are intellectual freedom and challenge; students in this category are satisfied with their program of studies and plan for advanced education and for professional careers.

ACADEMIC CONFORMITY ORIENTATION: conformity in study habits and attitudes; primary attention to grade-making; tendencies to persevere and master difficult situations, to be respectful to authority, to accept academic requirements.

THE PROFESSIONALIST: hard-working, earnest, diligent in academic work, and committed to the acquisition of expertise; but also anti-ideological, pragmatic, empirical, and distrustful of doctrine.

NONCONFORMIST CULTURE: students are highly involved with ideas but are not highly identified with their college.

AUTONOMOUS ORIENTATION: rejection of group standards of behavior and group-oriented recreational activities.  
SOCIAL PROTEST ORIENTATION: involved in social concerns and protests; seeks and supports change; questions the purpose of college; does not see major purpose of college as occupational preparation.  
INTELLECTUAL ORIENTATION: primarily concerned with ideas and esthetics on one's own terms; neglect of routine classwork because of interest in ideas.

NONCONFORMITY ORIENTATION: tendency to be critical of authority and to prefer change and experiment rather than stability and security; though positively oriented toward academic achievement, preference to work in one's own ways--resisting order, routine, and discipline.

THE ACTIVIST: protests against some segment of the university or society which seems in urgent need of reform.  
THE DISAFFILIATE: nonpolitical but culturally alienated who rejects totally the offerings and values of the conventional society.

COLLEGIATE CULTURE: students are not highly involved with ideas but are highly identified with their college.

TRADITIONAL ORIENTATION: Homecoming Week, Spring Carnival, etc.; prefers to associate with important people and concerned with being recognized as a leader; not more involved with off-campus than on-campus groups does not reject custom, tradition, and group standards or pressures.

SOCIAL-GROUP ORIENTATION: stress on "togetherness"; desire to help others is associated with feelings of personal inadequacy, the implication being that one is group-oriented because he needs group support.

THE BIG MAN ON CAMPUS: emphasizes the social rather than the academic or vocational aspects of higher education.

VOCATIONAL CULTURE: students are neither highly involved with ideas nor highly identified with their college.

VOCATIONAL ORIENTATION: sees major purpose of college as occupational preparation; wants good grades because employer wants them; is not involved in social concerns and protests; does not question the purpose of college.  
UNCOMMITTED ORIENTATION: desire for vocational preparation, involvement in off-campus rather than on-campus groups; uncertainty about the purpose of college.

TECHNICAL-VOCATIONAL ORIENTATION: basic orientation is toward applied science; college goals are practical and utilitarian rather than cultural and theoretical.

THE APPRENTICE: sees education as vocational training and a means of social mobility.

UNDIRECTED ORIENTATION: rejects custom and tradition; wonders about the purpose of college; is not searching for self-understanding; is not interested in recognition as a leader or in personal status; is not concerned with aesthetic values; wants claswork to give him something useful in a job.

SELF-CENTERED ORIENTATION: concerned with status seeking and self-understanding.

CONFORMIST ORIENTATION: wants to be recognized as a leader by other students; major concern is association with important persons; wants good grades because employers want them.

SOCIAL-SERVICE ORIENTATION: preference for social-service fields of study, coupled with the disposition to analyze and to understand motives and feelings.

THE UNDERACHIEVER: accepts the values of the university and society--but with them, one's own inadequacy.  
THE GENTLEMAN-IN-WAITING: views college as a refining of previously acquired gentlemanly qualities.

APPENDIX 3  
SCALE DEFINITIONS

## SCALE DEFINITIONS

(SF) Satisfaction with Faculty refers to a general attitude of esteem for instructors and the characteristic manner of student-faculty relationships at the respondent's college. Students with high scores regard their instructors as competent, fair, accessible, and interested in the problems of individual students. Low scores imply dissatisfaction with faculty and the general nature of student-faculty interaction.

(SA) Satisfaction with Administration is defined as a generally agreeable and uncritical attitude toward the college administration and administrative rules and regulations. High scores imply satisfaction with both the nature of administrative authority over student behavior and with personal interactions with various facets of the administration. Low scores imply a critical, perhaps contemptuous view of an administration that is variously held to be arbitrary, impersonal, and/or overly paternal.

(SM) Satisfaction with Major refers to a generally positive attitude on the part of the respondent about his activities in his field of academic concentration. High scores suggest not only continued personal commitment to present major field, but also satisfaction with department procedures, the quality of instruction received, and the level of personal

achievement within one's chosen field. Low scores suggest an attitude of uncertainty and disaffection about current major field work.

(SS) Satisfaction with Students refers to an attitude of approval in relation to various characteristics of individuals comprising the total student body. High scores suggest satisfaction with the extent to which such qualities as scholastic integrity, political awareness, and particular styles and tastes are perceived to be characteristic of the student body. Low scores imply disapproval of certain characteristics that are attributed to the overall student body.

(SH) Study Habits refers to a serious, disciplined, planful orientation toward customary academic obligations. High scores represent a perception of relatively extensive time devoted to study, use of systematic study routines and techniques, and a feeling of confidence in preparing for examinations and carrying out other assignments. Low scores suggest haphazard, perhaps minimal, attempts to carry through on instructional requirements.

(EI) Extracurricular Involvement is defined as relatively extensive participation in organized extracurricular affairs. High scores denote support of and wide involvement in student government, athletics, religious groups, preprofessional

clubs, and the like. Low scores represent disinterest in organized extracurricular activities.

(FI) Family Independence refers to a generalized autonomy in relation to parents and parental family. Students with high scores tend to perceive themselves as coming from families that are not closely united, as not consulting with parents about important personal matters, as not concerned about living up to parental expectations, and the like. Low scores suggest "psychological" dependence on parents and family.

(PI) Peer Independence refers to a generalized autonomy in relation to peers. Students with high scores tend not to be concerned about how their behavior appears to other students, not to consult with acquaintances about personal matters, and the like. They might be thought of as unsociable, introverted, or inner-directed. Low scores suggest conformity to prevailing peer norms, sociability, extroversion, or other-directedness.

(L) Liberalism is defined as a political economic-social value dimension, the nucleus of which is sympathy either for an ideology of change or for an ideology of preservation. Students with high scores (liberals) support welfare statism, organized labor, abolition of capital punishment, and the

like. Low scores (conservatism) indicate opposition to welfare legislation, to tampering with the free enterprise system, to persons disagreeing with American<sup>1</sup> political institutions, etc.

(SC) Social Conscience is defined as moral concern about perceived social injustice and what might be called "institutional wrongdoing" (as in government, business, unions), High scorers express concern about poverty, illegitimacy, juvenile crime, materialism, unethical business and labor union practices, graft in government, and the like. Low scores represent reported lack of concern, detachment, or apathy, about these matters.

(CS) Cultural Sophistication refers to an authentic sensibility to ideas and art forms, a sensibility that has developed through knowledge and experience. Students with high scores report interest in or pleasure from such things as wide reading, modern art, poetry, classical music, discussions of philosophies of history, and so forth. Low scores indicate a lack of cultivated sensibility in the general area of the humanities.

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<sup>1</sup> From the alterations made in certain items of the CSQ Part II as noted in Chapter II of this report, "American" was appropriately changed to read "Canadian".

APPENDIX 4

DISTRIBUTION OF THE ELEVEN SCALE SCORES  
BY SUBTYPES (TABLES XII TO XLIV).

Table XII.-

## Distribution of Satisfaction with Faculty Scale Scores by Subtypes

Interval Scores	Mid Point	Subtypes				Total
		Vocational (1)	Academics (2)	Collegiates (3)	Non- Conformists (4)	
10 - 14	12.0	4	2	2	18	26
15 - 19	17.0	29	17	40	11	97
20 - 24	22.0	92	52	169	25	338
25 - 29	27.0	76	56	180	11	323
30 - 34	32.0	35	38	93	4	170
35 - 40	37.5	5	9	9	0	23
Total N		241	174	493	69	977
Mean		24.55	25.84	25.52	20.04	
S.D.		4.83	5.07	4.54	5.55	

Table XIII.-  
Analysis of Variance Table.

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	2000.02	666.67	28.98*
Within Subtypes	973	22381.81	23.00	

\* significant at the .05 level.

Table XIV.-  
Scheffe Post Hoc Analysis.

Contrast of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-2.62	0.04	no
$\mu_1 - \mu_3$	-2.02	0.08	no
$\mu_1 - \mu_4$	2.68	6.34	yes
$\mu_2 - \mu_3$	-0.86	1.50	no
$\mu_2 - \mu_4$	3.89	7.71	yes
$\mu_3 - \mu_4$	3.76	7.20	yes

\*  $p < .05$

Table XV.-

Distribution of Satisfaction with Administration Scale Scores by Subtypes

Score Interval	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non-Conformists (4)	
10 - 14	12.0	3	0	0	4	7
15 - 19	17.0	10	4	14	19	47
20 - 24	22.0	42	34	87	16	179
25 - 29	27.0	93	75	196	16	380
30 - 34	32.0	73	53	168	11	305
35 - 40	37.5	6	6	19	0	31
Total N		227	172	484	66	949
Mean		27.28	27.56	27.99	22.71	
S.D.		4.49	4.07	4.10	5.81	

Table XVI.-  
Analysis of Variance Table

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	1627.30	542.43	28.81*
Within Subtypes	945	17789.45	18.82	

\* significant at the .05 level.

Table XVII.-  
Scheffe Post Hoc Analysis

Contrast of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-1.50	0.94	no
$\mu_1 - \mu_3$	-1.68	0.26	no
$\mu_1 - \mu_4$	2.88	6.26	yes
$\mu_2 - \mu_3$	-1.50	0.64	no
$\mu_2 - \mu_4$	3.10	6.60	yes
$\mu_3 - \mu_4$	3.69	6.77	yes

\*  $p < .05$ .

Table XVIII.-

Distribution of Satisfaction with Major Scale Scores by Subtypes

Score Interval	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non- Conformists (4)	
10 - 14	12.0	0	0	1	0	1
15 - 19	17.0	5	3	10	5	23
20 - 24	22.0	34	23	45	7	109
25 - 29	27.0	76	50	126	8	260
30 - 34	32.0	34	22	80	3	139
35 - 40	37.5	3	7	9	0	19
Total N		152	105	271	23	551
Mean		26.90	27.77	27.64	24.17	
S.D.		3.92	4.27	4.13	4.45	

Table XIX.-  
Analysis of Variance Table

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	304.03	101.34	5.94*
Within Subtypes	547	9328.02	17.05	

\* significant at the .05 level.

Table XX.-  
Scheffe Post Hoc Analysis

Contrast of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-2.33	0.59	no
$\mu_1 - \mu_3$	-1.91	0.43	no
$\mu_1 - \mu_4$	0.15	5.31	yes
$\mu_2 - \mu_3$	-1.20	1.46	no
$\mu_2 - \mu_4$	0.94	6.26	yes
$\mu_3 - \mu_4$	0.97	5.97	yes

\*  $p < .05$

Table XXI.-

Distribution of Satisfaction with Students Scale Scores by Subtypes.

Interval Scores	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non- Conformists (4)	
10 - 14	12.0	2	0	3	0	5
15 - 19	17.0	18	10	31	4	63
20 - 24	22.0	65	52	157	30	304
25 - 29	27.0	102	67	205	26	400
30 - 34	32.0	37	41	79	6	163
35 - 40	37.5	5	3	8	1	17
Total N		229	173	483	67	952
Mean		25.85	26.12	25.77	24.36	
S.D.		4.31	4.24	4.24	3.93	

Table XXII.-  
Analysis of Variance Table

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	156.89	52.30	2.90*
Within Subtypes	948	17082.04	18.02	

\* significant at the .05 level.

Table XXIII.-  
Scheffe Post Hoc Analysis.

Contrast of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-1.47	0.91	no
$\mu_1 - \mu_3$	-0.87	1.03	no
$\mu_1 - \mu_4$	-0.15	3.14	no
$\mu_2 - \mu_3$	-0.69	1.41	no
$\mu_2 - \mu_4$	0.07	3.47	yes
$\mu_3 - \mu_4$	-0.13	2.95	no

\*  $p < .05$ .

Table XXIV.-  
Distribution of Study Habits Scale Scores by Subtypes.

Score Intervals	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non-Conformists (4)	
10 - 14	12.0	4	1	4	1	10
15 - 19	17.0	25	9	41	21	96
20 - 24	22.0	65	36	143	25	269
25 - 29	27.0	101	75	219	14	409
30 - 34	32.0	42	50	82	7	181
35 - 40	37.5	5	7	6	0	18
Total N		242	178	495	68	983
Mean		25.39	27.17	25.60	22.32	
S.D.		4.68	4.48	4.37	4.92	

Table XXV.-  
Analysis of Variance Table

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among subtypes	3	1180.96	393.65	19.30*
Within subtypes	979	19971.91	20.40	

\* significant at the .05 level.

Table XXVI.-  
Scheffe Post Hoc Analysis

Contrast of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-3.02	-0.54	yes
$\mu_1 - \mu_3$	-1.20	0.78	no
$\mu_1 - \mu_4$	1.34	4.80	yes
$\mu_2 - \mu_3$	0.47	2.67	yes
$\mu_2 - \mu_4$	3.06	6.64	yes
$\mu_3 - \mu_4$	1.65	4.91	yes

\*  $p < .05$ .

Table XXVII.-

Distribution of Extracurricular Involvement Scale Scores by Subtypes.

Score Intervals	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non-Conformists (4)	
10 - 14	12.0	85	51	42	33	211
15 - 19	17.0	108	75	199	19	401
20 - 24	22.0	37	44	185	11	277
25 - 29	27.0	13	9	59	4	85
30 - 34	32.0	1	0	17	1	19
35 - 40	37.5	0	0	1	0	1
Total N		244	179	503	68	994
Mean		16.59	17.25	20.29	15.77	
S.D.		4.06	4.15	4.48	5.13	

Table XXVIII.-  
Analysis of Variance Table

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among subtypes	3	3287.66	1095.89	57.13*
Within subtypes	990	18989.79	19.18	

\* significant at the .05 level.

Table XXIX.-  
Scheffe Post Hoc Analysis

Contrast of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-1.86	0.54	no
$\mu_1 - \mu_3$	-4.75	-2.75	yes
$\mu_1 - \mu_4$	-0.86	2.50	no
$\mu_2 - \mu_3$	-4.10	-1.98	yes
$\mu_2 - \mu_4$	-0.26	3.22	no
$\mu_3 - \mu_4$	2.94	6.10	yes

\*  $p < .05$ .

Table XXX.-  
Distribution of Family Independence Scale Scores by Subtypes.

Interval Scores	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non-Conformists (4)	
10 - 14	12.0	10	5	21	2	38
15 - 19	17.0	55	37	106	5	203
20 - 24	22.0	89	55	196	11	351
25 - 29	27.0	60	49	133	16	258
30 - 34	32.0	22	20	29	12	83
35 - 40	37.5	3	3	3	21	30
Total N		239	169	488	67	963
Mean		23.06	23.66	22.54	28.96	
S.D.		5.14	5.35	4.68	7.19	

Table XXXI.-  
Analysis of Variance Table.

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	2463.78	821.26	31.13*
Within subtypes	959	25303.50	26.39	

\* significant at the .05 level.

Table XXXII.-  
Scheffe Post Hoc Analysis

Contrasts of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-2.04	0.84	no
$\mu_1 - \mu_3$	-0.61	1.65	no
$\mu_1 - \mu_4$	-7.88	-3.72	yes
$\mu_2 - \mu_3$	-0.16	2.40	no
$\mu_2 - \mu_4$	-7.37	-3.23	yes
$\mu_3 - \mu_4$	-8.29	-4.55	yes

\*  $p < .05$ .

Table XXXIII.-  
Distribution of Peer Independence Scale Scores by Subtypes.

Interval Scores	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non-Conformists (4)	
10 - 14	12.0	1	2	5	0	8
15 - 19	17.0	20	9	82	2	113
20 - 24	22.0	92	63	237	16	408
25 - 29	27.0	84	78	137	20	319
30 - 34	32.0	34	17	20	9	80
35 - 40	37.5	4	3	3	19	29
Total N		235	172	484	66	957
Mean		24.85	25.31	22.94	28.91	
S.D.		4.41	4.08	3.88	5.99	

Table XXXIV.-  
Analysis of Variance Table

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	2541.67	847.22	
Within groups	953	16882.98	17.72	47.82*

\* significant at the .05 level.

Table XXXV.-  
Scheffe Post Hoc Analysis

Contrasts of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-1.64	0.72	no
$\mu_1 - \mu_3$	0.98	2.84	yes
$\mu_1 - \mu_4$	-5.70	-2.42	yes
$\mu_2 - \mu_3$	1.33	3.41	yes
$\mu_2 - \mu_4$	-5.30	-1.90	yes
$\mu_3 - \mu_4$	-7.91	-4.43	yes

\*  $p < .05$

Table XXXVI.-  
Distribution of Liberalism Scale Scores by Subtypes.

Interval Scores	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non- Conformists (4)	
10 - 14	12.0	2	1	0	0	3
15 - 19	17.0	13	5	20	0	38
20 - 24	22.0	72	46	143	11	272
25 - 29	27.0	100	67	214	19	400
30 - 34	32.0	33	40	75	14	162
35 - 40	37.5	5	7	12	22	46
Total N		225	166	464	66	921
Mean		25.55	27.16	26.08	30.35	
S.D.		4.27	5.55	4.04	5.13	

Table XXXVII.-  
Analysis of Variance Table

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	1333.31	444.44	22.00*
Within Subtypes	917	18525.76	20.20	

\* significant at the .05 level.

Table XXXVIII.-  
Scheffe Post Hoc Analysis

Contrast of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-2.89	-0.33	yes
$\mu_1 - \mu_3$	-1.55	0.49	no
$\mu_1 - \mu_4$	-6.56	-3.04	yes
$\mu_2 - \mu_3$	-0.05	2.21	no
$\mu_2 - \mu_4$	-5.02	-1.36	yes
$\mu_3 - \mu_4$	-2.62	-5.92	yes

\*  $p < .05$ .

Table XXXIX.-  
Distribution of Social Conscience Scale Scores by Subtypes.

Interval Scores	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non- Conformists (4)	
10 - 14	12.0	0	0	0	0	0
15 - 19	17.0	8	6	9	2	25
20 - 24	22.0	50	18	80	7	155
25 - 29	27.0	84	57	179	22	342
30 - 34	32.0	65	58	156	27	306
35 - 40	37.5	26	28	50	9	113
Total N		233	167	474	67	941
Mean		28.03	29.62	28.66	29.46	
S.D.		4.99	5.07	4.55	4.49	

Table XL.-  
Analysis of Variance Table.

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	284.48	94.83	4.18*
Within Subtypes	937	21258.15	22.69	

\* significant at the .05 level.

Table XLI.-  
Scheffe Post Hoc Analysis.

Contrasts of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-2.94	-0.24	yes
$\mu_1 - \mu_3$	-1.69	0.43	no
$\mu_1 - \mu_4$	-3.27	0.41	no
$\mu_2 - \mu_3$	-0.23	2.15	no
$\mu_2 - \mu_4$	-1.03	1.35	no
$\mu_3 - \mu_4$	-2.53	0.93	no

\*  $p < .05$ .

Table XLII.-

## Distribution of Cultural Sophistication Scale Scores by Subtypes

Interval Scores	Mid Point	Subtypes				Total
		Vocationals (1)	Academics (2)	Collegiates (3)	Non- Conformists (4)	
10 - 14	12.0	34	9	51	2	96
15 - 19	17.0	91	46	181	10	328
20 - 24	22.0	73	53	154	19	299
25 - 29	27.0	28	40	74	13	155
30 - 34	32.0	5	18	18	16	57
35 - 40	37.5	0	3	1	7	11
Total N		231	169	479	67	946
Mean		19.46	22.47	20.15	25.88	
S.D.		4.70	5.44	4.87	7.00	

Table XLIII.-  
Analysis of Variance Table.

Sources	Number of Degrees of Freedom	Sum of Squares	Mean Square	F- Value
Among Subtypes	3	2817.51	939.17	35.75*
Within Subtypes	942	24747.50	26.27	

\* significant at the .05 level.

Table XLIV.-  
Scheffe Post Hoc Analysis

Contrasts of Subtype Means	Lower Limit	Upper Limit	*Significant
$\mu_1 - \mu_2$	-4.46	-1.56	yes
$\mu_1 - \mu_3$	-1.84	0.46	no
$\mu_1 - \mu_4$	-8.41	-4.43	yes
$\mu_2 - \mu_3$	1.04	3.60	yes
$\mu_2 - \mu_4$	-5.48	-0.34	yes
$\mu_3 - \mu_4$	-7.60	-3.86	yes

\*  $p < .05$ .

APPENDIX 5

INSTITUTIONAL BREAKDOWN OF STUDENT SUBTYPE  
ORIENTATION RANK ORDERING  
TABLES XLV TO XLVIII

Table XLV.-  
Academic Subtype (N=186)

Rank Ordering of Orientations			Frequency Distribution per Institution			
2nd Choice	3rd Choice	4th Choice	Ottawa Univ.	St.F.X. Univ.	Dalhousie Univ.	Total Frequency
Vocational	Collegiate	Non-conformist	48	42	36	126
Vocational	Non-conformist	Collegiate	10	7	4	21
Collegiate	Vocational	Non-conformist	17	1	3	21
Collegiate	Non-conformist	Vocational	5	0	0	5
Non-conformist	Vocational	Collegiate	5	1	1	7
Non-conformist	Collegiate	Vocational	4	1	1	6

Table XLVI.-  
Vocational Subtype (N=255)

Rank Ordering of Orientations			Frequency Distribution per Institution			
2nd Choice	3rd Choice	4th Choice	Ottawa Univ.	St.F.X. Univ.	Dalhousie Univ.	Total Frequency
Academic	Collegiate	Non-conformist	56	57	58	171
Academic	Non-conformist	Collegiate	11	3	5	19
Collegiate	Academic	Non-conformist	27	8	12	47
Collegiate	Non-conformist	Academic	4	1	1	6
Non-conformist	Academic	Collegiate	5	2	0	7
Non-conformist	Collegiate	Academic	2	0	3	5

Table XLVII.-  
Collegiate Subtype (N=504)

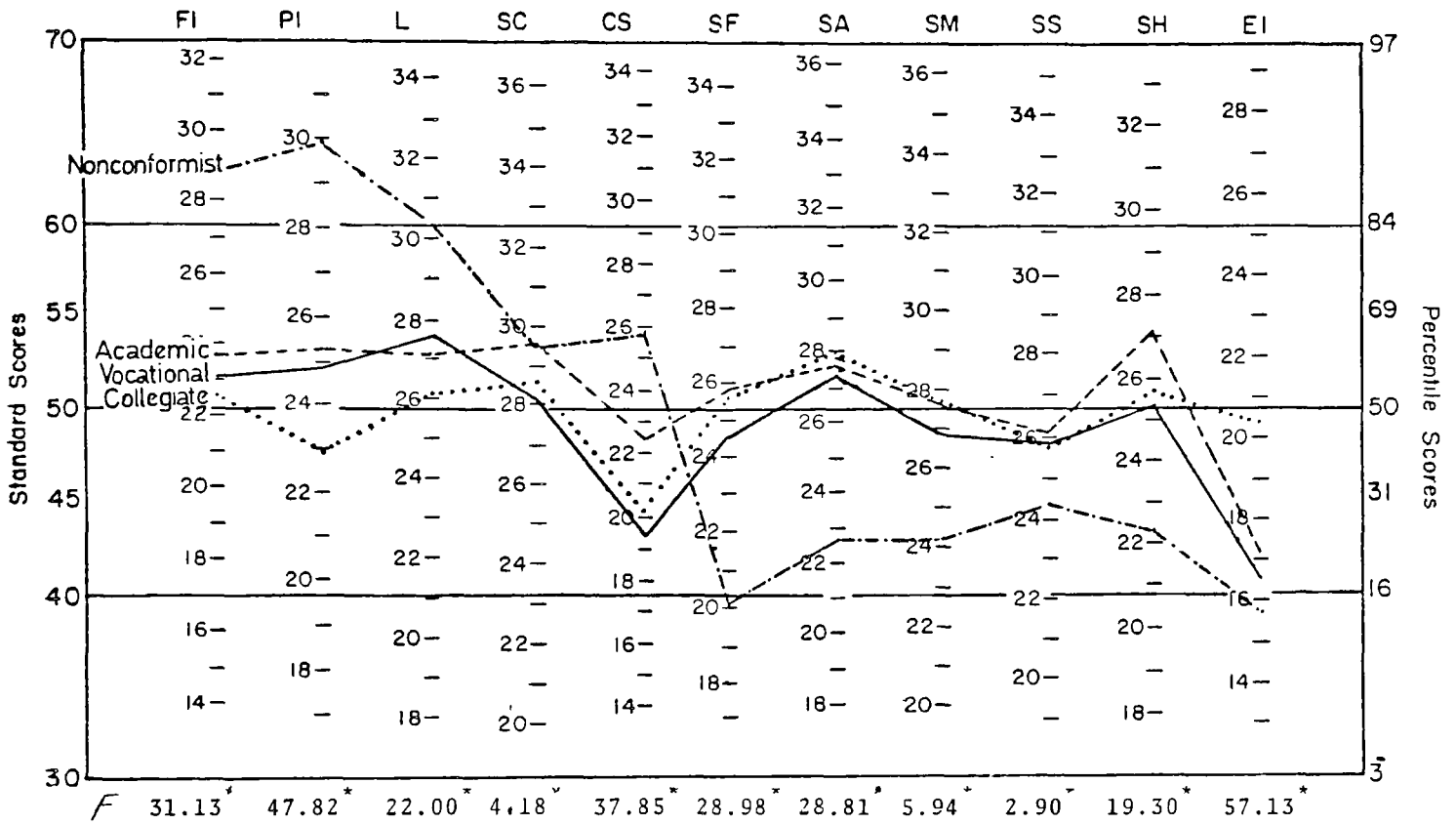
Rank Ordering of Orientations			Frequency Distribution per Institution			
2nd Choice	3rd Choice	4th Choice	Ottawa Univ.	St.F.X. Univ.	Dalhousie Univ.	Total Frequency
Vocational	Academic	Non-conformist	59	78	70	207
Vocational	Non-conformist	Academic	7	12	9	28
Academic	Vocational	Non-conformist	44	82	71	197
Academic	Non-conformist	Vocational	12	9	14	35
Non-conformist	Vocational	Academic	4	5	4	13
Non-conformist	Academic	Vocational	7	8	9	24

Table XLVIII.-  
Non-conformist Subtype (N=73)

Rank Ordering of Orientations			Frequency Distribution per Institution			
2nd Choice	3rd Choice	4th Choice	Ottawa Univ.	St.F.X. Univ.	Dalhousie Univ.	Total Frequency
Vocational	Academic	Collegiate	1	1	0	2
Vocational	Collegiate	Academic	3	1	0	4
Academic	Vocational	Collegiate	12	12	19	43
Academic	Collegiate	Vocational	10	3	3	16
Collegiate	Vocational	Academic	7	0	0	7
Collegiate	Academic	Vocational	1	0	0	1

APPENDIX 6

ORIENTATION SUBTYPE MEAN SCORES ON THE ELEVEN  
CSQ PART II SCALES PLOTTED AGAINST  
UNITED STATES NORMS



Legend for Scales:

- FI - Family Independence
- PI - Peer Independence
- L - Liberalism
- SC - Social Conscience
- CS - Cultural Sophistication
- SF - Satisfaction with Faculty
- SA - Satisfaction with Administration
- SM - Satisfaction with Major
- SS - Satisfaction with Students
- SH - Study Habits
- EI - Extracurricular Involvement

Legend for Subtypes:

- Academic = - - - - -
- Vocational = \_\_\_\_\_
- Collegiate = . . . . .
- Non-conformist = - . - . - .

APPENDIX 7

ABSTRACT OF

The Implications of Rank Ordering on the  
Clark-Trow Typology of University Students

## ABSTRACT OF

The Implications of Rank Ordering on the  
Clark-Trow Typology of University Students<sup>1</sup>

Research addressing the behaviors of undergraduate university students has relied heavily on a priori groupings of students. One criterion for grouping students is their orientation to higher education as shaped by forces resulting from the characteristics of the individual and of the university environment.

Of the several typologies of student subtypes the one devised by Clark and Trow has been considered in the literature as the most heuristic. The College Student Questionnaires (CSQ), Part II, which operationalizes the Clark-Trow typology model permits respondents to rank order their orientation choices. However, researchers have restricted its use to categorizing student subtypes as a function of the first rank ordered orientation choices.

Following a reappraisal of the Clark-Trow Model, the research problem centers on the operationalized model's capacity to predict student subtype orientation blends, that is, second choices of rank ordered orientations as a function of first rank ordered choices.

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<sup>1</sup> J. A. Doucet, doctoral thesis presented to the School of Graduate Studies of the University of Ottawa, Ontario, December 1975, xiii-175 p.

The four hypotheses tested in the null form are:

1. Students ranking themselves first as "academics" on the Clark-Trow model have a tendency to rank the "vocational" orientation more highly than any other orientation.
2. Students ranking themselves first as "vocationals" on the Clark-Trow model have a tendency to rank the "academic" orientation more highly than any other orientation.
3. (a) Students ranking themselves first as "collegiates" on the Clark-Trow model have a tendency to rank the "academic" orientation more highly than the "non-conformist" orientation.  
  
(b) Students ranking themselves first as "collegiates" on the Clark-Trow model have a tendency to rank the "vocational" orientation more highly than the "non-conformist" orientation.
4. Students ranking themselves first as "non-conformists" on the Clark-Trow model have a tendency to rank the "academic" orientation more highly than any other orientation.

The sample comprises 1018 post freshman full-time university undergraduate students registered in three Canadian universities located in Central and Eastern Canada. The appropriateness of the CSQ, Part II, for use in a Canadian setting **is** confirmed since significant differences ( $p < .05$ ) among each of the four subtype groups are seen to exist in the direction predicted by the model on the scores of each of the eleven characteristic trait scales comprised in the instrument. The Friedman non-parametric test is applied separately to each of the hypotheses with the level of

significance set at .05. Each null hypothesis is rejected.

These results confirm that student subtypes initially identified on the operationalized Clark-Trow model by their first rank ordered orientation choice have a tendency to select a particular second rank ordered orientation choice thus tending to define their orientation blends. Additional consideration of the findings suggests that the existing two dimensional Clark-Trow model might be appropriately modified to a three dimensional one by changing the notion of "involvement with career" from its present position as a minor descriptor to a third dichotomized dimension. While this latter suggestion must await further empirical verification considerable support for it has been expressed in the more recent literature.