UNIVERSITY OF TECHNOLOGY
LIBRARY

## AN ANALYSIS OF SUB-CULTURES IN A COLLEGE OF EDUCATION

## BY

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## A Doctoral Thesis

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| 392 | I expect to deepen and extend ry knowledge of my First Choice of Nain Subject. | 741 |
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| 395 | A pleasing manner and appearanco. | 745 |
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| 398 | The ability to communicate effectively with the pupils. | 748 |
| 399 | An appearance of confidence in front of children. | 749 |
| 400 | A Broad cultural lnowledge | 50 |
| 401 | Iilgh administrative ability. | 751 |
| 402 | A good academic record | 752 |
| 403 | A sound knowledge of recent developments in the techriques of teaching. | 753 |
| 404 | A sound lnowledge of child psychology. | 754 |
| 405 | The ability to make accurate diagnoses o.g. of maladjustment, reading difficulties physical defects etc. | 355 |


| Table NO. | Title | Page $\mathrm{NO}_{0}$ |
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|  | SOCIAL PARTICIPATIOT |  |
|  | I have taken part in the following activities during my timo at College: |  |
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| 407 | Choir | 757 |
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| 415 | 1st Choice of Kain Subject | 762 |
| 416 | 2nd Choico of Main Subject | 762 |
| 417 | Course for Education | 763 |
| 418 | Supporting Studies in Year 1 | 763 |
| 419 | Supportins Studies in Year 2 | 763 |
| $\bigcirc$ | What mark would you giveefor the overall quality of teaching on the course for: |  |
| 420 | Ist Choice of Main Subject? | 764 |
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| 422 | The course in Eaucation | 764 |
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| 425 | Your First Choice of Maln Subject | 766 |
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| 427 | In Education | 767 |
| 428 | The Total Weekly humber of Periods Students atterded at courses for lst Choice of Main Subject. | 767 |
| 429 | The Total Veekly Mumber of Feriods Students atterded at courses for and Choice of lain subject. | 768 |
| 430 | The Total Weelily number of Periods Students attended at courses for Education. | 768 |
| 431 | There too foy time-tabled periods per week in my prosent year. | 769 |
| 432 | The amount of work I an required to do in Collega in ceneral is axcessive. | 769 |
| 433 | I find the work in much of the Colloge Course trery boringe. | 770 |
| 434 | Many of the things which I am required to do in College will be of little praetical uss to me when I leave. | 770 |
| 435 | There are meny students in the college who are so urapped up in chasing highe maries that thoy are close to being failures as social persons. | 771 |
| 436 | The important aspects of College Life are social in nature rather than to to with study. | 771 |
| 437 | Many of the students in College are more concemed about their social life thon they are about their academic responsibil | 772 |
| 433 | The decrec of academic honesty and integrity shom by people not cheating in tests or by taking credit for work done by other students is high in this Colleg | 772 |


| Table No. | TItIe | Fage Mo. |
| :---: | :---: | :---: |
| 439 | Teachers of the age eroup (1.e. Infant - | 773 |
|  | Junior - Socondary) which I have chosen |  |
|  | to teach have good promotion prospects vithin schools. |  |
| 440 | Teachers have hich status in the | 773 |
|  | community. |  |
| 441 | In general have you enjoyed your various | 774 |
|  | studies at this College as much as you |  |
|  |  |  |
| 442 | Which one of the following statements | $774=$ |
|  | most closoly describes the way you |  |
|  | feel about teaching. |  |
| 443 | Hor much are you vorried that you might | 775 |
|  | not be happy in a teaching carcer. |  |
| 444 | Aro you contemplating further academic | 775 |
|  | study when you have left College? |  |
| 445 | Coment concerming the balance between | 776 |
|  | Contimuous Assescment and Dxaminations |  |
| 446 | Comment concerming the balance between | 776 |
|  | Acadenic work and Professional training. |  |
| 447 | The standard of professional training | 777 |
|  | (i.e. training for teaching) given in |  |
|  | this College is very high. |  |
| 443 | Have you changed any of your coursen | 777 |
|  | sinco entering College? |  |
| 449 | When you came to this College were you | 777 |
|  | accepted for your oribinal choice of |  |
|  | subjects? |  |
| 450 | Since entering College would you have | 778 |
|  | liked to havo changed efther or both |  |
|  | of your hain Subjects but have not |  |
|  | been able to do so? |  |
| 451 | My Tutors have been successful in | 773 |
|  | stretching mo to the linits of my |  |
|  | intellectual capacity. |  |
| 452 | Since I came to College, I have felt | 779 |
|  | that some of my Tutors have eiven me |  |
|  | Eradings based more on extrancous |  |
|  | and irrelevant factors rather than |  |
|  | on the quality of my work. |  |
| 453 | Being on the Bridging Course affects | 779 |
|  | the way your work is marked by Tutors. |  |


| Table NO | Title | Pago NO. |
| :---: | :---: | :---: |
| 454 | The marking and grading of essays and course worls by Tutors is affected by their personal life or alsilise of individual students. | 780 |
| 455 | In my experienco, ny iutors have boen tolerant of areument and disagreement between themselves and students. | 780 |
| 456 | I feel that Tutors fail to understand the problems of tho typical student. | 781 |
| 457 | What proportion of the Staff whom you have met in Collego would you say aro genuinely interested in the probiens of students. | 732 |
| 459 | Tairing my Collece courses as a whole, I am satisfied with the opportunities that I havo had to meot with my Tutors privately to discuss courso worls problems and ny progress. | 732 |
| 459 | During my College course to dato, I luve found that in general my Tutors are competent in what they do. | 732 |
| 460 | What mark would you Eive for the overall content of the course of your Eirst Choico of Main Subject. | 704 |
| 461 | That mark would you give for the overall content of the course of your Second Choice of Main Subject. | 785 |
| 462 | What mark rould you sive for the overall content of the course in Education. | 786 |
| 463 | that mark would you give for the overall content of the course for supporting Studies (Year 1). | 737 |
| 464 | What mark would you give for the overall content of the course for Supporting Studies (Year 2). | 783 |
| 465 | that mark would you givo for the overall quallty of teaching on the course for your First Choice of Main Subject. | 789 |
| 466 | That marls would you give for the overall quality of teaching on the ccurso for your second Choice of Main Subject. | 790 |
| 467 | What mark would you give for the overall quallty of teaching on the course for sducation. | 791 |



## Synonsis.

This investigation is concerned with similarities and differences between the sub-cultural groupings developed by the Clark and Trow (1963) model and which are prosent in a single year-group of students completing their third-year course in a College of Education. The four sub-cultural orientations are labelled Vocationalist, Academic, Collegiate and Nonconformist respectively.

The problem is outlined and various hypotheses are tested. A variety of measuring instruments are used and include both published material and measures designed and evaluated through a range of pilot studies to assess specific areas of importance which relate to the particular College used in the investigation.

Statistical techniques are employed which range from simple comparisons of group frequencies and percentages to the utilisation of analyses of variance, factor analyses and the stepwise discriminant function. Analyses and their resuits are discussed in terns of both single-sex comparisons and the larger groupings formed by combining the two sexes.

Near-sociometric techniques indicate the extent to which sub-cultural membership can be predicted from sociometric groupings. Further data are given which indicate major differences in attainment, attitudes and personality between the various groupings.

The results arc then summarised, conclusions are drawn and suEgestions are put forward for future research in this field.

## CHAPTER 1

IITRODUCTIOIN.

## CHAPTER 1.

## INTRODUCTION.

The present investigation is concerned with the composition of college-based sub-cultures which possibly exist within one year group of a large College of Education situated in the north of England. The assumption that such groups or sub-cultures exist is based upon the view that people respond to a situation not objectively but as they perceive it to be. Perception is selective and we all learm to perceive things, happenings and situations (mainly by the process of habit formation) which are contingent upon successes and fallures that follow,

> "Wronefrom actions based upon right' and 'ways of perceiving situations. "" (Newcomb 1966 p.3)

Furthermore, there are important reasons why groups have much to do with the successes and failures of individuals. In the setting of the College used in the present investigation, the chief one appears to be the value of consensus among the nembers of a group acting as a buffer against some of the administrative legislation. Also, the varied ways in which Tutors treat students ranging from near-adoption to a haughty disdain have to be mediated through a range of media and responses. Conversely, groups often have the power
to reinforce the views of their individual members and to reward or punish aspects of behaviour deemed to be acceptable or not acceptable as the case may be. Newcomb (1966) p. 4 has given the following cogent summary of the importance of the influence of College-based sub-cultures. He states
\#..... individual members develop attitudes towards each other - most comonly favourable ones - and they develop consensual sets of expectations regarding each others' behaviour and regarding important aspects of their common environment, by which their individual expectations of success and fallure aro guided. Such consensual expectations of each others' behaviour are known as norms. Ealdly put, groups have power over their members because the same processes of interaction that result in the members feeling favourably toward each other also result simultancously in their adopting norms that enable them to aim at success rather than failure. "

Finally, college students (who in this country tend to arrive at college straight from home, parents and school) meet each other with ready-made needs for independence as persons in a setting geographically and emotionally distant from home where a greatly enhanced degree of personal independence is possible. Also, students strive for full adult-status in a college setting now relieved of the problens of being in loco parentis' (and with a consequent lessening of pragmatic authority) and in an institutional environment tailormade to service one of the needs of the wider society.

However, the above notwithstanding, the students feel (often with some justification) that college is a world which requires them to behave like mature adults but itself sometimes treats them as children who need adult authority to be exercised over them.

These two bases of consensus together with the facts associated with group living in dining room, classroom and in residence result in the processes through which groups acquire power over their nembers.

Some Conditions of Feer-Groun Formation.

Since it is one of the major hypotheses of the present investigation that college-based sub-cultural groupings will primarily be composed of groups of peers the following brief consideration of conditions which aid the formation of peer-groups may be of value.

Newcomb (1966) p. 6 has suggested that even though it is 'natural' for people with common interests to associate with one another, adolescents and late adolescents in particular (including most College Students) appear to have strong needs for acceptance by ace and sex peers. He also indicates that (page 6)

> ".op this fact leaves the entire matter of selection unexplained.
and outlines the following three possible bases for peer-group formation
a) pre-college acquaintanceship.
b) propinquity.
c) sinilarity of attitudes and interests.

In the present investigation, whilst the above bases will be analysed in detall it is proposed that the classification into college-based sub-cultures will be based upon the primary, secondary and tertiary "philosophical orientations" of students according to the typology developed by Clark and Trow and as outlined in Peterson (1965).

## Typologies

Although typologies represent abstractions and in doing so often mask the multidimensional variability known to exist in a given type of student they have been shom by a variety of researchers to be useful as valuable analytic tools. Clark and Trow (1966), Freedman (1956) and Stern (1962) among others have each published relevant research in this field.

The history of typologies of college students is short and in the sreat majority of cases is confined to American studies whilst the small amount of work completed in England has been concerned with University studies rather than Colleges of Education. To date, the only useful reference to the typology outiined by

Clark and Trow in an English setting has been reported by Taylor (1969) and even in this case, the treatment is brief and only descriptive in character.

Tho Present Investipation.

1. The Philosophical Orientations.

The present investigation has adopted the typology outlined by Clark and Trov because of its conceptual clarity, and applicability to the Inglish college environment.

The basic paradigm of the model has been summarised by Feterson (1965) page 4 as follows.
"Its focus is draw from (a) interest in the impact of college on students, and from (b) the contention that this impact is realized or mediated largely through the action and influence of peer groups. The four types are held to result from dichotomizing two variables which presumably are causally related to college impact on students. These two dimensions are described as
a) the degree to which students are involved with ideas, and
b) the extent to which students identify with their College.

A diagramatic representation of this model $1 s$ given below.

Identify with
Involved with ideas


1. The academic subculture.
2. The collegiate subculture.
3. The nonconformist subculture.
4. The vocational subculture.

The actual philosophical orientations used in the present investigation have been closely modelled on the contents as outlinad by Clark and Trow and sumarised by Feterson (1965) with the permission of the author. Peterson's capsule sumaries are mach closer to those outlined by Clark and Trow than those given by Taylor (1969) and appeared to be particularly acceptable to the college population used in the present investigation. The capsule sumaries are given below.

## a) Vocational

This philosophy emphasizes education essentially as preparation for an occupational future. Social or purely intellectual phases of College life are relatively less important, though certainly not ignored. Concern with extra curricular activities and College traditions is relatively small. Persons holding this philosophy are usually quite comitted to particular fields of study and are in College primarily to obtain training for careers in their chosen fields.

## b) Acadomic

This philosophy, while it does not ignore career preparation, assigns greatest importance to the echolarly pursuit of knowledge and understanding wherever the pursuits 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 iffe are not to be forsaken, this philosophy attaches greatest importance to interest in ideas, pursuit of knowledge, and cultivation of the intellect.

## c) Collegiate

This philosophy emphasizes that besides occupational training and/or scholarly endeavour an important part of College life exists outside the lecture room and library. Extracurricular activities, social life, rewarding friendships and loyalty to College traditions are important elements in one's Collego experience and necessary to the cultivation of the well-rounded person. Thus, while not excludins academic activities, this philosophy emphasizes the importance of the oxtracurricular side of College life.

## d) Nonconform1st.

This is a philosophy held by the student who either consciously rojects commonly held value orfentations in favour 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 1deas and art forms both in College and in sources (often highly original and individualistic) in the vider society. Many facets of the College-organised extracurricular activities, traditions and 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 students were asked to study the above and to rank them in order of importance to them porsonally. Verification of their choices was further strengthened by gaining the opinions of staff nembers as to the validity of these choices.

Clark and Trow have draw a distinction which may be of some importance to the present investigation. They distinguish between student orientations toward college that are held by individual students, and student subcultures which they describe as igroup norns, shared notions of what constitutes right action and attitudes tovards a range of issues and experiences confronted in college' (1962 p.205).

As both authors explain.
"..... we can distinguish four broad patterns of orientations toward college which give content and meaning to the informal rolations of students. When these patterns or orientation define patterns of behaviour, sentiment and relationships we can usefuily think of them as subcultures. " (1962 p.205)

In short, the former are seen as giving content to the latter.
2. The Variables.

The primary hypotheses were concerned with the verification or otherwise of the view that the philosophical orientations would be clearly supported by an eramination of peer-group structure. Thus sociometric assessment played a large part in the subsequent analysis. Near-sociometric techniques vere used together with other appropriate methods of analysing group and individual data based on criterion choices.

A range of variables which assessed intelligence, critical thiniking, values, attitudes and personality were assembled together with a great deal of data extracted from the college records. In addition, much valld information was gained through a range of questionnaires developed for specific purposes. Complete details of the variables are given in Chapter 3. Thus, variables were obtained from two main sources, namely.
> a. published tests of known validity and reliability.
b. through a series of pilot studies designed to assess the acceptability of certain itens, tests and assessments deened to be of value to the present investigation.
3. The Samples.

The population from which the samples were drawn was composed of the 455 students who were completing their third year of their college course. There were 221 men and 234 women who because of a unique Box and Cox' arrangement (instituted in response to a request from the D.E.S. to utilise college facilities and staff on a more productive basis) had experienced an educative process denied both their predecessors and successors (since the college has not returned to a normal threeterm year). Such an arrangement has clear implications for the 'randomness' of the samples and the degree to which any valid 'general' or 'predictive' conclusions might be drawn.

Thus, in some ways, the investigation was exploratory in nature and suffered from the lack of a body of published work of complete relevance, Eor example, the term 'college education' has a mach different connotation in America (where much of the work on typologles has been completed) than the
commonly understood meaning here in England. Eutcher (1966) has offered some consolation concerning the degree of 'randomness' of sampling possible by the adoption of a particular college population by stating, (page 28)

> MEven an accidental sample, or one that is chosen because it is the only one available, may yield information of considerable value. This is particularly true in connection.. with relatively unexplored areas of research. But it is most important that the writer of a research report should take into account and make explicit the strength or weakness of his sampling design. The value of any conclusions will depend very largely on an intelligent assessment by the research worker of how far the considerations for valid scientific generalisations have been satisfied.

In terms of the researches done in England, the present investigation could be classed as a 'relatively unexplored area of research'. Clearly, however this does not renove the undoubted advantage to be gained from using randomly chosen samples if this is possible.

In sumary, it is proposed to divide a group of college students of both sexes into four philosophical orientations on the basis of the self-choice or ranking of the typology of Clark and Trow as outlined above. Further, by analysing a body of data gained from the assessment of a range of variables thought to be of importance it is intended to verify or refute the following hypotheses.
4. The Hypotheses.

Hypotheses could be formulated which predicted differences between the four groups based upon the primary orientations (1.0. first choices) for each of the variables. Such a procedure would possibly produce a fragmented analysis and one which would give a series of disjointed statements apparently leading to few relevant conclusions. In an attempt to preclude the possibillty of the above the following hypotheses were formulated.

1. That the most important single plece of data that will predict the sociometric groupings will be the primary philosophical orientations; and further, that the secondary philosophical orientations will have a small but significant predictable effect on such eroupings.
2. That tertiary orientations will not be predictable from socionetric choices.
3. That of the four groups formed by the primary philosophical orientations, the Academics and the Nonconformists will be more highly related in sociometric groupings than either of the two remaining groups.
4. That the primary orientation most closely related to academic success in College is Academic.
5. That the primary orientation most closely related to success in Practical Teaching is Vocational.
6. That the students whose primary orientation is Nonconformist will hold the most negative attitudes towards College, and further; that as a group they will indicate a lack of confidence and will display attributes associated with deference, anxiety and tendermindedness.
7. That the group whose primary orientation 1s Collegiate will have mediocre but acceptable grades for College and School based assessments and the lowest scores for Achievement Motivation.
8. That the variables which differentiate significantly between the four primary orientations will be attitudinal and motivational in nature rather than those related to ability and social class.

Pinsent (1933) in conducting one of the earliest studies of the relationship between intelligence scores and teaching ability grades using fairly large samples of 399 men and 362 women respectively, failed to find any significant correlation between the two variables. However, Vernon (1939) did find a positive but low correlation between intelligence test scores and teaching ability. His sample was composed of 240 Scottish graduates at a training college. Later, Carlile (1954) using scores from two separate intelligence tests correlated them with teaching ability and obtained correlations of +0.28 and +0.23 respectively

Fifty-five investigations completed in America between 1927 and 1952 were reviewed by Marsh and Wilder (1954). All of the studies were closely related to the effectiveness of instruction. Only in sixteen cases was the correlation coefficient greater than +0.3 whilst In a further twenty-four cases it ranged from 0 to +0.3 leaving a residue of fifteen cases where the correlation coefficient was negative.

Evans (1959) in a major review of the field concluded as follows:-

> "There is evidence that guccess in training college written examinations is related to intelingence, and that intelligence plays a part in the preparation and presentation of teaching material".

However, the size of the correlation coefficients given above indicates the sparsity of results of userul predictive value. Also, college students tend to be selected from a moderately narrow band of measured intelligence. Such a restriction may be responsible in part for the size of the coefficients given above. Further work by Herbert and Turnbull (1963) who used 500 students in a Scottish College of Education failed to produce any significant correlations between scores obtained from the Moray House Adult Verbal Reasoning test and teaching grades awarded at the end of the first and third year teaching practices. Later, Tarpey (1965) found similar results using the A.H. 5 intelligence test on a sample of 128 students drawn from three Irish and one English college of education. Cortis (1966) using a somewhat larger sample of 259 men and women students who were in their third year at college found, low, non-significant and negative relationships between intelligence and success in teaching. Soloman (1967) also found no significant corrolation between teaching ability and intelligence as measured by Factor B of Cattell's 16 P.F. Cuestionnaire. Her sample consisted of 155 students who were attending a day college of education in Manchester.

Lomax (1969) using a stratified random sample of 46 women and 22 men in a northern college of education obtained correlations (significant at the . 01 level) between womens teaching practice, final examination results and scores obtained from the Culture

Fair intelligence test.
Morgan (1969) used a large eample of 1020 women college students and found positive and significant correlations between Factor B (General Intelligence) of Cattell's 16 P.F. Personality Inventory and the first two teaching practices of a three-year course.

Two researches by Warburton are of interest In the present context. Warburton (1955) reported a correlation coefficient of +0.32 for the scores of 80 training college students using a vocabulary test and their teaching grades as assessed by tutors. In a later investigation, Warburton and Forrest (1963) using a similar sample found a positive but nonsignificant correlation of +0.165 between vocabulary and practical teaching.

## SUMMARY

The above researches tend to indicate that although in some cases a positive and significant relationship may occur between intelligence as measured and teaching practice grades, such a relationship is usually low and of limited use for predictive purposes.
B. THTELLIGENCE AMD ACADEMIC ATTATMAENT.

One of the major early pleces of research reported in this area has been published by Eysenck (1947). Having surveyed over 600 papers concerned with investigating the relationships between scholastic attainment and intelligence in America, he stated that the mean size of coefficients was of the order of to. 5 with the range extending from +0.3 to +0.7. Although Eysenck is very critical of some of the criteria used by some of the investigators, he does conclude that the use of an intelligence test substantially improves selection procedures for university and college entrance. They are particularly useful in indicating those who may be outstandingly good or bad.

Seagoe's (1943) point of view is that teachers are highly selective upon the verbal factor which as Vermon (1961) has indicated is related to the general factor ' $g$ ' but is distinct from it. Seagoe considers that the more selective the group then the more the verbal factor becomes distinguishable from the general.

Using a large sample ( $\mathrm{N}=1433$ ) composed mainly of women, Thompson (1945) obtained intelligence scores from all students training for teaching in Scotland during 1943. He concluded that graduates had higher scores than non-graduates. He went on to state however that

> The most immediately striking thing about these distributions is the overlap between different categories of students of non-graduates and the physical training and domestic science students have scores above the graduate mean. Some Honours graduates have scores below the non-graduate mean".

Work by Himelweit and Sumerfield (1951) at London University using two groups of 114 and 118 students respectively with the Thurstono Vocabulery scale gave correlations of +0.309 and +0.422 between the scale and final degree marks.

Heim (1955) a pioneer in this field used her AH5 test of verbal and non-verbal intelligence with both Scottish College and university graduates. She obtained correlations between her test and examination marks ranging from $\mathbf{- 0 . 4}$ for a sample of 40 training college students to +0.27 with the university students.

In comparine the attributes of both good and poor teachers, Kemp (1957) found a significant difference between the two Eroups on intelligence, with the good teachers obtaining the higher mean score. Locke (1958) administered the Alf test to 90 second-year University students who had passed their ifirst-year examinations. The correlation between examination marks and intelligence test scores was to.193. Also using university students but utilizing the N.I.I.P. Group Test No. 33 with 67 men and 57 women students, Tozer and Larwood (1958) tested at both tho beginning and end of their university
course. Although graduates scores were higher than pass degree students, the result was non-significant. Also, the differences between the intelligence test scores of arts and science students and between men and women were non-significant. This latter result is in accordance with an earlier finding by vatts (1954).

In sumarising the 'major' investigations up to 1959, Bvans (1959) coneluded that there was evidence that success in training college examinations was related to intelligence. Heim (1947) had pointed out earlier that one of the major problems associated with investigating selected groups of people such as students was that the importance of intelingence as measured by tests tended to decrease as the
"....mental stature of the subjects increases":-

In this context the following coment of Valentine (1961) is of value. He states.
"One of the difficulties has been the finding of a test of sufficient difficulty for the very high degree of intelligence of the test entrants to our universities, and of sufficient sensitivity to discriminate between those capable of thirdclass honours or pass degrees and those likely to fall".

Recent work by Alice Heim in producing her AH5 and AH6 tests would appear to be solving the above problem to a marked degree.

In testing 622 training college students, 149 university graduates, 222 gracuates and 45 schoolboys who had won open scholarships with his iReasoning Tests for Higher Levels of Intelligence', Valentine (1961) found the following results.
a)

Highly significant differences between scores of first-class honours and second-class honours graduates.
b) Differences significant at the $5 \%$ level between second and third-class honcurs graduates.
c) A difference which reached the $1 \%$ level of significant between second-class and pass degree graduates.

Furthermore, intelligence as measured by the above test correlated with final honours examination maries. The correlation was +0.396. Correlations between the criterion and the AH. 5 test and G.C.B. results were +0.320 and +0.302 respectively.

Hudson (1963) also used the AH. 5 test with
'clever' school boys to show that (with certain reservations) acadenic blas is likely to be reflected in intelligence test scores. Gibbons and Savage (1965) however, found no significant correlations between the Alf. 5 test and theory of education examination marks with
their sample of 60 training college students; Cortis (1966) found a somewhat different result with his sample of 259 students. He found that Verbal Intelligence as assessed by the AH. 5 test was significantly related to success in all academic examinations except Theory of Education.

Pilkington and Harrison (1967) used both the AH. 5 test and the Valentine Reasoning Test for Higher Levels of Intelligence. The scores were correlated with final degree classification and gave coefficients which were low but significant at the . 01 level. Neither test was recomended by the authors for use in selection procedures.

In a more thorough appraisal of the situation, Lomax (1969) used a stratified sample of 46 women and 22 men: in a college of education. He administered the W.A.I.S.m the AH.5, the Culture Fair intelligence scales and Factor B of the Cattell 16 P.F. questionnaire. Included in the analysis was a comparison of the upper and lower qua $i$ tiles of the students when ranked on three different criteria of success, namely a Composite mark, Academic grades and Teaching grades. The significant differences are summarised in Table 1.

Table 1 A comparison between Upper and Lower Cuartiles


The actual correlations between the examination result for the Main Academic subject and the A.H. 5 were as follows:

Sample
Men + Women ( $N=68$ )
ㅍ
Sts.

Homen only $\quad(N=46)$
+0.257
.05

Men only, $(\mathbb{N}=22)$ The correlation was non-significant.
Correlations between the examination result for the Main
Academic subject and the H.A.I.S, Vocabulary test were much higher and involved all three samples. They were as
follows:

| Sample | E | S1k. |
| :--- | ---: | ---: |
| Men + Homen $(N=68)$ | +0.501 | 01 |
| Homen Only | $(N=46)$ | +0.560 |

In the context of the present investigation, It is of interest to note that Lomax (1969) has indicated that students of higher general intelligence tend to achieve greater all round success and greater academ1c success at a college where importance is attached to academic attainment. Unlike the conclusion reached by Pilkington and Harrison (1967), Lomax concluded that the AH. 5 group test of Intelligence promised to be a useful predictor of academic success at college. In this context, the W.A.I.S. Vocabulary Test also appears to have promising predictive qualities.

## SUMMARY

In investigations using unselected groups of subjects, intelilgence has been shown to bo a major factor in assessing an individual for vocational or clinical purposes. Heim (1947) has published relevant findings in this area.

However, Varburton, Eutcher and Forrest (1963) and Eysenck (1967) have Indicated that within a highly selected superior group that differences in intelligence play a relatively minor part when compared to the contributions of specific aptitudes, temperament and interests.

The above review indicates the lack of any clear relationships between intelligence and teaching ability. The general ifindings has been in the direction of low positive correlations which tend to be insignificant.

The relationships between inteliligence and academic attainment are not very strong but lead to a clearer picture being obtained. Lomax (1969) has pointed out that very few investigators tend to include more than one test of intelligence in their test battery. He has provided evidence to show that when a variety of intelligence tests are used (such as W.A.I.S., AH. 5 and Cattell's Culture Fair Intelligence test) the relationships between intelligence and attainment can be seen much more clearly.

## C. CRITTCAL THINKING ABILITY

Watson and Glaser (1952) clain that the ability to think critically involves the following:
a) An attitude of wantins to have supporting evidence for opinions or conclusions before assuming them to be true.
b) A knowledge of the methods of logical enquiry which help determine the weight of different kinds of evidence and which help one to reach warranted conclusions.
c) Skill in employing the above attitude and knowledge.

The Intercollege Comittee on Social Science Objectives (Dressel and Mayhew 1954) defined the concept of critical thinking as the sum of particular abilities. Edvards (1950) believes that critical thinking is assumed to require abilities involved in reaching conclusions by means of facts. In an experinent involving 1,000 pupils, he found that the critical thinking test used did not measure pupilis on elther the basis of intelligence or achievement. Ho concluded by indicating that critical thinking might be taught as a skill.

The Intercollege Comittea on Social Science Objectives (Dressel and Mayhew 1954) presented evidence that was different to that of Ddwards (1950). They developed a 'Test of Critical Thinking in Social Science' and administered it to 5,250 freshmen from a total of
seventeen colleges. The subsequent analysis included a correlation of +0.51 with intelligence and correlations ranging from +0.69 to +0.74 with examination marks obtained in social science courses. Further work by the Committee substantiated the above findings. Analyses of critical thinking tests are relatively rate in the published literature. Rust (1960) with a sample of 949 American students and three eeparate tests of critical thinking, namely the A.C.I. Test, the Watson-Glaser and the Principles of Critical Thinking Test. An analysis of separate inter-item correlations yielded only one weak general factor on each test. Later, Rust, Jones and Kaiser (1962) reanalysed the scores on sub-sets (rather than using individual items) and identified the following three factors.
a) General reasoning.
b) Logical discrimination (the application of logical principles).
c) Semantic (verbal) understanding.

Such results as the above give a degree of credence to the criticisms of Hovland (1959) who stated when reviewing the Watson-Glaser tests

> "It is also true that since the theoretical relationship between critical thinking and the measures of intelifgence is not established, it is difficult to assess whether the correlation of . 70 reported betwedn this test and the TermanMcNemar test of mental ability means that the Watson Glaser test is measuring a single aspect of intelliligence or is just another form of intelilgence test.

However he also suggested that
"This is a very promising test for use as an experimental basis for selection purposes".

Vernon's (1961) viewpoint was that such tests may be a "form of complex reading comprehension tests" and indicated the difficulty in differentiating the higher mental processes which it was believed these tests measured because of the high correlation between the tests designed to elicit them.

Penfold and Abou - Hatab (1967) conducted a factor analysis of verbal critical thinking using a sample of 170 boys and girls from the sixth forms of three grammar schools. The authors adopted the hypothesis that critical thinking is mainly an evaluative ability which is a decisive process in the process of thinking. They suggest that it occurs toward the end of intellect functioning and includes various functions such as memory, knowledge and comprehension. In other words, the subject uses his intellect to analyse the various components of the problem and having done this then utilisesthe latter functions given above to synthesise those aspects required for the solving of the problem. Having administered thinking tests they suggested that the following five verbal critical thinking factors would emerge.
a. verbal identification b. logical evaluation
c. experimental evaluation d. judgement e. sensitivity.

The results indicated difficulty in separating them from other cognitive and productive factors (Guilford's model) and the three categories of cognition, production and evaluation showed high degrees of overlapping.

The two major factors extracted were
a. analytic thinking b. intuitive thinking.
with a weaker factor being given the title of "deduction". Sez differences emerged with analytic thinking being done best by the boys whilst the girls excelled at intuitive thinking, with no appreciable sex differences on the third factor of 'deduction'.

Further analysis indicated that intuitive thinking was dependent upon verbal ability and to some extent on the education of correlates. Analytic thinking, on the other hand, was dependent upon induction, deduction and general reasoning. The two factors did not have equal 'g' saturations. The authors concluded that the majority of 'critical thinking tests' including the Watson-Glaser Appraisal were in fact tests of analytic thinking.


#### Abstract

SUMMARY. The studies reviewed above tend to indicate that critical thinking ability is not synonymous with intelligence. However, Edwards (1950), Watson and Glaser (1952), Dressel and Mayhew (1954) and Rust (1960) have each reported correlation coefficients of varying magnitude between critical thinking and intelligence. It


was the high correlations which made Hovland (1959) point out the difficulty of establishing a true relationship between the two variables. We are thus left with two different viewpoints. Penfold and AbouHatab (1967) fall in between with their assertion that critical thinking is an evaluative ability that takes place at the end of intellect functioning.

Positive relationships between critical thinking ability and examination grades have been reported Independently by both Dressel and Mayhew (1954) and Watson and Glaser (1952). They concluded that such correlation coefficients are usually higher than those between examination grades and academic aptitude tests. Their claims are not supported by the work of Edwards (1950).


#### Abstract

D. PERSONALITY FACTORS AND EDUCATIONAL ATTATNAENF.

This section of the review of literature pertinent to the present study is restricted to a consideration of those studies concerned with subjects over oighteen years of age. Those studies which have investigated the relationships between personality factors and educational achievement at student level have been given special consideration.


The criterion of educational achievement in a College of Education may be more than that of a summation of various marks and grades (such as occurs at many universities). In a College of Education the following may contribute to different criteria of educational achievement:
a) Academic attainment - measured in terms of both practical and theoretical work and in terms of continuous assessment procedures and examinations.
b) Teaching Practice grades.
c) A combination of the above factors.

Most of the researches completed to date have used groups of university students although the number of sivdies using College students is growing.

The work of Eysenck and Cattell looms large in this area as they and their associates have produced a large mumber of both research reports and test instruments designed to throw some light upon the relationships between
personality and educational attainment.
Eysenck (1957) has postulated that those subjects who score highly on scales of neuroticism and low on extraversion should be high achievers in terms of educational criteria. He links his personality dimension of neuroticism with autonomic drive and the concept of extraversion with accumulation and slow dissipation of reactive inhibition.

Furneaux (1957) supports Eysenck's theory and found that university students who attained high levels of achievement scored more highly on neuroticism and lower on extraversion than did less successful students. He postulated that extraversion only really begins to have a detrimental effect upon educational achievement at the university level. He indicated that introverts were superior to extroverts in terms of educational attainment on the basis that they
(1) condition faster than extroverts.
(ii) attempt tasks more slowly and carefully than extroverts.
(ii1) are more capable of sustained attention to detailed tasks.

Support for the above view has come from Broadbent (1958) who divided twenty-four students graduating from Cambridge University into two groups on the basis of those obtaining 'good' or 'poor' degrees. The 'good' group had significantly lower scores for extraversion than the poor' group, Broadbent also found that the two groups did not differ on intelligence as measured by the AH. 5 test. He concluded that
introversion - extraversion acts independently of intelligence.

Lynn (1959) corroborated the above findings. Ho assessed the levels of neuroticism and extraversion of 115 men and 96 women in their first year at University, in relation to two control groups. These groups were composed of
a) $\quad 100$ apprentices - using scores obtained by Fiold (1959).
b) $\quad 67$ women occupational therapy students. Using the Maudsley Personality Inventory, he found that the university students had significantly higher mean scores in neuroticism (. 05 level) and significantly lover mean scores in extraversion (. 05 level) than the control groups.

In the following year, warburton and Hadley (1960) divided a sample of 300 students at colleges in England into two groups of
a) successful students.
b) less successful students.

The test used to assess personality was Cattell's 16 P.F. questionnaire. The results indicated that scholastic achievement was clearly related to stability and in particular with the primary factors of G+ (conscientiousness) and high self-control ( $\mathrm{Q}_{3}^{+}$).

Lymn and Gordon (1961) followed up Lynn's (1959) eariler investigation and administered the M.P.I. the Mill Hill Vocabulary Test and the Raven Progressive Matrices Test to sixty male university students. Findings supported his earlier work, namely, superior academic ability was
associated with neuroticism. The authors quoted an 'optimul level of neuroticism for academic success to be half of one standard deviation above the national average. They found no significant linear correlation between neuroticism; introversion or intelligence.

In comparing the scores of American university students, British graduate student teachers, and British students in a College of Advanced Technology using the 16 P.F. questionnaire, Cattell and Warburton (1961) found the following results. then comparisons between British students were made, the University graduates were found to be more introverted and more anxious than the C.A.T. students.

The work of Savage (1962) in Australia: is of relevance. He gave the M.P.I. to 168 students of both them sexes when he placed/in five groups according to their level of attainment in the final examinations. An analysis of variance technique was used to analyse the neuroticism and extraversion scores of the five groups. Academic failure was positively related to higher levels of neuroticism and low scores in extraversion.

Although this review of research is not concerned with investigations concerning children the following work by Warburton (1962) is of importance. He reported a summary of work carried out in America on the relationships between anxiety and school achievement. In $93 \%$ of the studies, anxiety was related to poor achievement and stability to good achievement. Of these findings Warburton stated:

> Possibly neuroticism has two different effects upon attanment, a disorganising one on learing and performance in stress situations, but a facilitating one In so far as it motivates sustained work. Further, the buik of research suggests that at the educational Ievel of the university and school gixth form its disorganising effects seem to be more than compensated for by its motivating powers."

In a later investigation Warburton, Butcher and Forrest (1963) tested one hundred graduate student teachers. The test battery included the 16 P.F. questionnaire. Stability, conscientiousness and unconventionality correlated at the .05 level with final theory marks. Also, final teaching grades were correlated at the .05 level with conscientiousness and sensitivity. They concluded that the successful student could be described in terms of being stable, self-controlled and conscientious.

Halliwell (1963) correlated M.P.I. scores with theory of education using a sample of 170 students training to be teachers. A significant and negative correlation of -0.203 was found between neuroticism and the theory of education grades.

Using 145 students drawn from four training colleges ( 55 men and 90 women) he compared their performance on both the M.P.I. and the revised Bernreuter Inventory with that of 144 graduates ( 76 men 68 women) who were completing a one year teacher training course in a university. The college students wore significantly higher on measures of extraversion and sociability. Also, $30.88 \%$ of the graduates could be classed as neurotic introverts
as compared with 17. $12 \%$ of college students. No significant correlation was found between neuroticism and academic success. Introversion, however was associated with good attainment.

In a review of forty-two personality studies, Warburton (1964) found that twenty-nine of them associated stability and not anxiety or neuroticism with educational attainment.

Using a sample of 60 training college students, Gibbons and Savage (1965) reported a significant correlation coefficient of +0.299 between marks obtained in an education theory paper and extraversion as assessed by the Eysenck Personality Inventory. They also reported a negative but non-significant correlation coefficient of -0.088 between examination marks and introversion.

The comprehensive review of 34 investigations by Cortis (1966) completed before 1965 linking attainment and personality indicated that two were inconclusive, fourteen positively associated with stability and eleven with neuroticism. Cortis also gave the 16 P.F. questionnaire to 158 students drawn from three colleges of education. The results were inconclusive but tended to indicate that several of Cattell's primary factors associated with both stability and extraversion correlated positively with academic performance.

- In a similar study, Soloman (1967) administered a battery of tests including the 16 P.F. questionnaire to 155 men and women students attending a day college of education. The majority of the sample were mature students.

She found that stability, extraversion and radicalism were significantly and positively associated with success on the course.

Using the 16 P.F. questionnaire, McClain (1968) correlated the results of 74 men and 122 women teachers with ratings for teaching proficiency. An attempt was made to predict performance using a combination of weighted factors. Successful male teachers were characterised by stability, responsibility, non-competitiveness and freediom from tension. Successful females were characterised by competence, enthusiasm and spontaneity.

Morgan (1969) analysed the records of 1020 students in order to evaluate predictors of academic and practical teaching success. The sample represented the entire female intake for the years 1965, 1966 and 1967. The criteria of success were teaching practice marks and examination results. The following primary factors had positive correlations with all the main criteria of academic success.

| Factor | Description |
| :---: | :---: |
| B | Intelligence |
| C | Stability |
| E | Assertion |
| G | Conscientiousness |
| I | Tendermindedness |
| M | Imagination. |

In addition, Factor I (emotional sensitivity) was also a predictor of success for each of the three teaching practices.

Davis and Satterley (1969) divided 149 female students into two groups using teaching ability as the criterion. Four factors differentiated between the two groups. Poor teachers were less conscientious and. persistent (C-), tenderminded and sensitive (I) and were prone to feelings of insecurity and timidity ( 0 ). They were also liable to be tense, excitable and restless (Q4).

Included in the large battery of tests administered by Lomax (1969) to a stratified sample of forty-six women and twenty-two men students in a college of education was the 16 P.F. questiomaire. Fourteen of the 16 P.F. variables correlated significantly with one or other of twelve criteria of the successful students but no clear pattern emerged. He condluded that "different patterns of personality factors seem to be associated with different criteria of success and it would not seem advisable to talk about tho 'personality' of the 'successful teacher'".

## SUMMARX

The above results are far from conclusive in pointing to specific personality traits being associated with various criteria of teaching success. However, the picture achioves some clarity when the researches are separated into those using college samples and those using university students. In the former case, stability was found to be associated far more frequently with attainment and neuroticism in investigations utilising university students. Warburton (1962) and Ley, Spelman, Davies and Riley (1966) have each given reasons for the corroboration of the above.

The problem when considered solely in terms
of the college of education students is made more complex because success in college is measured in terms of more than examination grades. Practical subjects are included in the assessment of college students and such assessments may favour the extravert. Also, the popular stereotype of the successful student teacher is that of the outgoing, well-adjusted person (qualities which favour the stableextrovert). Furneaux (1957) also suggests that stableextraversion is a factor in success in college by indicating that extraversion only begins to have a detrimental effect on educational attainment at university levol.

Shipman (1965) attempted to place the studies completed prior to this date in perspective by stating (p.10).
" Research into training colleges has concentrated on discovering factors which lead to successful performance on the course and to successful teaching afterwards. Evans (1959) and Allen (1963) reviewing such research concluded that it had ifttle practical value in a time of teacher shortage and was open to serious theoretical objections. Thus it depends on establishing criteria distinguishing good from bad teachers, but the evidence on these was contradictory and inconclusive. Further, the results merely established a number of low correlations between success and a variety of intellectual attributes, onily Cornwell (1958) using sociometric techniques presented a single easy index, easy to calculate and superior to the subjective assessment of college staff."

## E. MOTIVATION

The concept of motivation is important, extensive and responsible for a vast array of books, research papers and periodical articles. Much of the field is of no direct concern or relevance to the present investigation but the literature reviewed below gives some indication of the concept of 'achievement motivation' which has been utilised by the present investigator.

The fleld of research into the 'motive to achieve" has been influenced primarily by the work of Cattell and his associates and that done by McClelland and his coworkers. In the present case the work of the latter author has been used as a basis for the following review of IIterature.

Butcher (1969) in reviewing the field of achievement motivation has indicated that one of two methods is generally used.
a) By analysing responses to Thematic Apperception Test Pictures (a projective technique).
b) By questionnaires.

To date, the questionnaire method seems to be the more successful, possibly because of the low reliability which is associated with the T.A.T. System. Butcher indicates however that there are still doubts and uncertainties to overcome before we have a measuring device which is generally acceptable in terms of high validity and reliability coefficients.

The most promising work in recent years has been that of Lynn (1969) who has developed a measure of N.Ach.

This experimental measure assesses the concept of achievement motivation as outlined by Mcclelland. The scale was derived by factor analysis which showed that most of the components of achievement motivation loaded on a single factor. Lynn's (1969) article gives norms for several groups. Three criterion groups of successful people scored significantly highly on the scale, namely entrepreneurs, professors and managers. The scale was unrelated to neuroticism and extraversion but was correlated with Cattell's superego strength. Permission was given by Lynn to use the questionnaire in the present investigation.

A large scale investigation involving a random sample of one in $31 x$ students taken from 10,000 merit finalists in the United States was undertaken by Michols and Holland (1963). The subjects were of a very high ability such that intelligence and aptitude were not likely to discriminate between members of the sample. One hundred and fifty measures were correlated with fourteen criteria of first-year college achievement. The following nonintellective variables proved to be predictors of firstyear college grades.
a) Ferseverance and motive to achieve.
b) Conformity and socialisation.
of interest was the finding that most of the measures in these two clusters were still significant predictors when high school record was partialled out. They concluded that this indicated that motivation and determination to succeed assumed a new importance at university level as distinct from being just a
continuation of an already well established habit.
Shaw (1961) used a sample of 78 students from junior and senior high school classes. They were selected upon the basis of having achieved an I.Q. score of 110 or above on the California Test of Mental Maturity and also on a classification of high or low achievement based upon end of year grade point averages. The sample completed three tests, namely
a) The McClelland Achievement Motivation Test.
b) The Edwards Personal Preference Schedule.
c) The French Test of Achievement Motivation.

In Ia comparison of the two groups, the results showed that none of the need achievement scales differentiated achievers from non-achievers with the exception of the French scale. In this case, the scale differentiated male achievers from male under-achievers.

Using 139 undergraduate students, Knight and Sassenrath (1966) investigated the influence of achlevement motivation, test anxiety, and performance in programmed learning. The following tests were completed,
a) The Iowa interpretation test (achievement motivation).
b) A Test Anxiety Questionnaire.
c) An achievement pre-test.
and the following criteria were used to assess performance on the programed learning course.

1 Time to complete the material.
11 The number of incorrect responses.

## 111 A short term retention test.

The high achievement-motivated students performed significantly better on all criteria than did the low achievement-
motivated students.
Using a 24 Item self-rating inventory designed to assess academic motivation (described by the author as being a specific aspect of the more general personality trait of achievement motivation. Entwhistle (1968) tested 2,707 thirteen year old children. Of the several conclusions reached, the following were of particular importance.
a) The inventory correlated more closely with school attainment thon with reasoning ability.
b) Academic motivation scores also distinguished between groups of children who had improved their academic performance after transfer and those who had deteriorated. This distribution could not be attributed to social-class difference.

Entwhistle and Entwhistle (1970) administered an academic motivation questionnaire, a study methods questionnaire and the Eysenck Personality Inventory to a sample of 139 University students and 118 college of education students. A correlational analysis related to academic performance at the end of the first year courses yielded the following results.
(1) The successful students in both the university and the college tended to have below average scores on extraversion.
(ii) They also had high scores on the study methods and academic motivation scales.

They established a clear link between good study methods, introversion and stability.

The main purpose of the investigation by Hamilton (1970) was the assessment of the relationships between noncognitive parameters and performance in university examinations compared with cognitive and scholastic antecedents. He assessed sixty-four scholastic, motivational, Intelligence and personality variables using a sample of 169 first-year university students. He found that personality and motivational variables were statistically related at significant levels with the examination criterion and that the normal predictors used by university selectors such as 'A' level results and the personal interview were fairly imperfect as methods of assessing the suitability of candidates.

In a research using schoolchildren, Bruckman (1966) assembled a sample of 204 boys and 179 girls in the 3 rd and 4th forms of three London schools. McClelland's achievement motivation technique was used to give a level of N.Ach. and the N.F.E.R. verbal reasoning test and the Simplex Intellegence test were administered. No important sex differences in levels of N.Ach. were found but higher achievement motivation was associated with older children. The main relationship was between achievement motivation and intelligence, the N.Ach. scores of the ' $A$ ' stream children being significantly higher (. 01 level) than the children In the 'B' stream. However, when intelligence was partialled out, the relationship between need for achlevement and school success diaappeared and no significant stream differences were found.

SUMMARX
The majority of the investigators reviewed above support the hypothesis that there is a positive relationship between achievement motivation and attainment. The work of Shaw (1961) gives limited support to the above but that of Bruckman (1966) strikes a discordant note in that it conflicts with the findings of the other investigators.

The degree of contradictory evidence is confined to one single investigation which was concerned with 13 and 14 year old children. Bruckman's (1966) findings are hard to account for in view of Intwhistle's (1968) results but it would appear that the role of intelligence was important. Also, before intelligence was partialled out, the 'A' stream children had significantly higher mean scores than those in a lover stream. It is concluded, therefore that the hypothesis put forward by the present investigator suggesting a positive relationship between mediocre academic grades and a measure of achievenent motivation is tenable. In other words, it is hypothesised that those students who recelve mediocre grades will also display a nediocre level of H.Ach.

## F. VALUES

Spranger (1928) in classifying human beings into six basic groupings postulated that the personalities of men are best known through their values or evaluative attitudes.

Vernon and Allport (1931) in an early study designed to test the validity of Sprancer's theory constructed a questionnaire which measured values in terms of broad areas of cultural activity. These areas corresponded to Spranger's 'Economic', 'Aesthetic', 'Social', 'Political', and Religious'.

In 1951, Allport, Verion and Lindzey (1951) published a revised version. This revision contained a revised social value scale which in the original form had poor rellability. Richardson (1965) published a Eritish Edition which made no changes in the test items from the 1951 revision but incorporated improved norms suitable for a British population.

After factor analysing the Allport-Vernon study of values, Duffey and Crissey (1940) reported three factors.
a) A Philiatine factor - this factor emphasised utility and power and an interest in business at the expense of beauty and harmony.
b) A Social factor - this factor emphasised an interest in people.
c) A Theoreitical factor - this factor emphasised an interest in trith and science.

Not only did they fail to locate a religious factor but they found that economic and political values
were highly intercorrelated. They also found that these latter factors were correlated with the Fhilistine factor. The large-scale study conducted by Guilford and Christensen (1954) using United States Air Force Personnel used one hundred separate headings. These headings were used to describe a wide variety of courses of motivation, needs, drives and attitudes. Cuestions concerning religious views were specifically excluded. Even so, four factors were extracted which corresponded to Spranger's model. In summary they were as follows:
a) A Scientific factor corresponding to the theoretical type.
b) A business factor corresponding to the economic type.
c) A social welfare factor corresponding to the social type.
d) Two aesthetic factors.

Hilton and Korn (1964) examined systematic changes in the scores of the Allport Vemon Lindzey study caused by repeated administrations of the test. The sample was composed of 20 men and 10 women and it completed the test seven times at one month intervals. It was hypothesised that there are certain stable differences in values between the sexes and between groups with different occupational occupations. They also suggested that there are pressures on the members of a group to accept these values. The following predictions were made.
a) that men would score more highly than women on the theoretical, economic and political scales and lower on the aesthetic, social and religious scales.
b) that students in graduate school would have higher
scores than engineers on the political and aesthetic scale.

The results clearly demonstrated that there are patterns of personal values which distinguish members of one occupational, educational and social group from another group. They also indicated that there can be significant changes in values of the members of a group. A detailed analysis revealed that test performance did not suffer from the seven successive examinations. Test-retest reliability coefficients computed over the six scales for seven administrations ranged from +0.74 for the political scale to +0.89 for the religious scale, with a mean coefficient of +0.82 .

Evans (1967) in the first of two studies, administered the British Edition of the Study of Values test and also the Minnesota Teacher Attitude Inventory to a sample of 78 post-graduate students studying in a university department of education. The tests were administered twice, in October 1965 and in May 1966. The differences between the scores of the men and women on both docasions were sufficient to Justify treating them as separate groups rather than as sub-groups of the same population. The differences between the scores of women students following the two administrations were very small although the differences between the scores of the men showed some variation, for example, the mean score on social values had increased significantly, whilst the economic value score had actually declined. They attributed this to the emphasis in a teacher training course away from
purely utilitarion values and towards social values. Theoretical, aesthetic, political and religious values seemed to be affected only marginally by experiences encountered during the course.

Evans (1967) investigation again employed the above tests with the following six groups.
a. 32 Post-Graduate students undergoing teacher training.
b. 32 Anglican theology students.

21 Baptist theology students.
18 Ingineering students.
22 Experienced primary school teachers.
24 Experienced graduate teachers.
The analysis was followed by the following conclusions. 1. The graduate teachers in training for teaching acquired during their course attitudes particularly towards pupils that resembled those held by the experienced primary teachers.
2.

The values of the graduate students resembled those of the experienced primary teachers more closely than either the theology or engineering students, and that this resemblance existed before and not as a result of their training.
3. The three student groups did not differ in their social values and as a result it would appear that high scores appear to be a common characteristic of youns human beings rather than as a distinguishing feature of any particular Eroup.

In reviewing a study by Cowan, Anderson (1966)
found that gifted students scores high on theorotical and
political values but lower on economic and religious scales than did the less able students. The sample was composed of education 'majors' at an American university.

Lomax (1969) in investigating the characteristics of successful student teachers used the Eritish Edition of the Study of Values test. Table 2 reports the pattern of significant differences which occurred between successful and less successful students on measures of values. Significant Differences between Successful
Tablo 2

Lomax (1969)

| CRITERTA | METN | WOMEN |
| :---: | :---: | :---: |
| Main Academic Subject Grade. | - | Economic Values Sif. - . 05 leval |
| Theory of Education Final Exam Grade. | Social Values Sig. +.051 ev | - |
| Rating of suitability for the teaching profession by Main Academic Depts. | - | Aesthetic Values Sig. - . 05 level |
| Social Awareness: Interview Rating | Theoretical <br> Values. <br> Sig. -. 05 lev. <br> Economic <br> Values <br> 31r: - 01 lev. | - |
| Interests: Interview Rating. | Theoretical <br> Values <br> Sig. .. 05 Iev. <br> Relitious <br> Values. <br> Sig. +. 05 lev. | - |

Legend.

+ :- The value scale was positively associated with success.
- :- The value scale was negatively associated with success.
of interest was the fact that when men and women were combined
as one sample, no significant differences were found.

Warburton, Dutcher and Forrest (1963) administered a large battery of tests including the study of Values to one hundred post-graduate student teachers. Higher scores for Economic Values correlated significantly and negatively with achlevement in final theory marks (. 05 level) and certificate awards (.01) level.

Gallop (1970) gave a battery of tests which included the Study of Values to a stratified sample of 50 B.Id. students and 50 Certificate students. The results indicated that the B.Ed. men were more theoretically minded than the Certificate men students ( $P>.05$ ). other results indicated that the B.Ed. women students were more politically minded than the Certificate women students ( $P>$. 05).

## SUMMARY.

The Allport Vernon and Lindzey test is based upon Spranger's theory and has been used extensively. The Dritish Edition by Richardson (1965) has enhanced its use in this country. The factor analytic studies of Duffey and Crissey (1940) and Guilford and Christensen (1954) have given a degree of corroboration to the theoretical assumptions underlying the test.

The studies of Hilton and Korn (1964) and Evans (1967) and (1969) indicate that the values of college groups do change. The trend of such changes is in the direction of their becoming more related to their achievements as their courses progress. Also, patterns of personal values have been shown to distinguish members of educational and social groups from one another.

Evans (1967) and (1969) found an increaso in liberal views and social value scores in several groups and concluded that such gains appear to be a common feature of all student samples.

Warburton, Butcher and Forrest (1963) Anderson (1966) and to a lesser extent, Lomax (1969) have independently indicated a negative relationship between economic value scores and achievement. Anderson (1966) also reported a positive correlation between achievement and theoretical and political values for men and political values for women. York by Gallop (1970) supports these findings in respect of theoretical values for men and political values for women.

The results reported by Lomax (1969) conflict with the above findings in that he reported negative correlations between theoretical values for men and the criteria of social awareness and interests. Lomax (1969) also Lound a positive correlation between religious values and an interest rating based on an interview whereas Anderson (1966) reported a negative correlation between religious values and attainment. It should be noted however that whereas in these latter eases Anderson's work includes achievement, that of Lomax uses different criteria.

## G. ATTITUDES.

The concept of attitude has been defined by Thurstone and Chave (1929) pp 6-7 in the following terms. They stated that an attitude was composed of
"... the sum total of a man's inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears, threats and confictions about any specific topic".

A review of other definitions by Allport (1935), Cattell (1946) and 0sgood (1957) Indicated the following common points being established.
a. Attitudes are acquired and learned from a variety of personal sources.
b. Attitudes may be subjective and personal and may also be common to the group.
c. Attitudes have both direction and intensity ranging from highly favourable to highly unfavourable.
d.

Attitudes are not immutable and nay be replaced by on attitude which is the direct opposite or a void.

The following review of ifterature pertinent to the present study is confined to investigations involving students.

In using the M.T.A.I. with 74 primary school teachers, Fuller (1951) found no relationship between scores on the test and supervisors ratings, He expressed the view that the M.T.A.I. was not sensitive enough to distinguish groups in a homogeneous sample.

Sandgren and Schmidt (1956) also used the M.T.A.I.
on a sample of 393 student teachers. On the basis of the K.T.A.I. scores the sample was grouped into upper, giddle and lower sub-samples. No significant relationship was found between the scores of the sub-samples and experienced teachers ratings. The authors concluded that the M.T.A.I. was not useful as a predictive instrument.

Stein and Hardy (1957) however in using the M.T.A.I. with 100 Canadian students practising in primary schools, and 26 students practifing in secondary echools found a different result. The students were assessed on two measures of pupil ratings, a supervisor's rating, and a composite measure. Four correlations between the ratings and the M.T.A.I. scores were obtained for each classiffication of school. Six of the eight correlations were found to bs positive and significant at the .05 level. The work of Evans (1958) supported the non-significant relationships found by ruller (1951) and Sandgren and Schmidt (1956), Evans administered the M.T.A.I. to 109 students in a university department of cducation. No significant correlation between practical teaching and test scores were found. However, a significant correlation of +0.249 with theory of Education grades was found.

Using a form of Osgood's Semantic Differential, Weaver (1959) studied the semantic distance between students and teachers on certain concepts and the effects of this distance on leaming. He indicated that although the major limiting factor in a student's achievement should be his native ability he belived that it was not so. He hypothesised that consistently poor attitudes towards study might have a substantial effect upon subsequent learning.

He concluded that in his particular sample, the influence of attitude upon learning was about one quarter that of intelligence. He also concluded that the semantic distance also seemed to be a semantic barrier. The findings indicated that the semantic distance correlated significantly with achlevement and had a significant influence upon the accuracy of prediction.

Warburton, Butcher and Forrest (1963) included the Oliver attitude opinionnaire in a large test battery. A sample of 100 students from a university department of education completed the test. A significant correlation of +0.199 was found between the marks in the theory of Education and the scale scores for Tendermindedness.

Herbert and Turnbull (1963) used the M.T.A.I. to compare the attitudes of first and third year students studying at a Scottish college of education. The M.T.A.I. successfully discriminated 130 good from 96 poor students in terms of college teaching assessments.

Bruin (1964) used the M.T.A.I. with his sample of 250 undergraduate students training to be teachers, at the beginning and end of terms. His findings showed that there was a more liberal position in attitudes towards children; that the under-graduate teacher education faculty appeared to be influencing student attitudes by attracting them towards their own position and thirdly, that student mean scores were higher (i.e. Indicating a more liberal attitude) with each level of progression throughout the undergraduate teacher education programe.

One year later, Tarpey (1965) gave the M.T.A.I.
to two samples of students containing 31 and 39 subjects respectively. Her results included significant correlations of +0.434 and +0.330 between the inventory scores and practical teaching grades for the above groups.

Oliter's Survey of Opinions about Education was used by Cortis (1966) to a sample of 259 students drawn from three training colleges. A significant correlation of to.182 ( $p>.01$ ) was found botween naturalism in education and practical teaching. Of note was the finding that this was the solitary significant correlation between the many predictor variables and the criterion of practical teaching.

The purpose of the study by Neidt and Hedland (1967) was to investigate the relationship between changes in attitudes towards a course and final achievement. The sampleof 573 students were assessed on five attitude measurements (regarded as predictor variables) whilst the criterion was their final course grades. The findings indicated that student attitudes towards a particular learning experience became progressively more related to achievement in the learning experience as the period of instruction progresses.

A sample of 72 students was used by Willoughby and Wooford (1968) to assess the relationships between attitudes and scholastic behaviour. A sentence completion attitude scale measured attitudes towards two specific factors namely 'Instructor' and 'The Course', and two general factors 'College' and 'Life'. Scholastic behaviour measures were related to Absences, Tardiness and Course Grades. The results indicated that the Course

Grades variable was positively and significantly related to attitudes towards the College.

Using a sample of 97 students enrolled in the Department of Education of the University of Hong Kong, L1 (1969) related student attitudes towards teaching to performance on a teacher training course. Tests administered were the M.T.A.I., the Raven Progressive Matrices Test (1938) and the AH. 5 Intelifgence test. The following results are of note.
a) The Hong Kong students responded to the M.T.A.I. In a manner similar to that of British students rather than as American students.
b) A significant relationship was found between student attitudes towards teaching and thoir performance in the Diploma of Education course.
c) Significant correlations were obtained between M.T.A.I. scores and end of year theory examination marks.
d) Those students who were awarded a credit for practical teaching had significantly higher M.T.A.I. scores than those students who were awarded a pass.
e) Scores for intelligence did not relate to performance on the Diploma in Education course.
to obtain a measure of the attitudes of 245 college of education students towards their place of training and towards the teaching profession, Kitchen stated that:

> " It is highly probable that the way students evaluate their college and other aspects of teaching, determined their success and satisfaction.

The results suggested that male and female students have an overall similarity in their judgements, and in general a favourable impression was gained of their approach to their professional and social responsibilities. Both men and women had a favourable attitude towards their college and associated it with ambition. Differences between first and third year students indicated a greater emphasis by the third-year men on the concepts closely concerned with teaching. The attitude of the women to the profession was not so clearly defined.

## SUMMARY

Results of investigations using the M.T.A.I. as a means of assessing attitudes are mixed. Several researchers such as Fuller (1951) and Sandgren and Schmidt (1956) have indicated that this instrument is not particularly useful as a predictive instrument. Other researchers such as Stein and Hardy (1957), Bruin (1964) and Tarpey (1965) among others have used the instrument with profit. The work by Weaver (1959) and Kitchen (1970) using Osgood's Semantic Differential, related attitude and achievement. Oliver's 'Survey of Opinions about Education' although limited to sampling three attitudes has been used by a number of researchers.

The above review has indicated that in varying degrees, favourable attitudes towards various aspects of college courses are positively and significantly related to success in college-based examinations and assessments of practical teaching. The work of Brim (1964), Neidt and Hedland (1967) and Kitchen (1970) Indicated that as students pass through college their attitudes towards teaching become more favourable.

All students are a part of the total college environment and share common experiences of its overall characteristics such as general rules and regulations, required courses, attendance at lectures and residential requirements. However, in colleges of varying size and complexity there are sub-cultures which differ from each other and from the rest of tho college community as a whole. The following review outlines some of the researches relevant to the present investigation.

Much of the relevant work has been completed in America although in this country the investigations of Shipman (1965) and Lomax (1969) are of particular interest. The number of studies concerning the college environment or comparisons between college environments is large. Feldman and Newcomb's (1969) The Impact of College on Students has encompassed many of them for a fuller analysis of the current state of research in this area, the reader is referred to this well-documented account. The following review therefore is concemed with

1. Work completed in British institutions.
2. American studies involving the use of the Clark and Trow model of sub-cultural groupings.
3. Investigations concerning College-based peer groups.
4. The British Studies.

Some of the following researches may be regarded as being mainly concerned with the attitudes of students towards their courses of training. The large-scale studies
have been those of the University of London Instituto of Education Students Association and the Union of Loughborough Colleges (1963 and 1964). These studies examined the attitudes of students to working, livins and social conditions within the colleges included in these institutions. In each case a number of colleges was included.

In addition, there hafo been a number of studies by individual resoerchers, Shipman (1965) has criticised both the group and individual investigations by questioning their value in view of the fact that they all exomined attitudes without reference to the environment to which these refer and in which they arise. He and other researchers since have also criticised the basic sampling designs of some of the studies.

For example, Ogren (1953) using postal questionnaires had a non-response rate of $62 \%$ which can be seen to be well over half of the sample. In the surveys carried out by students (referred to above) only in the case of the Loughborough study (1964) was the response rate given. However, Shipman (1965) suggests that they were probably high. As he later points out with justification, response rates of less than $50 \%$ make "nonsense of the complex sampling techniques used in the research by individualst (p.12). Ho concludes a brief review of the literature by stating (p.12).
$n$ However, the fundamental weakness is the failure to relate attitudes or factors in success on the course, to the aims and workings of the colleges themselves. Thus the cormon conclusion of many of these survoys was that students wanted mors teaching practice. At a time when the expansion of the colleges had made this provision very difficult to organise, this was of ilttio practical use. That was important was to find out why students so often denied the usefulness of
theoretical or academic work. This would require on examination of the way students perceived the aims of teacher training and the factors which determined this perception. These determinants Iie in the past and present structure of teacher training and could be examined only by investigating this stiveture.

Ono of the major reasons for the above state of affairs is that time in college is short and whether the investigator is employed in college (like the miter) or from outside (as in the case of a university lecturer using a college-based sample) the material has to be assembled Before the students leave. If one adds to this the time needed for pilot studies, editing and validity and reliability studies, it is easy to see the basis of the above comments of Shipman.

The studies completed in Britain within the last twenty years or so have been mainly confined to the worls of universities, their selection procedures and their problems of wastage. Such studies range from Himmelweit (1963) who investigated the relationships betwoen qualifications and characteristics of the students on entry, through the work of staff-student relations by Marks, Smith and Wright (1962) to very carefully planned diagnostic studies of students attending for medical attention as a result of stress, (Halleson 1961). Other studies such as those of Eden (1959) and Thoday (1957) on the influence of living in halls of residence and the one concerned with the social characteristics of students by the University of Nottingham Union (1962) served to widen the field.

The whole question of the state of the colleges together with the service which they attempt to give has
been raised by Professor Harry Reछ (1968). He suggests the pressing need for a Royal Comaission on the basis that (p.55).

7 Teachers are in danger of becoming impervious to the criticism so many rotten eggs have hit thom in the past few years that now they hardly notice the smell:......."

He cites recent correspondence in the Times Educational Supplement and an issue of the N.A.T.E. Journal. In similar vein, Cohen (1968) has indicated the deleterious effect three years of college experience had on the attitudes of potential teachers. Peters (1968) has indicated how seldom trainers' assumptions about the effectiveness of their courses are tested and when this does take place how ineffective they have proved to be.

In recent years, criticism of the work done by the Colleges of Education has been growing. Many of the conments have been like the following example taken from the Where! supplement of May 1965.

> " whereas they (the students) want to learn to be teachers, actually to impart lnowledge in the classroom, this is the thing they are not taught. Instead they are constantly being dragged up into airy regions of theory; they might say cloud-cuckoo land".

Shipman (1965) found that many college applicants expected an aprentice-type course and that an overwhelming proportion of primary and $40 \%$ of secondary students saw academic work as a secondary priority to that of becoming a teacher. His findings corroborated those of Thimme-Gowdan (1948), Ogren (1953) and Williams (1963) who concluded independently that students ranked academic work below practical teaching and sometimes below professional courses. Baron (1963) p. 144 has pointed out that:

> "The aim is no longer to equip a young man (or woman) with just enough knowledge to enable him to teach the elements of the usual school subjects, hut to extend his General education by affording him opportunities for pursuing one or more subjects of his own choice to as high a level as possible."

Peters (1967) comented upon the above points of view as follows. He asked.
" What are the Colleges of Education? Centres of indoctrination, or places where students - and staff fior that matter - can learn to think fearlessly for themselves".

Robinson (1969) and his co-workers set out to investigate the attitudes of students drawn from one college of education towards the content of the three-year course. Although the study suffers from the weakness referred to by Shipman (1965) in that it does not relate the attitude patterns to the structure and function of the college in general it does have its merits. It links some of its more factual findings such as ' $\mathrm{O}^{\prime}$ and ' A ' level results with those published by Robbins (1963) and the studies published by the National Union of Students. Indication of the rising entry standards of colleges of education is gained by comparing the figures of Robbins with the later figures provided by Robinson.

Robinson (1969) drew attention to the fact that although the Mieaver" Report (1.e. The Report on the Government of Colleges of Education) (p.2)

> n....gave the colleges the chance of incorporating the views of students as a valuable part of the growing machinery of the college communtty. Many have, sadly not done so. Although, as the National Union of Students was quick to point out even Weaver had forgotten to make provision In its recommendations for the assessment of student attitudes within the college."

Like the N.U.S. reports and others which he quotes, Robinson (1969) suggests the need for a reorganisation and restructuring of the personal-social aspects of college Ife. He suggests (pp, 2-3) that

> " The illiberal ordering and administration of many colleges is somewhat disturbing. The pettiness and narrowness of mind all appear farcical in the light of what really matters the education of professional teachers."

The recent works by Eason (1970) and Eason and Croll (1971) throw further illumination on the problems associated With the curriculum facing the colleges of education and their students. Both of these investigations sought to establish the relationship between academic and professional studies in colleges of education in England and Vales. Of the many findings published by the authors of the latter investigation, the following have particular relevance to the work of Lomax cited above and the present investigation. Only about half of the staff and students at the six colleges in the samie thought that the Main course contributed most to the personal development of the students. Curriculum courses brought the greatest personal satisfaction to only $2 \%$ of the students whilst $33 \%$ regarded them as being the least satisfying parts of their course as a whole. only $20 \%$ of the students regarded educational studies as being of particular value for teaching practice whilst an equal number claimed this for their Main subject.

From the point of view of dissatisfaction with the products of the colleges and the ways in which they are taught the critical literature is growing. The following brief review is an indication of the general tenor of the
work recently commented upon by Ree (1968) who suggested that the colleges must either defend themselves or reform. Bibby (1967) has indicated that many teachers regard students as being only half-trained and that colleges are all too often out of touch with the schools. The recent expansion programme has done little but exacerbate this problem in the eyes of many teachers. The journal 'New Education' of December 1968 (p.3) suggested that whilst the colleges had increased in size and student intake, quallty was also important.

Earlier work by Rudd and Wiseman (1962) had indicated that criticisms of courses offered in training colleges (as they were then) were among the main sources of dissatisfaction expressed by a large sample of in-service teachers. Porter (1968) p. 3 outlined one of the main problems when he pointed to the difficulty.
"... of providing large numbers of students In very large colleges of education with the necessary support in the use of leamer-centred methods in schools when they come up against the scepticism of the teacher in the classroom or find themselves in secondary schools orientated to teacher directed learning. "

The above would appear to be in agreement with the earlier comment of Shipman (1963) p. 2 who suggested that there
"... is a danger that increasing numbers will enter the colleges who are so immersed in their growth problems that thexo courses will be inappropriate in a rapidly changing education system."

The recent critique of the Colleges of Education by Koemer (1968) Indicated the extent and direction of the dissatisfactions expressed by members of the teaching professions about such institutions.

Bearing in mind the plea of Shipman (1965) for investigators to relate their findings on attitudes and values to the environment to which they refer and in which they arise, the following studies are of particular note.

Of particular note are the studies of Marris (1964) which sampled from four institutions and Zwoig (1963) who investigated two institutions. In both of these cases the particular aspects studied were viewed in the context of the various institutions being regarded as complex social and working environments. Marris (1964) clearly indicated that living in halls of residence and staff-student relations whilst being organised in similar ways in different institutions can vary widely in quality as a result of other factors produced by the total institutional framework. Now that the expansion programmes of the Colleges of Education have been met and a time of consolidation appears to be near It will be of interest to see just how these 'new' institutions (new because of the fundemental changes which appear to have occurred with the increase in size and the introduction of the B.Ed. degree) cope with their newly created superstructure and role. The recommendations of the James Committee will, no doubt, have a marked effect on the future work of the colleges. Relevant questions in this context would appear to include asking whether the colleges should remain monotechnic or whether they should broaden their range of courses to include preparation for other careers in the social services. One could also enquire if the colleges have a rejuvenated future as liberal arts colleges or the like.

Shipman (1965) concluded his extensive investigation by making fourteen recommendations. Those of particular relevance to the present study are given bilow. He suggested that:
a.

Attention should be switched from the introduction of degree courses for minority to the motivation of the majority. Good performance on the Certificate of Education should be materially rewarded to reduce : frustration and waste of talent.
b. Professional and Education courses should aim at breaking through the insulation from progressive ideas built up by students, rather than by spreading these on top of it.
c. Efforts should be made to raise the demands on students in all courses. Larger lecture groups would enable tutorial supervision to increase without increasing staff work loads. This would facilitate a transfer of responsibility for learning to the students, reducing passive reception. Suitably qualified students should be given the opportunity to obtain exemption from parts of courses as the size of Colleges (and courses) increases.

New building should not increase the separation of residential social and working accommodation.

A high density, with maximum informal contact, particularly between staff and students should be the aim.
e.

The importance of social activity in personal development and professional preparation means that further falls in participation should be stopped. Subjects will have to become the centre of more extra-curricula activity and staff will need to stimulate activity as: increased size and almost continuous teaching practice destroys contimulty.

Looking at the College of Education as an 'exploration
of professional socialization' and in relation to the role of the teacher, Marsland (1969) suggested the following ( p .45 )
in terms of a theoretical model of the educational system.
" It involves interpreting teacher training
as a social system (itself a sub-system of the
educational system and of a specific societal
system similarly conceptualised), that is, as
a complex of interactions and attitudes
characterised by a determinate social structure
and culture, which in its coherency and its
conflicts alike provides a crucial environment
for learning by and change in the students who
pass through it. Specification of the social
systen of teacher education and training as an
agency of socialization permits and requires
a particular focus in research upon (a) the
nature of that learning and change, as
developmont and transformation of students !
professional identities and conceptions of the
teacher-role, and upon (b) the objectives and
goals of the organizations and sub-organizations
involved, and their several collective teacher-
role conceptions as crucial mechanisms in the
production of different patterns and levels of
effectiveness of professional socialization."

Marsland used one whole year group in one college Of cuucation together with a cohort of 150 followed through in a longitudinol design. A variety of dependent variables were measured by scales. Eetween Year 1 and Year 3 of their courses the students changed significantly in the following ways (among others):
a. They became increasingly educational in their orientation to teaching and to classroom interaction, and less acadenic.
b. They decreased in organizational comitment to the school and its demands.
c. They became more affective in their role definitions.
d. They became increasingly progressive and decreasingly traditional in their eaucational philosophy and methods.
c. Their levol of commitment to teaching as a career declined.
f. Their role definitions became increasingly specific, decreasingly diffuse.

Finding (e) above is in accordance with the conclusions of Becker and Geer (1958) who also indicated a 'disidealization' of commitmont in most types of professional trainins and education.

In a recent article in the Sociological Review, Ashley, Cohen, McIntyre and Slatter (1970) commented upon the reasons why students become teachers. This followed an earlier study by Ashley, Cohen and Slatter (1967) designed to furnish material for the instrument used in the 1979 study. The present investigation has used a similar technique, Responses were gained from four samples (based on a sex differentiation of a year-group of graduate students completing a one-year course and a complete year-group of women students taking the threeyear diploma course who were classified as being over or under twenty-one years of age).

A subsequent factor analysis using the Varimax criterion produced five factors. Three factors which were reasonably consistent over the four groups were extracted and named as the 'Teacher as Educator', the 'Teacher as Worker' and the 'Teacher as a Person'. Factor number four was widely different for the four groups and in no case were the results close to the predicted 'Teacher as Teacher' dimension. Of this latter finding, the authors concluded that this lack of cormon identification might have been due to the instrument falling to cover the area adequately or that the population studied lacked knowledge of this aspect of the teachers' role. They concluded that the instrument had merit but indicated the need for more research.

A year later, Rolls and Coble (1971) offered a variety of comments on the above article and regarded it as thought provoking and questioned certain of its suppositions. They posed the question (p.229)
" Can we assume, in fact, that all applicants to the colleges really want to teach, or are some secking to pursuo their own higher education?"

It would appear that further coment from Ashley ot al will be forthcoming presently although the tone of nolls and coble (1971) is one of enquiry rather than of disparagement.

Looking at a different aspect of teacher training and relating it to tho school, Whiteside, Pembaum and Noble (1969) commented upon the aspirations, reality shock and entry into teaching. Their sample of postgraduates undertaking teacher training in a university department of education completed an instrument which indicated whether aspirations in terms of a first teaching appointment were realised. Amons the many findines the following are of importance to the present study. There was a sizeable discrepancy between the numbers wishing to teach in comprehensive schools and the much maller number who actually did enter this type of school (97 students as against 54). The main reasons why many of the students disliked the secondary-modern schools were
a. Cannot teach subject speciality.
b. want to teach able and motivated children.

The move towards a fully comprehensive system over most If not all of the country may cause problems for some of the above respondents since not all the graduate teachers will be able to teach the more able and motivated pupils
majority of the time.
Lomax (1970) investigated a wide variety of aspects conceming student teachers in a large college of education in the north of England. Among the large number of findings the following are of particular importance to the present investigation because of the similarity of some of the measuring techniques and instruments used.
a. On a test of high grade intelligence (AH.5) the top $10 \%$ of the students compared favourably with the most able groups of university students.
b. On the AH. 5 test, approximately half of the college group obtained test scores close to the average score attained by university students.
c. The students were not only able people but also, on average, well-balanced personalities.
d. The men were more interested in economic and political values whilst the women placed more stress on aesthetic values.
e. On the whole, students were interested in their main academic subject but not as much in their subsidiary academic studies, Attitudes to the basic curriculum courses, however, were much less enthusiastic.
f. "Some savage things were said not only about course content but also about lecturers
teaching these courses". (p.45).
g. Psychology was regarded as being interesting; only a slight interest was expressed in the history of education and virtually no interest in philosophy.
h. The verdict on the whole staff was that they were only moderately interesting people although those teaching academic subjects fared better.

1. Teaching practice was regarded as being of prime importance.
j. Generally speaking, the students were satisfied with their choice of career and considered that their future prospects in teaching were quite good.

The work of Lomax (1969) (1970) will be referred to in more detail in a later chapter concerned with the analysis of data used in the present investigation.

SUMMARY.
The ilterature concerning teachers, their preparation, their duties and their satisfactions is vast. Wiseman (1959) found that $10 \%$ of all articles in educational psychology were on the selection, training, adjustment and professional
progress of teachers. Even looking at the restricted fleld of teacher competence, Domas and Tledman (1950) compiled a bibllography of 1006 references. Nuch of the recent work In the field of teacher training has been summarised by Ryans (1962), Conant (1963) and Biddie and Ellena (1964) In America whilst British studies have been ably catalogued by Allen (1963), Shipman (1965), Cane (1967), Cohen (1968) and Lomax (1969).

The above review has indicated the problem areas associated with the work of the Colleges of Education. It has also pointed to the rich field which can be tapped in terms of student experiences in the contexts of the academic and professional training which they receive. In this latter respect, the work of Shipman (1965), Cohen (1968) Lomax (1969) and Eason and Croll (1971) is worthy of special note.
2. American Studies involving the Clark and Trov model of sub-cultural eroupines.

Prior to a study of investigations utilising the Clark and Trow model, it is worth while to briefly survey the alternative typologies which have been used by other investigators.

The published material concerning typologies of college students is not extensive and the following represent the main studies outside of the framework created by Clark and Trow.
a. Tvo typolosies of Vassar students were proposed by staff members of the Mellon program.
(i) Friedman (1956) proposed Type A (well-prepared private secondary zchool graduates), Type B (less well-prepared public school graduates), and type C (relatively naive students usually of minority group origin).
(ii) Brow (1956) used five patterns of college behaviour.

Social activity and peer group orientation. Over-achievers.

Under-achievers with futuro family orientation. High achievers.

Seekers of identity.
b. Wedge (1958) at Yale nominated groups on the basis of their being intellectuals, athletes, the professionally and yocationally oriented, the business oriented, and those that are 'well-rounded' without 'deep commitments'.
c. Steinzor (1960) in summarizing a longitudinal study at the Sarah Lawrence college, used a fourfold typology consisting of 'pre-college maturers', 'college maturers', 'late maturers' and the unresolved.
d. Heath (1964) also used a four-fold typology which he labelled 'reasonable adventurer', 'non-commiters', 'mustlers' and 'plungers'. The sample consisted of Princeton students.

Pace (1964) has written about administrative, faculty and student subcultures and he also distinguishes between various student subcultures along major subject lines such as science, vocational and 1iberal arts.

Comenting on the above researches, Peterson (1965)
stated that
"Typologies, of course, differ according to the purpose and perspective of the investigator constructing the model; certain of the ones mentioned here reflect, for example, the concerns of clinical psychology, and mental health." (p.4)

THE CLARK AND TROY PARADICM.
The focus for Clark and Trow's (1966) paradigm is
drawn from

1. interest in the impact of the college on students.
2. the contention that this impact is realized or mediated largely through the action and influence of peer groups.

Four types of sub-cultures are produced by dichotomizing two variables which they presume to be causally related to the college impact on students. The dimensions are described as follows.
a) 'the degree to which students are involved with ideas!.
b) The extent to which students identify with their college'.
Such a dichotomy gives the following four groups or subcultures.
(1) The acaderic subculture.
(11) The nonconformist subculture. (iii) The collegiate subculture. (iv) The academic subculture.

Peterson (1964) used Clark and Trow's model with 12,949 freshmen dram from 23 colleges and universities which represented a cross-section of American higher education in terms of location, sex, religion and public v private
institutions. Table 3 summarises the proportions of Freshmen classified according to the four orientations. In each case save that of the Total Sample, only one institution is reported in each category of institution. Proportions of Freshmen Classified as Vocational Academic Collegtate and Monconformist.

Table 3 Peterson. (1964).

|  | Total <br> Sample $N=12,949$ | Tech. Inst. <br> $\mathrm{N}=236$ | Priv. Univ. <br> $N=171$ | State Coll. <br> $\mathrm{N}=727$ | Ind. Lib. Arts Womens College. $N=110$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Vocational | 27 | 48 | 33 | 21 | 7 |
| Academic | 19 | 14 | 33 | 12 | 47 |
| Collegiate | 51 | 34 | 29 | 64 | 15 |
| Nonconformist | 4 | 2 | 2 | 2 | 31 |

Although approximately half of the Total Sample indicated the Collegiate orientation as being their most accurate self-description, the differences in proportions among the freshmen attending different institutions was sizeable. The author concluded that (among other things) (p.19)

> "Young people from all corners of the social system are finding acess to college, Large numbers of these youths are lacking serious acadenic (or even vocational) comnitment.
> In a much more detailed study which following the above report, peterson (1965) listed the following sumnary of conclusions after anlaysing the college Student Questionnaires (1964) having grouped the students (1.e. by their own preferences) into the four categories listed above.

1. The Vocational type

This student comes from a working or lower middleclass home; looks towards his formal education as a means of upward social mobility and social status. His parents share his instrumental view. He is undistinguished in school and chooses a college relatively close to his parents' home. He chooses a college speciallzing in his chosen field. His energy is used either to master the subject matter or to digest it passively rather than to explore and examine critically. He is generally disinterested in extra-curricular 'student lifs' except for perhaps athletics and is apolitical and culturally plebelan. In short he is (p.86)
n.... ambitious and singleminded; he is in college chiefly to acquire the wherewithal for a stable, secure, and prestigeful future".

## 2. The Academic type

The academically oriented college freshman
regards formal education as a medium in which
to express and sharpen a genulne proclivity
to explore, explain and understand for the
sake of understanding. "
His social origins are middie-class and his parents are relatively well educated. He enjoyed and was distinguished academically in his secondary school. In college he chooses disciplines (such as the sciences) which demand curiosity and a keen and serious intelligence. He anticipates further study (postgraduate work) and his approach to Iearning is active, independent, and individualistic. He is sceptical of authority; introverted but not dissociated and is politically ilberal and culturally aware. He represents as 'input' a kind of 'excellence' that the academic profession
$1 s$ increasingly regarding as characteristic of the successful graduating senior ("output")".
3. The Colleglate Typo.

The collegiate freshman is as likely to be a girl as a boy. For the collegiate male his outstanding characteristic is that of non-acceptance of adult norms of responsible study and work. The collegiate woman is distinguished by her essential femininity and by her overriding prooccupation with marriage and motherhood.

For both sexes the important aspects of college 11 fe are of an interpersonal nature obtainable through regular and deep participation in the extracurricular world of 'college life'. His social origins are middle class and in high school he was popular, a student official and an athlete. In college he chooses courses which make relatively few intellectual demands and his characteristic approach to learning is
".. at best passive and at worst chicane" (p.87)
He is not interested in graduate school or further study of any kind. He is seldom critical of authority and his personality pattern is that of the aggressive extrovert. He conforms to the current standards of his peers and prefers the forms of popular culture over more serious idions. Peterson (1965) p. 87 concludes that HHe is a boy in whom adolescence has yet to run its course, or a girl for whom most everything else is secondary to innding a suitable mate".
4. The Nonconformist type.

Above everything else, the Nonconformist is seeking for an interpretation of his life which not only makes sense to him morally and intellectually but which also affords him a definition for himself that is unique. As a sceker he rejects and derides. He has (says Peterson p.88)
"... rid himself of the 'phoney' trappings of his upper-middle-class upbringing."

He met little in his secondary school which evoked his respect. He is contemptuous of popular culture but is capable of genuine response to serious artistic statement. He regards the college classroom as yet another possible source of personally meaningful experiences, ideas and forms of expression. He is not comitted to any particular field of study but is oriented toward the humantties and ine arts because of the individualistic expression which they provide. He is clearly antipathetic toward any form of organized 'official', or 'sponsored' aspects of college life.

Although he constantly supports an ideology of social change he tends to be emotionally 'cool' about pex the whole matter.

Peterson concludes ( $\mathrm{p}, 88$ )
In general he is allenated from the larger society, the 'system', which considers him a misfit. As with Salinger's prototype, the Nonconformist in his search for personal meaning has already found much that is unworthy of his fidelity".

The above studies by Peterson have been considered in some detall because of the particularly clear picture
which they give of Clark and Trow's four philosophical orientations in a practical situation. Also, the samples used were large and appeared to be representative of American higher education. The present writer is aware, however, that what constitutes life in college in America may be very different from the kind of experiences which face the sample used in this investigation. To take but one point, that of choice of faculty or main subjects to be studied. Whether they like it or not, all students In a College of Education are being specifically trained for entry into the teaching profession. Even though as Koerner (1968) p. 157 states.

> nestimates are that within five years of graduation from a British teacher-training program, seventy per-cent of the women and thirty per-cent of the men will have left teaching".

Nevertheless one would expect that whilst at College, many of the students would support the general aims of the institution in preparing them for their chosen future. The American College unlike the British College of Education is not monotechnic but a place where a student can prepare for one of a range of future occupations, entry to which will depend upon success in completing a number of self-chosen courses. Thus, although in one way the British teacher training student and the American college student are both undertaking specialised study, in the case of the former the limiting factor is the chosen environment of the college, whereas in the case of the latter it is the choice of college 'major' or main subjects of study.

Clark and Trow (1966) in outlining the strengths and combinations of the four orientations found in different types of colleges commented as follows.
"Among the 17,000 undergraduates on the
Berkeley campus of the University of Callfornia,
all these systems of values are represented in
some strength; among the large number at a
nearby state college, the collegiate, academic.
and nonconformist subcultures are weak compared
with the predominantly vocational orientation
of the great majority. At small, academically
Gilte schools, the academic subculture is
clearly dominant, with nonconformist values
represented, whilist both the vocational and
the collegiate are weak. And at a large muber
of colleges, large and small, of average rank,
the older collegiate values still reign supreme,
tempered perhaps by an academically oriented
minority but with the leaven of nonconformists
almost. Wholly absent."

Clark and Trow (1966) in using the work of Mc Connell (1963) suggest that among the broad forces that affect colleges and student culture are the values. regarding higher education held in different parts of the population - notions of what a college is and ought to be. These values tend to be very heavily shaped by the occupational structure, which in turn reflects the changing character of the major institutions of society. Both in Britain and America, the growth in size of educational institutions followed by a hardening of the requirements for certificates and diplomas may affect the sub-cultural eroupings formed by students. In Britain alone the B.Ed. degree and the Open University are but two of the forces which may lead to a greater number of students becoming vocational in outlook. Also, the James Comittee proposals may affect the
function of the Colleges of Education in a major way. The Erowth in bureaucracy and the growing awareness of members of the working class in Britain that they too can enrol for grant-aided study has meant that the number of students who can attend college and ignore the 'record' or the need for certain grades is becoming smaller.

In commenting upon the extension of educational opportunities for higher education to lower secial strata Kahl (1953) and Trow (1958) both conclude that where such people regard a college education in purely instrumental terms then the vocational subculture or orientation is the wore likely to flourish. On such campuses the absolute level of student interaction is lower, and rolations among students centre on the shared training experience - friendships are shaped very largely by comon departmental affiliations.

Clar: and Trow (1966) summarise the studies completed to that date by stating (pp 28-29)
"Thus three major social forces - the
kureaucratizing of organization, the
professionalizing of occupations, and the
democratizing of higher education - are
together influencing what students seck in
college and how they use thoir college
experience. The forces link to student
cultures in part through thoir effects on
student aspirations. Lower-middlc-class
origins and modest aspirations for security
in a job predispose students to taling a
vocational stance toward their college stucies;
in the upper-middle-class, aspirations for
the intellectual occupations and professions
that involve postgraduate study predisposo
students toward the academic cultures and
disciplines of learning".

Howevar, they do go on to: point out (p.29) that the above picture grossly oversimplifies and (in the American setting) that the effects of selective recruitment
and screening processes (such as grades and money) result in the fact that,
". .while students from working and lower-middle-class origins are more vocationally oriented and less culturally sophisticated than are students from upper-middie-class and professional homes, these differences are less litely to be found among the students within any particular college."

Data obtained from the colleges of Antioch,
Reed and Swarthmore indicated that the small minovity of students from lower-class origins are indistinguishable In their cultural habits and orientations from the majority of students. Sinilarly, the minority of students at San Francisco State College who come from the upper-middle-class are culturally indistinguishable from the students of lower and lower-middle-class backgrounds.

In reviewing the researches which have adopted the paradigm of Clark and Trow, Feldman and Newcomb (1969) state the followins (pp.233-234).
nA number of investigators have more or less
directly operationalized Clark and Trow's scheme,
in order to classify students in a school and to
search for the empirical implications of such a
classification (including the attitudinal,
behavioural, and backeground correlates of the
differentiaily classified students). These
investigators first determine students '
orientations; then they ciassify the students
according to similarity of orientation into one
of the four types propounded by Clark and Trow,
but they do not show the degree to which
students in a given classification interact
with one another or the degree to which they are
aware of their common orientation. At best,
then, these studies classify students by
similarity in subcultural orientations rather
than by membership in an interacting group
in which members share an orientation."

The main investigations which fall into the above category are those of Lehmann and Dressell (1962), Hodgkins (1963 and 1964), Farber and Goodstein (1964) Abe and Helland (1965) Adams (1965), Gottlicb (1965) Harrington (1965) Gezi and Cummings (1966) and McDowell (1967). All of these investigators have produced results which in greater or lesser degrees are similar to those of Peterson (1964 and 1965) referred to earlier in this review. It is for these two reasons that the above investigations have not been considered in greater detail.

Finally, in terms of student typologies generated from bases different to those of Clark and Trow, Feldman and Newcomb (1969) p. 234 state
"Their typologies, nevertheless, have categories that parailel the academic, nonconformist, collegiate and vocational.....Again, with the excpption of Flacks (1963).... these investigators do not present evidence that students classified as being similar in attitude interact to form a subcuztura."

## A terminal note -

Wuch of the research on college and university environments in an American setting has bean published by Pace and Stern or by people using their instruments. These instruments based upon the 'needs' of students and 'presses' of institutions include the College Characteristics Index and the more wide-ranging College and University Environmental Scales. These investigations have not been included here since they operate from a conceptual basis which is somewhat different from the base of Clark and Trow.

The College Characteristics Index was not used at all in the present investigation because it appeared to be of very limited use in its 1969 format for the College of Education in which the study was carried out. Since this decision was made, Mcleish (1970) has published Students' Attitudes and College: Environments in which he outlines on page 79 four reasons why he considers the C.C.I. to be unsuitable for use in British college environments.

## 3. STUDENT PEER GROUPS

Feldman and Newcomb (1969) have published the following list of functions served by peer groups for individual students. They indicate that the list is not exhaustive nor are the functions necessarily mutually exclusive.

1. As a part of the intermediate state between the family and the larger post-college world, the peer group may help the individual student through the crisis of achieving independence from home. Researches of particular note in this field have been those of Sussman (1960), Smucker (1947) Le Vine (1966), Lozoff (1967) and Sanford (1956). Shipman (1965) touches on the subject briefly but not in the detail of the American investigators referred to above. 2. Onder certain conditions the peer group can support and facilitate the academic-intellectual goals of the college. This would appear to be the case in fairly small, well-organised colleges some of which are described by Feldman and Newcomb (1969). Further corroborative evidence of the above item can be found in Newcomb (1962).
2. The peer group offers general emotional support to the student and fulfilis needs not met by the curriculum, the classroom or the teaching staff. Investigations which have given support to this hypothesis are those of Eushnell (1962), Smucker (1947), Freedman (1956) and Coelho, Hamburg and Murphey (1963).
3. The college peer group can provide for the student an occasion for and practice in getting along with people whose backerround, interests and orientations are different
from his own. The investigations of Hartshome (1943), Eddy (1959) and Katz (1967) are of particular interest in this context.
4. Through the reinforcement of values, the peer group can provide support for not changing. The studies of Sanford (1961) and Coelho, Hamburg and Murphey (1963) provide evidence gained from the American college setting on this point.
5. However, the above point notwithstanding, Feldman and Newcomb (1969) p. 237 state

> " Yet, it can also challenge old values, provide Intellectual stimulation and act as a sounding board for new points of view, present new information and new experiences to the student, help to clarify new semidefinitions, suggest new career posiblilities, and provide emotional support for students who are changing.

Sanford (1956 and 1963) Coelho, Hamburg and Murphey (1963), and Pervin (1966) all provide evidence which corroborates the above in varying degrees.
7. The peer group can offer an alternative source of gratification and of positive self-image, along with rewarding a variety of non-academic interests, for students Who are disappointed or not completely successful academically. Coelho, Hamburg and Kurphey (1963), Kamens (1967a and 1967b) Mayer and Bowers (1965), Bushnell (1962) and Taves, Corwin, and Haas (1963) have all published investigations concerned with this area. Pervin (1966) has also indicated that friends and other social ties may also serve to actively discourage voluntary withdrawal from college for other than academic reasons.
8. College peer-group relations can be significant to students in their post-college careers - not only because they provide general social training but also because of the development of personal ties that may reappear later in the career of the former student. Evidence for this is given by Kimball (1962).

The major work in this field is called College Peer Groups and is edited by Newcomb and Wilson (1966). The contributors include Newcomb, Eurton Clark, Robert Pace, James Coleman and David Rlesman. For a datailed treatment of the theme, the reader is directed to a personal consideration of the book. For the present, comments are restricted to those of relevance to the investigation now being completed. Newcomb (1966) indicates that conditions necessary for peer group formation include.
a) Pre-college accuaintance - although he does state that there is a shortage of information concerning the fate of pre-college friendships. He also belleves that it is probable that such friendships are superseded by others developed in college with previously unknown persons.
b) Propinauity - Propinquity determines the probability of any two or more persons meeting and

$$
\begin{aligned}
& \text { "....early propinquity in college - when most } \\
& \text { other individuals are relatively indistinuishable, } \\
& \text { since nost of them are strangers - deternines the } \\
& \text { probability of early meeting". }
\end{aligned}
$$

Newcomb (1966) p.7.
Newcomb (1961) had already shown that even within a small, two-floor house accommodating only seventeen students, there were at first (but not following intimate acquaintance)
significantly more close relationships among the eight men on one floor and among the nine men on the other than between men on the different floors. Roommates, whose proximity to each other was greatest of all, were particularly prone to developing close relationships.

## c) Similarity of Attitudes and Interests

Newcomb (1966) p. 9 summarises the current viewpoint
in the above context by stating,
"The earlier principle....that interaction tends to create consensual attitudes should not obscure the equally important one that interaction tends to begin on the basis of existing interests that are shared. The two principles, together, imply that interaction may lead to new (and often widening) lands of shared interests".

He went on to develop the theme that a combination of continuity and common interests (or, at least those assumed to be common) soem to account for the beginning of most peer group relationships. He concludes that:

> "The social psychological fact seems to be that group continuity is fostered by high levels of consensus of both of two kinds: first, favourable attitudes toward each other, and second, similar attitudes towards things of common importance - though most groups can tolerate less than a perfectiy solid front."

Finally, it is important to note in passing (though they will be dealt with in more detail in a later chapter) the conditions associated with peer group influence. Newcomb (1966) p. 12 outlines four conditions but indicates that most commonly several or all of these conditions exist together when marked effects have been noted.
a) Size of groups - Membership of large groups is not likely, of itself, to bring about the strong interpersonal attitudes that are so important as an ingredient in peer group effects upon attitudes. Relatively large groups have the advantage of making it possible for individuals to be selective in their more intimate associations.

[^0]
## d) Importance to individuals of groun supported Attitudes.

Newcomb (1966) p. 14 has indicated that
"Other things being equal, the greater the importance to them (the peer group) of the attitudes for which the group stands, the greater the solldarity of the group, regardiess of whether the sense of importance preceded or has been engendered by group membership."

He concludes the discussion by pointing out the
important feature that
"Peer group formation is an outcome of antecedent events; the nature of a member's experiences, and thus the effects of those experiences may be profoundly influenced by the circumstances attending the group's emergence

More specifically, the nature of student peer
group experience is sure to be influenced by the various factors categorized as selective, and these in turn are influenced by, and (in time) they also influence, both the actual and the perceived nature of the college itself"。

## CHAETER 3.

## DESCRTETTON OF THE INVESTTGATION.

## DESCRIPITON OF THE INVESTIGATION.

The investigation was carried out in a large College of Education which was a constituent member of the Keele Area Training Organisation. The data which were assembled came from the following sources.

## A. THE DATA

1. Published Questionnaires and Instruments.
a) The A. H .5 Intelligence Test (Heim 1968).
b) The 16 P.F. Questionnaire (Cattell and Eber 1962).
c) The Watson-Glaser Critical Thinking Appraisal (1952).
d) The Study of Values (British Edition, Richardson 2965).
e) The Achievement Motivation Questionnaire (Lynn 1969).
2. Material extracted from College records.
a) Course work and examination results in Main Subjects and Iducation.
b) Teaching Practice Grades.
c) Teaching Specialisation (Infant, Junior or Secondary).
3. Questionnaires and associated instruments develoned by the investigator coverins the following areas.
a) Blographical Data.
b) General Information.
c) College Courses.
d) Authority and Discipline -
e) Expectation and Realisation of aspects of College life.
f) Reasons for entering teaching.
g) Personal views on Teaching.
h) Personal Velfare.
1) Social Participation.
4. Near-sociometric techniques developed in order to ascertain the group structure and degree of cohesion present in such groups.
5. Philosophical orientations made by the adoption of the Clark and Trow model as outlined by Peterson (1965).
B. THE SAMPLT

The sample was composed of 221 Men and 234 Women students in a College of Education. During the time of testing, they were completing their third year in College which extended from September 1969 to July 1970. They were initially regarded as two groups but the main analysis concerned their First-Choice of Philosophical Orientation using the mocel outlined by Peterson (1965). This gave the following brealdown in terms of sample sizes.

| FIRSI CHOICA OF PHILOSOPHICAL ORIENTATION. | MEN | WOAEN | TOTALS |
| :---: | :---: | :---: | :---: |
| VOCATIONAL | 53 | 59 | 112 |
| ACADEMIC | 36 | 26 | 62 |
| COLLEGIATE | 103 | 129 | 232 |
| NONCONFORMIST | 29 | 20 | 49 |
| TOTALS | 221 | 234 | 455 |

Table $4 \quad \frac{\text { A Description of the Samples by First-Choice }}{\text { of Philosophical Orientation. }}$

Further analyses of the samples were considered, namely
(i) Second-choice orientations in relation to first choices.
(11) Fourth-choice orientations in relation to first choices.

Details of the sample sizes are given below in Tables 5 and 6 .

Table 5 Second-Choices of Philosophical Orientation In relation to the First-Choices.

Men
Homen
Vocational who chose Academic as their and choice $32 \quad 28$
Vocational who chose Collegiate as their 2nd choice 14.26
Vocational who chose Nonconformist as their 2nd 75 choice

Academics who chose Vocational as their and choice 1814
Acadenics who chose Collegiate as their 2nd choice 1411
Academics who chose Nonconformist as their and choice 41

Collegiates who chose Vocational as their 2nd choice44 78
Collegiates who chose Academic as their 2nd choice 3932
Collegiates who chose Nonconformist as their 2nd 2019

Nonconformists who chose Vocational as their 2nd choice $7 \quad 5$
$\begin{array}{rrr}\text { Nonconformists who chose Academic as their 2nd } \\ \text { choice } & 7 \quad 6\end{array}$
Nonconformists who chose Collegiate as their 2nd $\quad$ choice $15 \quad 9$
Table 6 Fourth-Choices of Philosophical
Orientation in relation to first-Cholces
Men Yomen
Vocational who chose Academic as their 4th choice 5 ..... 10
Vocational who chose Collegiate as their 4th choice 12 ..... 4
Vocational who chose Nonconformist as their 4th choice ..... 36 ..... 45
Academic whochose Vocational as their 4th choice ..... 5 ..... 2
Academic who chose Collegiate as their 4th choice ..... 10 ..... 2
Academic who chose Nonconformist as their 4th choice ..... 21 ..... 22
Collegiates who chose Vocational as their 4th choice ..... 27 ..... 16
Collegiates who chose Academic as their 4th choice 20 ..... 27
Collegiates who chose Nonconformist as their 4th choice ..... 56 ..... 86
Nonconformists who chose Vocational as their 4th choice ..... 12 ..... 7
Nonconformists who chose Academic as their 4th choice 11 ..... 5
Nonconformists who chose Collegiate as their 4 th choice ..... 6 ..... 8
C. THE STATISTICAL TREATHENTS.1.In the Introduction to this investigation, attention was drawn to the degree of randomness associated with the samples. Statistical advice given to the writer was
that he could employ both parametric and non-parametric statistical techniques as lons as he indicated the limitations imposed by the sampling design. The purist view is that the samples have not been chosen by truly random methods. However, the College year from which the samples were extracted represents a 'population' and the choices made using the 'Philosophical Orientations! may be said to represent a degree of randomness on the part of the respondents. However, the degres of generalisation which may be applied to the results is ilmited for the following two reasons.
a) Thetreatments given to the whole population (1.e. 455 students in their third year of a College course).
b) The manner in which they were grouped following responses in terms of primary and secondary choices of philosophical orientations.
2. The Statistical techniques used were as follows.
a) Sorting techniques preparatory to further analysis of the data.
b) The use of frequencies and percentages for simple comparisons between groups.
c) The computation of means and standard deviations.
d) Correlation and factor analyses.
e) A one-way analysis of variance followed by the use of conditional t-tests.

1) The use of the discriminant function in comparing sub-cultural differences.

Vuch of the data were analysed by the use of an electronic computer. Such analyses Included sorting procedures, the factor analyses, the use of the discriminant function and the one-way analysis of variance. The sorting of the data concerming the philosophical orientations and the friendship and acquaintanceship patterns was completed by hand over a $31 x$ month pericd, Attempts to analyse by computer or card sorting machine were unsatisfactory mainly because of the prohibitive cost involved or because of the extensive format of the data which computing departments in three separate universities were unwilling to handle.
D. THE ADMINISTRATIVE ARRAMGEMENTS.

Permission was obtained from the Principal for the test battery to be administered to the Third-year student body during class periods in the summerterm of 1970. This followed a six month perilod during which pilot studies and editing had reduced the test instruments to an acceptable format.

Unlise most other colleges, the one used in the Investigation was operating on a 'Eox and Cox' system Whereby at any given time one third of the total student body (1.e. one whole year group) was at home completing 'home based study' assignments. The teaching and hollday arrangements were such that the writer was not engaged in teaching for the whole of the period of testing. Iuring a period of six weeks he was able to test the students in groups of 50-60 in a large well-equipped room placed at his disposal.

The students each had three double periods to complete the tests, which were presented in manageable blocks. Very few of the students ever needed more than fifty minutes or so to complete any single block of tests. Co-operation was enhanced by the writer being given an opportunity of lecturing to the whole of the third year group on such topics as revision for the examinations, the probationary year and methods of gaining additional quallfications. Colleagues proved ever-willing to help with distribution of materials and the writer is indebted to both them and the students for their considerable efforts on his behall. Absentees were tested shortly afterwards as a group. Since the purposes of the investigation were circulated in writing to each student individually and a promise to discuss the tests was honoured the degree of co-operation was high.

The published tests and questionnaires listed in Section A of this chapter were also used by a colleague for his Master's thesis. Since they were pertinent to both investigations a considerable saving in cost, effort and time was achieved. The process of checking the marked scripts was also greatly beneficial to the accuracy of the final scores. The choice of published tests was made after lengthy consultation with the above colleague.

## E. THE CHOICR OF YEASURING INSTRUMENTS.

In the case of the A.H. 5 test, the 16 P.F. Questionnaire and the Study of Values, the writer adopted them for use in the present investigation because of their
wide and successful use with populations similar to the one utilised in the present investigation. Also, they tapped areas of fundamental importance to any assessment of the various traits of students.

Lynn's test of Achlevement Motivation was the most recent product of its kind and was used with the kind permission of the author. It appeared to have a valuable contribution to make to the study. The acceptance of the Watson-Glaser Critical Thinking Appraisal was based upon the view that with the advent of the B.Ed. degree and the employment of an increasing number of Staff with advanced academic qualifications the standard of work expected of students was being raised continually. The distance which wo have yet to go in thes context can be gauged from the critical comments reviewed in Chapter 2 concerning the pertinent Iiterature. With more advanced courses being offered, the ability to think critically may become more important. Also, it was felt that the display of poor attitudes might be negatively related to the ability to think critically.

The remainder of the techniques and methods of assessment listed under A2 to A5 on the first page of this chapter were used because they appeared to tap the areas of importance to the investigation. The writer consulted the authorities in the field such as Newcomb and V11son (1966), Feldman and Newcomb (1969) and Lomax (1969) for corroboration of this bellef.
F. A DESCRIPTION OF THE NEASURING INSTRUMANTS.

1. Published Questionnalres and Instruments.
a) The A.H. 5 test of Intell1gence (Heim 1968)

The A.H. 5 is a group test of intelligence designed for use with selected, highly intelifgent subjects. It stresses deductive reasoning, accurate observation and meticulous attention to detail. Speed plays a fairly minor role in this test which distinguishes individuals at the upper end of the intelligence scale.

The test has two parts, each one consisting of thirty-six items. Part one contains verbal and numerical problens (such as directions, verbal analogies, numerical series and 'similar' relationships). Part two consists of a further four types of principle (analogies, series, directions requiring mirror imagery and shape construction and 'feature in comon' problems).

The total score is represented by the summation of scores obtained on Parts 1 and 2. Excluding the preliminary examples the time limit for each part of the test is twenty minutes, and the test is scored by the manual use of a cardboard key.

Rellability
Satisfactory reliability coefficients are quoted in the manual. A coefficient of to. 84 is given from a pilot model of the test used over a five month period. Using the final form of the test with small groups of unlike intellectual levels each week over a ten week period the coefficients ranged from +0.8 to +0.9 with the majority being nearer to the upper limit.

## Validity

The manual lists a comprehensive list of correlations between the A.H. 5 and other tests of intelligence ranging from +0.37 (Mill Hill Vocabulary) to +0.80 (Moray House). Correlation coefficients between the A.H. 5 and other criteria such as G.C.E. grades and University examination marks are also reported. They too Indicate the satisfactory nature of the test for use with students.

Norms
The mamul contains a comprehensive set of norms for use with College of Education students, University students and Grammar school children aged thirteen to eighteen years.

## b) The 16 Personality Factor Questionnaire.

The 16 P.F. Questionnaire (Cattell and Eber 1957) is claimed by the authors to give the most comprehensive coverage of the basic personality traits in the shortest possible testing time. It aims to cover all the main dimensions along wich people differ. It was formulated following extensive factor analytic research.

The test is intended for administration in both group and individual situations. Responses to the questionnaire are made on a detachable sheet which can be machine or hand scored. The test has been standardised for use in Britain and researches conducted on a worldwide scale have established its usefulness for indicating the position of people along the main dimensions of personality.

The questionnaire measures the following sixteen first-order personality factors. The factors are bi-polar and high scores correspond to the description on the lefthand side of the table whilst low scores are given on the right.

## FACTOR A

Cyclothmia $A^{+}$
(Varm, sociable).


Enotional Stability $\mathrm{C}^{+}$
(Mature, Calm)

Dominance $\mathrm{E}^{+}$ (Aggressive, Competitive).

Surgency $\mathrm{F}^{+}$ (Enthusiastic, Happy-go-Iucky)

Superego Strength $G^{+}$ (Conscientious, Persistent).

Protension $L^{+}$
(Suspecting, Jealous)

## Autia $\mathrm{M}^{+}$

(Bohemian,
Unconventional)
Shrewdiness $\mathrm{N}^{+}$ (Sophisticated, polished)

FACTOR C
Versus

FACTOR $\mathcal{E}$ versus

EACTOR $F$ versus

FACTOR G versus

FACTOR H.
versus

EACTOR I
versus
FACTOR M
versus (Practical, Conventional)

FACTOR if versus (Simple, Unpretentious)

| Guilt Proneness $0^{+}$ <br> (Timid, Insecure) | $\frac{\text { FACTOR } 0}{\text { versus }}$ | Confident Adequacy $0^{-}$ (Confident, Self-secure) |
| :---: | :---: | :---: |
| Radicalism $Q_{1}{ }^{+}$ | $\frac{\text { FACTOR } Q_{1}}{\text { versus }}$ | $\begin{aligned} & \text { Conservation of } \\ & \text { Tepperament } \mathrm{C}_{1}^{\prime} \\ & \text { (Respecting Established } \\ & \text { Ideas). } \end{aligned}$ |
|  | FACTOR $Q_{2}$ |  |
| Self-Sufficiency $Q_{2}^{+}$ | versus | Group Dependency $Q_{2}^{-}$ |
| (Self sufficient Resourceful). | versus | (Sociably Grciap Dependent) |
| High Self Sefntiment Formation $Q_{3}^{+}$ | FACTOR $Q_{3}$ |  |
|  | versus | Poor Self Sentiment Formation $Q_{3}$ |
|  | FACTOR $Q_{4}$ |  |
| High Ergic Tension $Q_{4}^{+}$ <br> (Tense, Frustrated) | versus | Low Ergic Tension $Q_{4}^{-}$ <br> (Relaxed, Tranquil) |

Four second-order personality factors may be obtained by using summations of first-order data. The details are given below:

The second-order personality factors are:
Emotionality
The combined sten scores of
the primary factors
$L^{+}, O^{+}, Q_{4}^{+}, C^{-}, Q_{3}^{-}$.

Extraversion
The combined sten scores of the primary factors
$\mathrm{A}^{+}, \mathrm{E}^{+}, \mathrm{F}^{+}, \mathrm{H}^{+}, \mathrm{Q}_{2}^{-}$.

Tendermindedness
The combined sten scores of the primary factors $\mathrm{I}^{+}$and $\mathrm{N}^{-\infty}$.

Radicallsm
The combined sten scores of the primary factors $\mathrm{Q}_{1}^{+}$and $\mathrm{N}^{+}$.

The four second-order personallty factors outlined above together with primary Factor G (Supar-ego strength) were utilised in the present investigation.

## Reliability

High rellability (consistency) coefficients are reported in the manual for primary factor measurements on the battery of 374 items of Forms A and B combined.

## Validity

$\qquad$

1. Factor analytic procedures were used to establish concept valldity. From the knom factor loadings of the items on the factors, in the original researches, using the formula (Cattell 1957) for combining items. 2. From the split-half reliability of the factor, assuming that the items have no 'specifics' in common but only the common factor. Valldity is then equal to rellability.

## Details concerning the test.

1. This paper and pencil test is avallable in three Lormed labelled A, B and C. Forms A and B are intended to be parallel and interchangeable although some researchers prefer to gain maximum coverage of the factors by administering both versions. Form C is a shortened version for use when a sparser coverage of the 16 factors is demanded because of a time limit boing imposed on the testing period.
2. Factor $B$ is that of General Intelligence. As a test of intelligence it is very short but it is of approximately the same length as the other iffteen primary factors. In terms of intelligence tests it is a power rather than a speed measure (1.e. it measures 'crystallized' rather than 'fluid' general ability, and shows no age decline).

## 3.

Scoring is accomplished by the use of a cardboard template. Clear instructions are given on the front of the booklet and four examples are completed prior to the test being answered. The test is untimed but students average fifty minutes to complete the test.

## c) The Watson-Glaser Critical Thinking Appraisal.

The original test was developed by Watson (1937) and modified by Glaser (1937) later in the same year. Since then seven refinements and revisions have been used. The final form was published in 1952. The test has been reviewed by Hovland (1959) and Hill (1959).

The test has been used repeatedly as an evaluation instrument and also as a teaching tool to help students and trainees develop reliable techniques for logical reasoning. The manual also indicates that it has been used extensively as a screening instrument for selection purposes in industry and public service.

The Appraisal is designed to provide problems and situations which require the application of some of the important abilities involved in thinking critically. There are two equated forms named Am and Bm . Dach form has five sub-tests designed to measure different factors related to
the total concept of critical thinking. The sub-tests are as follows.

Sub-Test No. 1 Inference
The twenty items in this sub-test sample the ability to discriminate among degrees of truth or falsity, or the probability of certain inferences drawn from given facts or data.

Sub Test No. 2 Recognition of Assumptions.
Sixteen items are given which test the ability to recognise unstated assumptions in given assertions or propositions.

Sub-Test No. 3 Deduction.
Twenty-five items are given which sample the ability to reason deductively from given premises; to recognise the relation of implication between propositions; to determine Whether what seems an implication or necessary inference between one proposition; to determine whother what seems an implication or necessary inference between one proposition and another is indeedssuch.

Sub-Test No, 4 Interpretation.
The twenty-four items test the ability to weigh evidence and to distinguish between unwarranted generalisations and probable inferences which, though not conclusive or necessary, are warranted beyond a reasonable doubt.

Sub-Test No. 5 Evaluation of Arguments.
Fourteen items are given which are designed to sample the ability to distinguish between arguments which are strong and important to the question at issue, and those which are weak, unimportant or irrelevant.

Both Forms Am and Bm contain ninety-nine items. There is no time limit but the authors claim that the test can be completed in less than 40 minutes.

## The Scoring of the Test.

Separate answer sheets are provided and the test cen either be hand or machine scored. A choice of responses is given for each separate question. A subject has to record his choice by making a black mark between the appropriate pair of dotted lines on the answer sheet. On any items in which two or more answer spaces have been filled in, both responses are erased. Care needs to be taken where any item has been given a second response but the initial response has been only partly erased. Partial erasures of this type need to be completed. A cardboard template is given for scoring by hand.

## Reliability

Reliability analyses have been extensive on this test. The rellability of the test as a whole and of the separate sub-tests has been established by the use of both split-half and inter-form methods using several different and varied groups. Correlation coefficients
range from +0.79 to +0.84 for the individual sub-tests (Inter-form method). These coefficients indicated that the total score has adequate reliability for use with groups when one form is used.

Split-hale reliability coefficients ranged from +0.36 to +0.78 for the individual sub-tests and a total reliabillty coofficientisof +0.83 was reported for the 1949 Experimental edition $0 \check{2} 224$ items.

## Validity

Validity problems related to this test were of two kinds.
(1) The soundness or logical 'correctness' of the actual Key.
(ii) The usual idea of what test validity implies.

The mamual indicates that the Koy represents the judgement of 35 persons selected for their advanced training in logic and language meaning, together with their demonstrated leadership in academic flelds and business administration. Following many revisions and refinements of items this group were in unanimous agreement that the answers in the Key were logically correct and that correct response to the questions requires some of the most important skills or abilities fundamental to critical thinking.

The manual also contains details of valldation against independent criteria. over a period of twelve years a variety of validation studies have been carried out. The manual gives a table of correlations between total
critical thinking scores using the 1938 edition of the test and the average of teachers ratings of pupils on eight kinds of behaviour associated with the ability to think critically.

Norms
The norms given in the mamual are representative of American High school and American College student sroups. Percentile norms are given together with median values and the rance of scores for special groups.
d. The Study of Values (Richardson 1965)

This anglicised version of the original Study of Values by Allport, Vermon and Lindzey has been designed for use with college students or with adults who have had a college or equivalent education. It was sdopted from the third edition which was published in 1960.

The original test instrument was published in 1931 to test in an empirical fashion Spranger's theory that people can be classified according to their values. The British version is a new form which has been specifically standardised Lor use in this country. As such it contains new items whilst following very closely the form and intention of the original.

The test contains a number of questions based upon a variety of famillar situations for which alternative answers are provided. Preferences are recorded numerically and total scores can be obtained for each of six values. The total number of points obtainable is 180 and these are
distributed among the six measured values. Thus, the six sub-scores are therefore NOT INDEPENDENT and this limits the statistical techniques which can legitimately'be applied to the results of this test.

The six 'Ideal' personality types which Spranger generated from predominant values of the people concerned give their names to the six sub-scales of the Study of Values. In summary, the six types are
(1) Theoretical
(ii) Economic
(ii1) Aesthetic
(iv) Social
(v) Folitical
(vi) Religious
(i) The Theoretical The dominant interest of the theoretical man is the discovery of truth. He takes a cognitive attitude seekins to observe and reason. His approach is empirical, critical and rational. He aims to order and systematize his knowledge.
(1i) The Economic The economic man is characteristically interested in what is useful. He is thoroushly practical and business-life. His attitude frequently conflicts with other values, such as the aesthetic.
(ㅎi1) The Aesthetic The aesthetic man sees his highest value in form and harmony. Experience is judged from the standpoint of grace, symmetry or fitness. He finds his chief interest in the artistic episodes of I1fe.
(iv) The Social The highest value of this type of man is love of people. He is kind, sympathetic and unselfish, regarding love as the only suitable form of human relationship.
(v) The Political The political man is interested primarily in power. Competition and struggle play a large part in his life. He wishes for personal power, influence and renown.
(vi) The Religious The religious man is mystical. His mind is directed to the creation of the highest value experience. He seeks to comprehend the cosmos as a whole.

The test does not measure the absolute strength of each of the above values, but only their relative strength, since a high score on one can only be obtained by correspondingly reducing the scores on other values. There is no indication of the total "value energy" possessed by an individual.

## Rellability

For the British Revision, two item-analyses are reported in the manual. The samples were composed of 198 and 256 subjects respectively with men and women being represented equally. The reliability coefficients for the six scales ranged from +0.78 to +0.95 .

## Validity

Extensive external validation surveys of the original form of the test have been published by Cantrill and Allport (1933) and Duffy (1940). The current manual gives details of the validation procedures used with the British Edition. Richardson asked informed subjects to estimate and rank their own values based upon the six types postulated by Spranger. The comparison of scores and senestimates suggested that the scale measured somethins closely related to the Spranger values. Such comparisons also suggested that the uneveness of the means was a genuine reflection of public opinion.

## Scoring the Test.

The manual claims that the tasks of taking the test and scoring can both be accomplished within one hour. The test is self-scoring and in the present investigation most students completed the test in half an hour. The scoring was completed by the investigator. Profiles can be drawn for the purposes of comparison with British profiles of both the average male and female students on similarly educated populations. The mamal also provides tables of means and standard deviations for each of the six values for a variety of occupational groups.

## Q. The Achievement Motivation Questionnaire

This questionnaire was developed by Lymn (1969)
and permission was obtained by the present writer to use it in this investigation. The construction details are
reported in the British Journal of Psychology (1969), Vol. 60 No. 4 pp $529-534$ inclusive.

The questionnaire was designed to measure McClelland's (1961) concept of achievement motivation. The scale was derived by factor analytic procedures which indicated that most of the components of achievement motivation were loaded on one lactor.

Sixty three questions were assembled which it was thought would be related to achievement motivation. The questionnaire was administered to 583 male subjects consisting of
(1) 303 managers.
(1i) 200 students.
(1i1) 80 junior naval officers.

The results were correlated and a principal components analysis of the resulting matrix of correlations was obtained. The first two factors were rotated to the normal Varimax criterion and the Varimax solution was then rotated to oblique simple structure using the Promax technique of Hendrickson and thyte (1964). The resulting analysis yielded a factor which had the appearance of being achievement motivation. The eight questions with the highest loadings (loadings ranging from 0.26 to 0.45 ) were then used for the achlevement scale.

Lym also lists a further four questions which were designed to tap other traits which McClelland had regarded as characteristic of achievement motivation. Although these four questions had lower loadings than the
elght questions which Lynn selected for his scale they did load on the same factor: These four questions have been included in the Achievement Motivation questionnaire used in this study.

## Validation of the Scale.

Lymn constructed the scale primarily for use with people in executive, professional and managerial occupations. He regarded university students as a standard group since they were able young people who subsequently enter a variety of occupations in which a wide range of success is achieved. In addition, eighty junior naval officers aged 19 to 22 years completed the test.

Three criterion groups were used and were composed as follows. Group No. 1.

Forty entrepreneurs who had set up their own companies and operated successfully for a period of at least three years.

Group No. 2.
Twenty-eight university professors.

Group No. 3.
Fifty-five managers who had attained senior grades, and two hundred and fifty elght managers in lower grades.

The results indicated that all three criterion groups scored significantly higher in the test than the students. The entrepreneurs scored highest (a result which follows

McClelland's thesis). In order to satisfy the objection that the criterion groups differed from the students not only in achievement but also in age, the correlation between achlevement motivation and age was computed for the entire sample of managers whose ages ranged uniformly over the range 25 to 60 years. The correlation was -0.007 and was completely insignificant.

Correlates of the Scale.
Two investigations were carried out as follows:
(i) The scores were correlated with Eysenck's constructs of Heuroticism and Extraversion Introversion. The results indicated that the scale was inderendent of both.
(ii) The scores were correlated with Cattell's 16 P.F. Questionnaire. Two of Cattell's factors correlated significantly with the scale. A positive correlation ( $P$ > .01) of +0.343 with Factor $G$ (Superego strength) and a negative correlation. ( $\mathrm{P}>$.02) with Factor $F$ (Surgency) of -0.215 . Lynn indicated that these results were not surprising since the sobriety of desurgency was more alsin to achievement motivation, and at least one group of high achievers (eminent scientists) scored high on desurgency (Cattell 1965). Since several components of McClelland's concept of achievement motifation appear to be linked closely to superego strength, the above correlation with Factor G is not unexpected.

## 2. Material extracted from College Records.

Material was extracted from the College records which gave the following information.
(1) Age.
(i1) G.C.E. results.
(i11) Types of secondary School(s) attended and the duration of stay.
(iv) Teaching Specialisation (Infant, Junior or Secondary).
(v) Teaching Practice grades.
(vi) Marks for Course works and Examinations in Main Subjects and Education.

In addition the students wore assessed on a Social Class variable by means of a request for detailed information concerning the occupation of their father.

The scoring and sumation procedures used with the above variables are given below.
(1) Age - Age was recorded in completed years.
(11) G.C.E. Results The data recorded for 10 ' and
'A' level successes were in the form of a total numerical score. It was decided by the writer that the normal student who presented himself for entry to College had undertaken three 'A' level subjects following upon eight 'O' level subjects. This was ascertained from an inspection of the College Application Forms and has been corroborated by Start (1966). Assuming that these two amounts are approximately equal (1.0. 3 'A' levels $=3^{\prime} 0^{\prime}$ levels) it then follows that a score of 5 could be awarded for each 'A' level and 2 for each to' level galned.

The following numerical equivalents were awarded for various ' $O$ ' and ' $A$ ' levol passes.
a) For every ${ }^{\prime} 0^{\prime}$ level gained at the first attempt, 2 points were awarded. In all other cases (such as taking the subject a second or subsequent time) one point was awarded - with the exception of the following cases. Following Start (1966) p.27, when the person was under 16 years of age at the time of the first examination; in the year preceding three ' $A$ ' levels; or taken in conjunction with two ' $A$ ' levels, a person was given 2 points for each 101 level pass. b)

Five points were awarded for each 'A' level gained when taken togother. Subsequent 'A' levels were awarded 3 points.
c) School Certificate which was taken prior to the establishment of the .G.C.E. examination was given 10 points (1.e. $5 \times 2$ ). If more details were given then 2 points were awarded for each subject Ilsted whether at Fass or Credit level. Also, for the Higher School Certificate, 5 points were awarded for each subject.

Therefore, entrance qualifications consisted of the total number of points accumulated through 10 ' and $A$ ' level passes or their equivalents in the case of School Certificate and Higher School Certificate results.

## (111) Type (s) of secondary School (s) Attended An

 attempt was made to quantify the typo of Secondary Schools which the students had attended prior to entering College. The following table was used in assigning scores to Individual students. Points were awarded for each year spentIn Secondary school after the age of 11. For those who had attended the old Elementary schools the system was still operated. A fair number of students had experience of more than one secondary school over periods in excess of one year by virtue of either transfer arrangements or the reorganisation under government circular 10/66 (the change to a fully comprehensive system of secondary education).

The scale was as follows.

| Secondary Modern, 1 point. Elcmentary 1 noint. |  |
| :---: | :---: |
| Colleges of Further | Tech, Colls 1 coint |
| Education. 1 noint Grammar. 2 points: |  |
| Comprehensive. $\qquad$ 2 points $\qquad$ Schools. |  |
|  |  |

Only a minority of students had attended either Direct Grant Grammar Schools or Public Schools. For each year spent in any of the above establishments points were awarded as per the scale. Foints were totalled in the case of those students who had attended more than one secondary school. Each student thus had a mumerical score awarded for his time in secondary schools and colleges of various types.

## (iv) Teaching Specialisation The three

 specialisations available were: Infant, Junior and Secondary with some combined areas such as Infant/Junior, Junior/Secondary and Secondary/Junior. For all practical purposes having chocked just how many students did in fact enter schools of their primary specialisation (e.g. the Junior/Secondary teacher who did in fact enter a Junior School)the three main areas of speciallzation only were recorded. The figure for those who entered their first choice of teaching specialization was $96.41 \%$. The writer thus feit Justified in adopting the three areas of specialization as clear indications of both attendance at College courses and future intentions. A mark of 1 was awarded to each Infants specialist with 2 and 3 being given to the Junior and Secondary specialists respectively.
(v) Teaching Practice Grades. The students were assessed on three anmal practice periods. In most cases, the final practice was taken as being representative of the students' final level of expertise in this area as far as the College was concerned. However, since in a small proportion of cases marks gained on either or both of the previous periods of practice was taken into consideration when awarding the final mark (1.e. extra supervision was given and additional assessments were made when discrepancies of magnitude appeared between grades awarded in successive years) the grades for each of the three teaching practices were converted to a muerical score and were totalled to give a innal score. Also, by this method a range of three ratings for any single student was obtained. The following ratings and their mmerical equivalents were used.

| E | $\mathrm{E}+$ | D | D | $\mathrm{D}+$ | C | C | $\mathrm{C}+$ | B | B | $\mathrm{B}+$ | $\mathrm{A}-$ | A | $\mathrm{A}+$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

Each student's letter scores for the three teaching practices was converted to its mumerical equivalent. The three scores were surmed and the total was entered in on data sheets.

## (vi) Marks for Course Vork and Braminations in each haln subject and iducation.

a) The above grades and their numerical equivalents were utilised to gain the scores for each Main subject and Education. The A.T.O. at Keele had issued a complex set of tables and reightings for use in combining.
a) marks from Years 1, 2 and 3.
b) course and examination marks (since the college operated a contimuous assessment system together With a final examination).

By using the tables and weightings it was possible to utilise the scale E to $\mathrm{A}+$ with numerical equivalents 1-14 inclusive. This was done and for each Student three scores were recorded to take account of his Main or Subsidiary subjects and Education. b) The Composite Academic Score was gained by using the scores outlined in $v(a)$ above together with an additional weighting system desicned to give extra credit for extra work. Thus, the following scheme was put into operation. a) Each score gained at Main level was added as it was (e.g. if Main $I=6$ points and Main $2=6$ points the total was 12 points).
b) Subsidiary level subjects were avarded only two-thirds of their recorded score (thus, an A- was worth 12 points at Main level but only 8 points at Subsidiary level).
c) Bridging course candidates were awarded extra marks as follows:
(1) 5 points for passing in both subjects (1.0. One Main subject and Education).
(11) 3 points if the man re-sat one of these two subjects.
(iii) 1 point if the man re-sat both of the subjects. (iv) 0 points for either failing both subjects at a subsequent re-examination or if the mat failed to turn up for the examinations.
The various mariss were summed to give a total score for each student.

The Assessment of Social Class.
In an attempt to assess the social class background of the students, they were asked to indicate in the fullest possible terns the occupation of their father. If the father was deceased they were still required to state in detail what his occupation had been prior to his death.

Researchers such as Oppenheim (1966) have indicated the pitfalls assoclated with the assessment of social class and in particular the vagueness of responses from subjects as to what certain occupations entailed. For example the word engineer can be explained either in terms of a worker on the shop floor to a ran who designs buildings costing many millions of pounds. For this reason, the students were requested to complete the relevant section of the questionnairo as fully as possible.

The resulting data then had to be classified and quantified. This was done with the aid of the Hall-Jones Scale of Occupational Prestige for Nales. Details of the construction of the Scale aro to be found in Hall and Jones (1950) and Glass (1954). Special care vas taken to look up and ind each individual job in question. Those that were not in the 1ist (such as a sagger makers bottom lnocker) were gained through the good offices of the University of Keelo Sociology Department. Such cases proved to represent only 1\% of the total and were therefore catered for in a relatively short space of time.

The data were classified into the following seven categories which nore then used as raw scores for subsequent sorting and analyses.

Table 7 The Hall-Jones Scale of Occupational Prestige For hales.

## Class 1 Professional qualified and High Administrative.

2 Managerial and Executive.
3 Inspectional, Supervisory and Other Nonmanual.
(Higher Grade)
4 Inspectional, Supervisory, and Other Nonmanual. (Lower Grade)

5 5 Routine Grades of Nonmanual Nork.
5b Skilled Mamal.
6 Mamal, Semi-skilled.
7 Manual, Routine.

For computer-based analyses using the above scale, the classes were reversed thus Class 1 was given 7 points whilst Class 7 was given 1 point. The numerical scores were used in analyses of variance, factor analyses and an analysis using the multiple stepwise discriminant function.
3. Questionnaires associated instruments developed by the investicator for speciflic use in the study.

The following questionnaires were administered to gain biographical data and other kinds of information mainly of a factual nature.
(i) Blographical Iata.
(ii) General Information.
(iii) Viev of College Courses.
(iv) Reasons for Entering Teaching.
(v) Personal Welfare.
(vi) Social Participation.
(vii) Expectations and Realisation of aspects of College Life.
(viii) Personal Views on Teaching.

The instruments listed below were more sophisticated in nature than those listed above and were constructed using factor analysis.
(i) Attitude to First Choice of Main Subject.
(ii) Attitude to Second Choice of Main Subject.
(iii) Attitude to Education.
(iv) Attitude to College Authority and Discipline.

In the case of the scales designed to measure attitudes to Main Subjects and Education, a pool of 45 items was assembled. These items exhibited face validity and had been used in part and found to be useful in previous college-based researches, The items were presented in ore comprehensive format designed to assess attitudes to two Main Subjects and Education. The items
were administered to 100 men and 100 women Third-year students who had been chosen at random from the population of 455 Third-year students.

The resulting data were separated to give three separate scores for each item (1.e, one for each of the two Main Subjects and one for Education). As might be expected, the results of a factor analysis of the data using the Varimax criterion indicated that the loadings of items varied between the two Main Subjects thenselves and also to Education. For example, loadings for the following item:
"The following courses have been a great challenge to men for the two Main Subjects and Education were as follows:
Main Subject No. 1 Main Subject No. 2 Education $0.41 \quad 0.39 \quad 0.51$

The process of sorting the items on the basis
of accepting loadings above 0.2 and removing items which loaded negatively on fewer than all three College Subjects reduced the final scale to nineteen items. The loadings ranged from 0.20 to 0.54 with the mean loading being 0.361 . Rellabillty

Reliability was established by the use of the test-retest method. The two administrations of the scales were separated by a four week period at the beginning of the Spring term. The following rellability coefficients were obtained.

Attitude Scale
Attitude to Main Subject 1
Reliability Coefficient

Attitude to Main Subject 2
Attitude to Education
$+0.79$
$+0.74$
$+0.77$

## Validity

One of the several techniques available to investigators for ascertaining the degree of validity is that of factorial validity. In reality we should regard this method as establishing the factorial 'consistency' of the items on a given scale. Fortunately, the use of factor analysis with item pools relating to attitudes is the major exception to the principle that it is usually unwise from a mathematical point of view to start an 1tem analysis with factor analysis. Details of this problem are given by Nunnally (1967).

In the present investigation, validity was established using four related techniques. They were as follows.
a) Face validity,
b) Factorial consistency.
c) The comparison of ratings by Tutors with the responses of the students to the three separate scales.
d) Construct validity using the "known groups" technique.

To establish the coefficients and differences between means required by items (c) and (d) above, the following techniques were employed.

1. The twenty Tutors who had taught the 100 students in the two random samples for either of their

Main Subjects or Education were asked to rate them for their attitude to their own subject. The number of tutors involved was relativoly low because of some students being taught by the same man or woman. This was particularly the case in Education. An A to $E$ scale was used following detailed written instructions of what was required which in turn was followed by a clearly typed list of what was involved. The gradings were converted to numerical scores and validity coefficients were computed. They were as follows.

Attitude Scale
Attitude to Nain Subject 1
Attitude to Main Subject 2 Attitude to Education.

## Validity Coofficient

$$
+0.53
$$

$+0.49$
$+0.62$

The above coefficients whilst being far from perfect are in accordance with the sizes outiined by Cronbach (1961) who has stated (p.115)
"It is very unusual for a validity coefficient to rise above . 60, which is far from perfect prediction".

A detailed perusal of Shaw and Vright's (1967) "Scales for the Measurement of Attitudes", indicates that Cronbach's figure may be somewhat low and their figures tended to fall on or below the .70 level.
2.

One of the applications of 'construct' validity. is the "Known-Groups" technique. If our definition of the underlying attitude leads us to expect that two or more Eroups should hold different attitudes towards a given object, it follows that a valid scale to measure the attitude in question should yield different scores from
those groups. Thurstone and Chave's (1929) uses of Churchgoers and Non-Churchgoers to validate a scale for measuring attitude towards the Church is an example of this approach.

Cronbach and Meehl (1955) have Indicated that only a rough correspondence between the attitude scale scores and the known-groups is expected since too great a correspondence might lead one to question the validity of the scale, since members of the groups are expected to overlap on the scale. Details of the method used in the present investigation are given below.

From the 200 Students chosen at randon six separate groups were assembled. Detalls are given below.

| Group | Description | Number in Sample |  |
| :---: | :---: | :---: | :---: |
|  |  | Men | Women |
| 1 a | Students who had obtained an average mark of B or above for their lat Choice of Main Subject up to the time of testing. | 21 | 16 |
| 2 a | As above but for 2nd Choice of Main Subject. | 19 | 20 |
| 3 a | As above but for Education | 24 | 26 |
| 1 b | Students who had obtained an average mark of $D$ or below for their lst choice of Main Subject up to the time of testing. | 17 | 16 |
| 2b | As above but for and choice of Main Subject. | 22 | 13 |
| 30 | As above but for Education | 12 | 15 |

The differences between means were significant at the following levels.

| Men | P | Women | P |
| :---: | :---: | :---: | :---: |
| $1 \mathrm{a} V 1 \mathrm{~b}$ | >. 05 | lav Ib | $\lambda .10$ |
| 2a V 2b | $>.10$ | 2av 2 b | >. 10 |
| $3 \mathrm{a} \cdot \mathrm{V} 3 \mathrm{~b}$ | >. 05 | 3 a v 3 b | $\rangle .05$ |

The overlap between the methods of establishing validity outlined above is acknowledged. However, the writer felt that the degree of stringency allowed him had certain limits and preferred to work to these limits. The resulting three scales were considered to have an acceptable degree of validity and were therefore adopted for use in the investigation. In each case, the scale contained nineteen items and the total scores were obtained for the students' attitude to
(i) His first choice of Main Subject.
(1i) His second choice of Main Subject.
(ii1) Education.

Attitude towards College-based Authority and Discipline.
This attitude scale was assembled in much the same manner as outlined above for the Main Subjects and Education. The same 200 students formed the sample. Once more a pool of items was collected and their factorial consistency was evaluated by using a Varimax rotation. Items which loaded above . 25 were accepted for the final scale and were sixteen in number. Many of the items were taken from an instrument of proven value which had been in existence in College for some years and which had been developed by the present writer.

A test-retest correlation coefficient of +0.781 established the degree of rellability of the test.

The period between the first and second testing was one month. Validation was accomplished by the following two methods which were intended to provide an acceptable supplement to face validity and factorial consistency. a) Both men and women Resident Wardens were asked to rate on an A to E scale the attitudes towards College-based authority and discipline for the 200 students in the sample. It is acknowledged here, as in the former case that not all students were rated by one individual. However, this appeared to be unavoidable. The ratings were converted to numerical scores and correlated with the total score on the attitude scale. A valldity coefficient of +0.44 was obtained.
b)

The College records were consulted and four groups of students were established from the total sample of 200. The groups were constructed as follows: Twenty-seven men and thirty-four women were found to be House Representatives or Committoe Chairmen and women or were of high personal standing and whose views were known to support the aims of the College Authorities very strongly.

A further sixteen men and fourteen women wero selected on the basis of their continual infringements of College rules and regulations or negative attitudes to College and the College Authorities. Using their scores on the attitude scale as a basis, differences between their group mean scores were computed. In both cases, the differences were significant boyond the . 05 level with the samples composed of men having means which differed at the .02 level.

The above results were accepted as being satisfactory indicators of the consistency, reliability and valldity of the final scale. A terminal note.

In the case of certain Sub-scales contained In the General Information questionnaire and to a greater extent in those questionnaires concemed with Expectations and Realisations of aspects of College Iife, and Fersonal Views on Teaching, the construction has been on a simpler level. The aim in each case was to ascertain the views of the various samples of students and then to relate these views to the same items but using a different criterion. For example, in Expectations and Realisations of aspects of College life, the question was asied (when the Students were in the first year of their course) if they expected to be taught how to teach whilst at College. The ifve response categories ranged from Strongly Agree to Strongly Disagree. Two years later they were asked if they had in fact been taught to teach and the same response categories were used (o.g. Statement:- I have been taught to teach Answer:- Strongly Agree). In some of the tables which are to follow the above data were combined to give contingency tables since it was felt that such an analysis would be particularly fruitful.
4. Sociometric Data

A major aim of the investigation was to ascertain if the primary philosophical orientations were associated with sociometric groupings. Because
of the nature of the problem which included using 455 students, 'pure' sociometric techniques were not used. Instead, 'near' sociometric techniques were adopted using the work of Rossi (1966) based upon the concept of 'interpersonal environment'. Rossi and his colleague Vallace (1966) have developed a technique by which it is possible:to locate and identify sets of peers using large samples. The technique has been adapted somewhat for use with the present sample.

The present writer was concerned with the

> "eip 'natural informal group', loosely defined for our purposes as a set of individuals who interact with each other on a face to face basis, who do so relatively frequently, and who have formed themselves into such a group oithout the intervention of outside directives." (Rossi 1966 p.190)

Ross1 (1966) p. 191 develops his approach
by stating that:
"There have been two broad types of
strategies employed in the definition
of groups; one concerned with "peer
groups" and the other with "sets of
peers". The first approach - a group
centred strategy - starts with the
identification of groups through
interconnections among individuals
typically employing some variant of
the sociometric test. Cnce groups
are identified, individuals are
placed as members within such groups.
The second approach - the individual-
centred strategy - prefers to define
for each individual the set of persons
who are his peers without too much
attention to the interconnections
among such peers. The typical research
device here is also a variant of the
sociometric test, al thoughthe data
obtained are handled quite differently.
The choice between one strategy or the
other 13 a choice between an approach
which defines peer groups and an
approach which defines sets of peers".

In a subsequent discussion, Rossi (1966)
p. 191 draws attention to the fact that
"There is no doubt about the reality of informal groupings within closed communities such as colleges... The only problems arise over how to define and isolate objectively such informal groupings clearly and unequivocally".

He then goes on to outline how some variant of the sociometric test $1 s$ often used to discern the pattern of groupings among the subjects and concludes (p.194)

> nThe total set of answers to a sociometric test for a population of any appreciable size presents a momumental task of analysis. Although a number of analytical procedures hsve been employed, each has yet to demonstrate that it clearly and unambisuously depicts the pattern of informal association within the population studied."

Forsyth and Katz (1946) sucsosted a matrix solution which would lead adjacent rows and columns to contain persons who chose each other thus revealing the group structures. Luce and Perry (1949) devised a more complicated scheme whereby matrix cholces were raised to higher powors through matrix multiplications to give chains of choices'. The restriction in this method was that a group chose each other. Luce (1950) relaxed this restriction and further unpublished work by Harrison C. White of Harvard University is in this direction. Coleman and MacRae (Unpublished report) using factor analytic rodels and computers devised a 'cascading' criterion which by rearransing choice matrices by iterative procedures brought persons choosing one another closer and closer togother in a choice matrix.

Coleman (Unpublished rescarch) used the method in American high schools but without any notable success in producing clear-cut subgroupings within his population. McRae (Unpublished research) is now developing this concept and hopes to produce groups with similar choice patterns which will emerge as factors in the resulting factor matrix. It would appear from the above researches that the problem is complex and not yet fully resolved into adequate and meaningful techniques. Rossi (1966 p.196) in outlining the degree of fallibility of many sociometric instruments suggests also that
"A few groups encompassing a relatively small part of the student body will be easy to define, but the majority of the population will not be easy to place within an inforalaly organized group structure. But this does not mean that they are not influenced by their peers. It only means that the set of peers to which they are reacting is not a peer group. The implication of this paiterning for the study of peer influences on individual students is clear: for a large proportion of the students, it will not be possible to place them within a clearly definable peer sroup".

After further detailed consideration of the problem, Rossi (1966 p.198) concludes by stating:-

> "The main point that I want to bring out here is that sociometric tests must have reliability much ereater than that ordinariy demanded in questionnaire work in order to be useful in determining group structures of any appreciable size. We must keep in mind, however, that our general interest is not in Eroup structure per se but in group structure as it it usefully illuminates the working of peer
influences on individuals. We shall now turn to a set of methods which accomplishes this goal but bypasses the problem of the identification of group strictures. These are the techniques which earlier I labelled 'individual centred'".

In commenting upon the concept of 'sets of peers' Rossi ( 1966 p.198) defines a student's peers as follows:

In the college environment his peers are his fellow students and particularly those students with hom he is in contact and whom he values in some way even negatively. If there were some way of getting at this interpersonal environment directiy without necessarily being concerned with its organization, the purpose of discerning peer group influence could be accomplished with relative ease."

Studies which, in varying degrees, have adopted and developed the above concept include Derelson et al (1954) and Katz and Lazarsfeld (1955) together with others which directly employed dyadic analysis (which studies the relationship between pairs of individuals) or those which suggested that spouses choose each other because of their similarity or because of their complementarity of their needs. In such studies the individuals 30 designated and their various characteristics aro used to describe the interpersonal environments of individual respondents. Rossi (1966 p.199) concludes on the following important point.

> "Note that this technique in comparison to the sociometric minimizes measurement errors For example, if we assume that the probability of an individualis desienating a "real" friend as a friend is 90 then the probability of his degignating both of two "real" friends is. $90^{2}$ or . 81 .

The chance that, of a group of three friends, all will designate each other under these conditions, however, is only .53. In other words, it is easier to determine an individual's peers reliably than to determine his peer group. The advantages of the individual-centred strategy in research on peer influences has led us to develop a now research approach to which I have given the term "Interpersonal environment" (or IE)".

The Concept of Interpersonal Bnvironment and its Measurement
The 'interpersonal enviroment' of an individual is defined as
N... the set of stimuli presented to the individual by those persons with whom he is in contact on a direct and unmediated basis. This is a conception of each individual as being on the receiving end of commaications from a limited and specific set of others with whom ho is in fact contact". Rossi (1956 p. 200)

There are two critical features assoclated with this concept.
a) It 13 centred on individuals rather than on groups

> "It does not attempt to define the world of other persons in terms of the structure of that world but only in terms of aggregates of individuals who may or may not be structured into patterned relationships among themselves". (Rossi 1966 p.200)
b) The concept of interpersonal environment uses the criterion of face-to-face interaction as a boundarysetting device. Fersons with whom an individual is not in direct interaction are outside this inter personal environment. This idea excludes potential Influences of considerable importance but as Rossi indicated (p.200)
"... we are not presenting a general model of behaviour but only a model which considers elements arising from face to face interaction."

Rossi (1966) has outlined a comprehensive
set of indices for use with the data collected by the Interpersonal Invironment Technique. The present investigation has not used them to any large extent since the hypothesised relationships did not require them. What was important was the apparant acceptability of Rossi's general method of applying the technique to large groups of people and gaining information of particular relevance to the present study.

The basic problems of data collection in
the present investigation are those outlined by
Rossi (1966 p.204).
"The problems of data collection centre around the three central variables; interaction, attraction and content. We need to find some rellable and inexpensive way of determining with whom, how frequently, and with what attraction individuals interact with other persons in a given population. The magnizude of the task obviously varies with the size of the population in question as well as the ability of individuals to provido such information about themselves.

Interaction and attraction present the greatest difificulties in data collection. Obviously, it would be best to make direct observational measures of interaction, but such observations are feasible only under very imited conditions, such as experimentally constituted small groups. The attraction of members of a population for each other can only be obtained from subjective accounts. of course, there is good precedent for such measures in the Bociometric test tradition.

The content variable presents much the same difficulties encountered in conventional attitude testing. An attitude questionnaire distributed to each member of a population to be studied can constitute, providing the questionnaire satisfies the usual canons of measurement, an adequate measure of the content of the interaction.

> The data collection problem boils down to this How cen we obtain from an individual a ilst of persons with whom he is in contact and the frequency of such contact? Drawing on the experiences of the socicmetric tradition, several devices can be suggested: population listings, use of context reminders to aid recall, and openeended recall. $n$

The Apnilcation of the Interpersonal Environment Instrument
Rossi's definition of a 'small' population is
one of 1,000 subjects or less. The present study contained 455 subjects who were listed in alphabetical order on clearly typewritten sheets designed for clarity and the easy recognition of names. The instructions were simple and were dealt with orally prior to the students being asked to complete the instrument. The instructions were also presented in written form at the time of testing. The preliminary technique employed was basically that of Nallace (1966) in that each student was asked to indicate on the ilst using the place provided (in the form of a square box ) the followins itens.
(i) those whom you RECOGNISE
(11) those whom you KION WELL
(iii) How many hours per week do you spend in this student's company.
(iv) Do you LIKB or DISLIKS this student. A pllot administration to the 200 students who formed the sample used in the analysis of the Attitudo Scales indicated three major problems.
a) The term 'recognise' was regarded as meaningless and of no use since it was clear to the students present that they recognised many other students In class and lecture periods but beyond these areas they did nothing to increase their friend
-ships save among those whom they "knew-well".
b) Very fow students were prepared to indicate that they actively 'disliked' another student. The upshot was a unified request by the Students' Union to change this approach if co-operation was to be forthcoming in futute. This was complied with. Support for this request was also fortheoming from Senior Tutors who had been informed by students of their concern over this point. Cornwell (1958) and Foster (1969) have each commented on the above point in connection with their own researches. The sociometric literature also contains much ovidence on the inadvisability of asking for negativo choices or the indication of 'rejectees'.
c) The heading conceming the number of hours spent In a student's company also caused much comment. The consensus of opinion was that 'they could'nt' (or would not say). However, they did indicate it all depended upon what had to be done in terns of work and that when work was put on one side for the day they frequently (if not invariably in some cases) spent their free time with various numbers of their friends. They suggested that this requirement be dropped in order to facilitate the process of gathering more relevant data.

The conclusion reached was that in effect only one category was needed, that of 'know well' since this

Indicated all that had to be lonom. The writer accepted. this but also included detailed definitions of what constituted 'Know-Mell' and also asked for details of who was
a. a former occupant of Day Room (i.e, a room occupied by $2-6$ people as a base for leaving bags and clothes. Such roons were rarely used for the purposes of study and also were never used as places of residence).
b. a Day Student.
c. whether they had shared College 'digs' or Iodeings.

Of note was the frequently expressed comment that with the 'Box and Cox! syster in operation there were clear indications of the need and the actual realisation for students in any single year-group to have close friendships and groups of friends. Theso groups and individuals were a necessary barrier against the atomisation of the College year and what it contained, whereby at any Eiven time one wholo year group was at home for periods of up to seven weeks and out of touch with the College.

Thus, the final instrument which was administered contained specific detalls as to what "Know-iell" meant and asked for responses on this category. In addition it requested information concerning Day Room accommodation. day student status and whether they had shared lodgings accormodation. In retrospect the instrument worked very well and by bearing in mind the views of the student body
the collection of the vast remainder of the data was greatly enhanced.

The final 'score' on this instrument for each student vas obtained by totaling the number of people whom any particular student indicated as well known to him. The ancillary data referred to above was also recorded for future use.

## 5. The Fhilosophical Orientations.

Details concerning the formulation and adoption of the instrument entitled Personal Fhilosophies (Feterson 1965) are to be found in the Introduction. It is sufficient hero to say that four personal orientations vere presented to the students in the form of a one page script. This script contained thumb-nail sketches of the orientations in easy to understand language and the requirements were explained orally as well as being written at the top of each individual script.

A simple check on the validity of the rankings vas sought by asking $25 \%$ of the futorial Staff to rank $25 \%$ of the students chozen at random on the same instrument. The results showed that in none of the four orientations did the choices of the students and tutors fail to agree in less than $75 \%$ of the cases for the first choice of orfentation. For the remaining $25 \%$ the Tutors tended to heavily overload the vocational croup. In addition, each nember of the tutorial staff completed one of the sets of capsule summaries from his or her own point of view. This Eave the orientations of the staff usine the same instrument as used by the students.

## The Filot study

Bearing in mind Marsland's (1969) comment concerning the unreliability of data collected on only one occasion, the writer drew up a list of 100 students from the Third-Year at random. His intontion was to re-administer the whole battery of tests as a necessary check on rellability. For purposes of convenience and practicality, the published tests and the three attitude scales were omitted from the re-test battery.

At this time (1.e. late June) the students were preparing for their lons vacation. As a result, only 44 of the 100 students in the random sample offered to complete the instruments for a second time. Thus the writer was left with approximately 10:s of hisoriginal sample from which to check on the reliability of his data. Motivation and co-operation was enhanced for these 44 people ( 30 men and 14 women) by the writer's being in a position to help with various domestic problems such as the packing and transporting of their personal goods. This was clearly and baldly in the nature of a 'quid pro quo' which the investicator folt to bo vital at this stage of the proceedings.

Subsequent correlational analysis removed items which had a rellability coefficient of less than +0.70 . As a result, two scales designed to tap future aspirations were completely removed and other measures were shortened where necessary.

The Collection and Prenaration of the Data for Analysis
The relcvant detalls of how the data were collected are to be found on pages 103-104.

The subsequent marking and analysis of the various forms of questionnaires and test instruments presented a major problem. Initially, over a twelve-week period the writer scored all of the various papers save the sociometric dita. His fallure to obtain computerised analysis of the sociometric data led him to spend a further five months (evenings and weokends oniy) with his wifo in mamally sorting out this particular set of results. As a necessary check, all of the papers were carefully re-checked by the writer, his wife and a colleague who was a close personal friend. The addition of this extra man speeded the work up considerably. In terms of the actual number of calendar months used in scoring, checking and analysing the data (both manually and by computer) the following outline indicates the schedule of worl.

Date
June 1970

August to October 1970

November to December 1970

January to Hay 1971
June to September 1971
September to October 1971

## The task

The end of the data-collection period.

Scoring and recording of data for all the instruments except the sociometric data.

Re-checking of the above data and the beginning of the computer based analyzes.

Sorting of the sociometric dita. Re-checking of tho sociometric data.

Computerisation of the remaining data needing this treatment. Mamal processing and analysis of the sociometric data.

CHAPTER 4.

THE COLLEGE.

## The Collezo.

Prior to commencing an analysis of the data it is important to consider the setting in which the tests were administered and in which the sample of students was finishing a three-year course of training and education. The basic facts concerning the College are given below. The material has been extracted from the College Prospectus for 1969-1970.

## 1. General Information

Situation and Accommodation
The College, situated in rural surroundings, has immediate access to the M6 and the main line railway at Crewe. It was first established in 1947 as an Bmergency Training College, was made permanent in 1949, and is now a constituent College of the University of Keele Institute of Education.

There are now 1,600 students at the College. Fach resident student Iiving in the College has a study-bedroom. Full residence is arranged for about a third of the course, and during the periods that students are in lodgings near the College thoy continue to enjoy the advantages of corporate ilie. Lodgings are arranged and supervised by the College. Students whose homes are within daily travelling distance are admitted as non-residents.

A programme of redevelopaent and expansion of the College was commenced in 1961 and is nearing completion. It provides new accommodation for the
residential and teaching sides of the commity and good facilities for recreation.

The College Year
A special feature of the life of the College results from its "modified three-term year". Each "year" of students is in attendance for two stralght terms of ten weeks; the third term of his year is split into two five week units, round the incidence of School Practice, which lasts for five weeks. All students are required to undertake some weeks of home-based study or field work as an integral part of the course. The calendar therefore provides for some vacations at off-season periods, as well as for fixed vacetions at the traditional geasons of Christmas, Easter and the month of August.

College Government
The College is governed by liberal and democratic principles. The Governing Eody includes county councillors; teachers, nominees of the university, members of the tutorial staff and representatives of the student body. A consultative comittee of staff and students has fashioned the structure of internal government of the College. The College Council is composed of senior members of staff and officers of the Students Union, together with elected students and tutors; a number of joint
stafi/student comittees look to specific areas of responsibility in the day to day life of the College.

College Activities,
The College attaches much importance to social, cultural, and sporting activities. Student life on the College is organised and run by the Students Union to which all students bolong. The Union receives 23.10s. per student per anmul from the L.T.A., and each student pays 52 a year towards the Union funds.

The Students' Union rim some forty clubs and societies on College, both sporting and nonsporting, and as well as catering for the major sports, visits, concerts and trips of all kinds are arranged. Nost major events on College are organised by staff/student comaltees.

Intry qualifications and requirements were outlined in the Prospectus as follors.
"Applicants for admission to the Three-year Course who possess the appropriate qualifications and personal qualities, and who will have reached the age of 18 years on or before the 1st october of the year of entry, will be interviewed at the College. To become eligible for grant-aid candidates should be British subjects, normally resident in England or Wales.

Character, health and physical capacity for teaching will be taken into consideration. The minimum academic requirements include five 'Ordinary' level passes, one of which must be in Inglish Language, in the examination of the General Certificate of Education, or an equivalent qualification. Entrants direct from school, however, will normally be expected to have completed two years of advanced studies in the Sixth Form.

The Three-year Course is designed to prepare students for a teaching career in which they may contribute effectively to the educational service during many years of social change. Teaching practices in various types of schools are therefore arranged, and special attention is given to the increasing demand for well-trained Primary School teachers and for speciallst teachers of Handicraft, Nathematics, Sciences and Fhysical Education in the Secondary Schools.

Kature students with suitable qualifications may enter the three year course; those with exceptional qualifications may be granted remission of one year or more of the Three-year Course. All applications for admission to shortened courses require the special approval of the University of Keelo Institute of Iducation. "

The following courses were offered by the

## College.

A. Courses of initial training.

1. A Three-year Course of initial training for Primary and Secondary Education for men and women.
2. A One-year Special Course (Handicraft).
B. A Fourth Year Course leading to the degree of Bachelor of Education.
C. A One-year Course for the Post-Graduate Certificate in Education.
D. Supplementary Courses.
3. A One-year Supplementary Course in Handicraft.
4. A One-year Supplementary Course in Mathematics.
E. Short Courses.
5. One-term Course in Mathematics for Teachers in Primary Schools.
6. One-term Courses in the Education of the Slow Leaming Child in Ordinary Schools.

The Certificate in Education, and the Supplementary Certificate, are awarded by the University of Keele Institute of Education to students who complete their courses successfully. The awards are based upon a system of continuous assessment of the students work, with some end of the course examinations.

In all a total of twenty Nain-Courses were offered by the College including the usual range of science, arts and practical subjects. French was the only foreign language course available. All students had to undertake to study two subjects at Main level, and Education. In addition, in Year one, a range of 'Supporting Studies' in Art and Craft, Divinity, English, Mathematics, Fhysical Education (including Health Education) and The School Library were undertaken. In Year two of the course the students had a choice of further Supporting Studies which were in the form of fairly wide-ranging options using subject combinations as a basis. Ixamples Includa nScience In the Primary School" and a Handicraft course for women students.

At the end of the second year those students who for various reasons wished to reduce their commitments were allowed to study one of their lhain subjects at a subsidiary level. The final decision was that of the student following upon discussion with his Subject and Personal tutors. Those who opted to reduce a Main subject to a Subsidiary level wore examined at the end of their second year and if successful ceased to study it for the remainder of the course. Therefore, in Year three these students studied one Main subject and Education only. In the present sample the numers of such students were 29 Men and 53 Women.
2. The Staff.

At the time of the investigation, the number of Academic staff including the Principal and his two Deputies together with the breakdown of their quallfications was as follows.

Total number of Staff 151
The number of graduates 86
The number of non-graduates 65
( 122 Men and 29 Vomen)
( 69 Men and 17 Women)
( 53 Men and 12 Women)

The number of Men and Women holding higher degrees was 25 The number of Men and Yomen worising for further qualifications was 28.

A comparison of the above figures (expressed below as percentages) with figures given in Taylor (1969) taken from a 1964 survey of College Staff, indicated the following points of interest.


In four of the five categories listed above, the College percentages are considerably below those given by Taylor taken from a 1964 survey. The figures for the College clash with the general belief by Staff in College that promotion was closely linked to the attainment of further academic qualifications. It was claimed by members of staff that 'many' of their colleagues were pursuing further qualifications of one kind or another. The above figures would appear to discount this view to a large degree as lar as the women members of staff were concerned.
3. Social Structure and Social Control.

A detailed account of social structure and social control in the Colleges of Education can be found in Taylor (1969). Several of the headings used by him have been adopted as the basis of the following brief account of aspects of the social structure of the college used in the present investigation. a) The Growth of the College.

The writer has been employed at the College for nine years. During this time, it has developed from a small community of under four hundred people to its present size which now caters for over sixteen hundred students and one hundred and fifty one staff. The results were as Shipman (1965) p. 50 has already indicated:
"The expansion had certain immediate effects on the administration of the college, equivalent to the transition from a small family firm to a large limited company, with all the accompanying features of rationalisation, such as increased specialisation by staff and students, formalisation of comminications, a hierarchical staff structure and standardisation of procedures
Increased size also necessitated an expanded physical layout, involving a separation of lecture rooms and assembly halls from residential accomodation. Thus staff were no longer required to circulate around student rooms and students had to cross the campus to get to lectures or student union activities. "

In the case of the college used in the investigation the position was made more frustrating for many of the students by
a)

The large-scale building programe which
was in progress throughout the whole of
their three-year course.
b) The modified three-term year concept which physically separated individual year groups of students for 5-7 weeks at a time. Details of this scheme are given at the beginning of this chapter in an extract from the relevant Prospectus.

One observed result of these features was that the students tended to regard the College as a base for servicing their needs during their time spent on the campus. College reunions whilst still fairly wellattended are weighted in terms of numbers by those students who left College before 1968. However, the
point of note is that for a variety of observable reasons such as increase in size, a fairly fragmented College year an increase in the number of staff pursuing specialised functions (such as preparation for teaching, preparation for entry onto the B.Ed. degree course, teaching on the B.EC. courses or one or more of the several shorter courses available) and fairly rigid residential and accomodation procedures, the function of the College was seen by many of the students as an area where their diverse needs might be serviced.

## b) The Hierarchy of Positions.

Taylor (1969) pp 238-241 has analysed the role of the College Principal and has indicated that the Frincipal's work involves four major aspects, namely, academic, institutional, instrumental and expressive functions. In the present case, the rapid growth of the College together with the addition of extra courses for B.Ed. candidates and people from industry and commerce as vell as serving teachers has increased the instrumental or task-centred area of the Principal's role at the expense of the expressive.

However, in the present case, the rincipal was still a figure who was readily recognised on campus and was known to many of the students. This was particularly true of offenders or those who sat on one or more of the various comittees. At Staff level the Principal and his imediate subordinates together with
their wives were still seen regularly at social events throughout the year. However, the lecturing comiltments of the Principal and his two Vice-principals had become fewer and fewer and tended to be associated with such things as the welcoming of new entrants, the introduction of students to schools and a final talk concerning the completion of application forms and points of importance concerning interviews for first teaching appointments.

The complete hlerarchy of College staff at the time of testing 1.0. 1970 was as follows:

1. The Principal.
2. Two Vice-Principals (One man and one woman)
3. Two Senior Tutors (Departmental heads who had extra remunerable responsibilities as members of the Principal's Administrative Staff).
4. One Pxincipal Lecturer who was primarily (now fully) occupied with the organization of Teaching practice.
5. Departmental Heads - Who formed the Academic Board.
6. Principal and Senior Lecturers and Lecturers.

In addition to the above, there were many Administrative staff ranging from the Senior Administrative Officer down to a small army of cleaners, porters and gardeners. The Resident Wardens of whom there were seven men and seven women were all full-time tutors who were paid an extra sum to fulfil this extra function.

Accommodation for the Vardens was generally good and the job was not unduly arduous.

The policy of the Principal to promote Internally and to fully utilise his powers as far as the ratio of Principal Lecturers: Senior Lecturers: Lecturers was concerned was seen by many in a favourable light. Sabbatical arrangements were continually improving so that when one had completed seven to ten years of contimuous service in the College he or she was in a favourable position to apply for (and probably get) a year's leave of absence on salary to pursue a higher qualification. Departmental policy modified this in some cases but the College compared favourably with some colleges whilst being far worse off in this respect than others.

## c) The Aftermath of Veaver.

After the publication of the Weaver Report (1966) which was concerned with the Government of Colleges of Education the following elaborate committee structure was developed.
(1) The Academic Board.
(ii) The Devolopment Comittee.
(iii) The Staffing Comittee.
(iv) The Admissions Committes.
(v) The Teaching Practice and Schools Comittee.
(vi) The Examinations and Assessment Comittee.
(vii) The Educational Research Comittee.

# (vili) The Finance and General Furposes Comittee. <br> (ix) The Organisation Committee. <br> (x) The Roview Comiltee. <br> (xi) The Staff Welfare Committee. 

In addition, there were several other subcomittees such as the College Bar Committee and the Halls of Residence Committee, The Principal, his two Deputies and the two Senior Tutors were all on some comittees whilst all other committees had one or another of these senior people as members. The Principal was also an ex-officio member of all Academic sub-comittees.

An immediate problem assoclated with the above was that a number of senior staff were frequently involved in committeo work. The majority of committees listed above were desienated to meet only once per tern. However the multiplicity of sub-comittees and the evergrowing agendas of these bodies made attendance at them a frequent happening which often cut across teaching comitments.

Just how far the implementation of the recommendations of Weaver has led to a diffusion of power which formerly rested in the hands of the College Principal or his chief officers is hard to assess in the present case. The time taken up by comittee work seems large but the fragmentation of time and functions on the part of the College Staff makes it very difficult to assess just what one's colleagues are doing during

College time. Also what is being achieved is open to speculation and comment runs the whole gambit from 'very worthwhile' to 'nothing of value' with the midpoint being around the "points of relative unimportance are now placed in our hands for our interminable deliberation". For many of the Comittee members however, their work-load had increased considerably. However, with the advent of Weaver, the vote at 18 years of age and the consequent withdrawal of the concept of tutors being 'in loco parentis' the effects on the students have been profound. They are now fully aware of their 'rights' and the extent of the power of the College authorities. They appear on comittees and through their union are vociferous in their opinions to a degree unknown seven or eight years ago. One example in this realm has been the near-instant adoption of 'mixed visiting' (i.e. the sexes remaining in each others' rooms) for any period within the time limits of noon to midnight. There are vigorous measures being pursued to extend this to a 24 hour period.

Thus, in summary, for a variety of reasons:
a) the absolute power of the Principal appeared to be less than was the case.
b) the students had become aware of their 'rights! and the power of concerted effort.
c) In a real and observable way the students were governing themselves in a growing number of areas and particularly within the frameworic
of social and residential life.

## d) Personal Velfare.

The personal welfare of the student body falls into two distinct categories.

1. Their physical well-being in terms of food, heating, lighting and genoral physical comfort in addition to the medical services offered by a fully equipped Hedical Centre.
2. Care of their mental and personal needs through the Personal Tutor system.
3. The Organisation of physical comforts.

The rebuildins programe had provided the students with lecture hall facilities and classrooms of a very high standard. In general, comments of visitors to the college in these areas were very favourable.

The residential accommodation on College was also of a high standard with each Third-year student having his own very modern study bedroom. The rooms were centrally heated and contained ample modern furniture including sockets for shavers and extra lamps or record players and the like. Each hall of residence accomodated approximately ninety students and only a relatively small number of students opted to live in nearby enclave of private houses which the college had purchased. Every effort was made to meot the wishes
of the students concerning room neighbours. Nuch of the day to day organisation was in the hands of the Hall Comittee which contained several student representatives in addition to the warden. Relations between Warden and students were of a high order. This was the view of parents visiting the College and was corroborated by the frequent occasions when the students would seek the advico of the Warden on a range of personal problems. However, from the point of view of mixed visiting in the halls and its possible extension to cover a 24 hour period the students presented a seemingly strong front although Tutors belleved that in the event of a referendum on this point, many students would vote against it.

Frior to being in residence tho students had in fact lived both at home and in lodgings provided by the college. This latter point is of relevance to a small part of the investigation.

The cleaning of rooms and the laundering of bed linen and towels was catered for by the College. The students tended to have large T.V. sets in their lounges and which were often able to receive transmission in colour. Rentals were paid for by termly subscriptions.

The number of meals provided for students each day was five, ranging from breakfast through lunch, tea and dinner to a supper snacls based on an issue of fresh milk and bread. Cooking facilities were provided along with washing machines and a degree of comfort was achieved envied by many outside the college.
2. The organising of the satisfactions of mental and personal needs.

In an effort to cater for these various needs, the Principal had developed a system based upon each student having a nember of staff as his Personal Tutor. Tutors usually had four or ifve students allocated to them at random as each new group of entrants arrived. This gave a total of 10 to 12 students per tutor at any given time (1.e. 4 students in each of the three-year course).

The roles which the Personal Iutor had to play were diverse and included champion, counsellor, friend, financial helper, confidant and mature adult. The strength of these different emphases was decided by both the tutor and the student acting independently. In some cases both saw a real need for a close relationship, in others the opposite was the case. There were some tutors who saw their students infrequently whilst others recelved them into their homes as personal friends. A wide range of styles and situations was readily observable.

Each year the Principal in an attempt to regain a part of his former and important 'expressive? role as opposed to his increasingly bureaucratic and instrumental role saw each student in the company of his Fersonal Tutor. If (as happened) the 'Box and Cox' system prevented the tutor being present because he was on holiday, then his deputy took his place. In some cases the Personal Tutor himself would break his holiday to appear.

The views of both Staff and students towards this practice ranged from admiration (there were 455 students to be seen by the Principal) to cynicism. Fach meeting between the Principal and the student and his Fersonal Tutor was a reviev of the student's progress to. date. This review took place. in both years one and two of the college course also but on these occasions was conducted by the two Vice-Principals (1.e. the woman Vice-Frincipal saw the second-year students whilst her male counterpart saw the first-year students).

## e) Organisation for Teaching.

As in the majority of Colleges of Education, the major vertical divisions as far as the teaching work was concerned were between the various subject departments. The year-group of students provided the main horizontal split. The above organisation held true for the majority of tutors also. They tended (under the arrangements for the 'modified' three-term year) to be on holiday or away from college at the same time as their students. Teaching practice was organised on a year-group basis with the above tutors being in charge of 6-14 students at a time (1.e. the number varied according to whether or not they had any other cormitments such as B.Ed. or shortened-course lectures to deliver).

The largest department in the College was that of Education with 38 members of whom only 5 were women. The smallest department was that of Social and Community Studies in relation to work with Youth which at this time had one member only.

Taylor (1969) pp $244-248$ has some interesting comments to make concerning the problems of growth in relation to the college teaching organisational functions for example, he states.
a) "Social cohesion within the department tends to be based upon a commitment to the disciplines of study rather than to the institution.... (p.245)
b) "The academic system rewards the individual entrepreneur rather than the loyal college man" (p.245)
c) "In some colleges departmental conflict is a permanent feature of the social organisation. A split between the Education department and those responsible for the academic subjects has been common; the child-centred orientation of the former, the fact that it contained fewer graduate members, that it is often larger, and has control over a number of aspects of college work such as school practice organisation that affect the whole staff, all help to emphasize this split".

From the point of view of the College used in the present study and the above comments of Taylor the following may be said.

1. There was some evidence in the form of informal talk at coffee that groups of students and tutors alike tended to group with members of the same subject or subject department. In particular the fairly large handicraft group (nicknamed the lohippies') and to a lesser extent
the physical education and drama students tended to be seen in groups somewhat more frequently than the other students. The commencement and finishing times of individual lectures tended to reinforce the above in some small degree (e.g. the drama lecturer might give time for a coffee break at what would be the middle of a lecture period for another member of staff).
2. The second comment of Taylor has some basis in fact since the University of Keele laid down fairly stringent requirements for anyone wishing to teach either on the B.Ed. bridging course or on the degree course itself. However, college pollcy still tended to reward the men and women whose 'all-round' commitment to the values of the college was high. Examples of this abounded. For some, it was seen as a reward for 'time serving' but by others as a 'just reward'. In general, promotion was extremely fair and was acknowledged as being so by many staff representing all levels of the teaching hlerarchy.
3. Conflict was greatly reduced following the publishing of the Weaver Report and the rapid growth In the size of the college. The Education Department remains the largest and still has many non-graduate members of staff. However, the institution of the Academic Board, the placing of Teaching Practice in the hands of all the tutors in the College and the large number of committees (necessitated by Weaver)
all served to reduce the degree of insularity between the departments and in particular between the Education Department and the remaining departments.
4. The modernisation and building programes were well-established by 1970 and very few (1f any) departments had teaching accommodation which was inferior to that of other colleagues. The College Principal insisted upon every member of the tutorial staff having his own personal tutorial room. The newer rooms went to those who had been in the college the longest but such was the case that the great majority (1.e. $77 \%$ in 1970) of tutors had rooms less than four years old. They vere more than adequate and had a degree of comfort envied by colleagues at a nearby Collego of Education.

## 1) The dally timetable

In the first two years each student studied two Main subjects and Education together with a range of 'Supporting Studies'. This latter group included Maths, Inglish, R.I., Drama, P.E. and Library Studies. In year two much the same system operated with a different set of 'Supporting studies' oparating from a basis of options (such as Comparative Education). However, from the point of viow of weekly commitment, each student was comintted for approximately four full days per week. Some variation in work load occurred with the individual departments. For example, the handicraft and drama departments required prool of expertise in a practical as well as a theoretical format and this kind of work
tended to absorb a lot of the students 'free' time. In Year three a significant change occurred in that there were no 'Supporting Studies' to attend but instead there were three dissertations to complete. However, the organisation of lectures was such that a student was committed on three days per week; one for each of his two Main subjects and one for Education. Any student who had 'dropped' a subject to 'subsidiary' level and had passed the exanination prior to entering Year Thre was now comitted to attending lectures on only two days per week!

The programe of lectures, tutorials and practical sessions within a 'Main day' or for Education varied with the Lecturer and the subject being studied. As indicated, drama and handicraft students tended to have to work long Lours. Some of the science subjects required attendance on a 'main day' for the full seven lecture periods (such days would, of course, include periods of practical work) whilst some of the arts subjects required attendance at three lectures or tutorial sessions.

In Education the system which was laid down was as Lollows and was adhered to by all of the Tutors who taught in Year Three. During the day (which could be either a Monday, Wednesday or Friday) on which they studied the subject, the students had to attend for a maximum of five periods, namely
a. a lecture period attended by half of the
total year group. (No lecture of this kind was given on a Friday). A third of the total student body then went on to the followine.
b. a single forty-five minute class period to follow-up and develop the theme (usually sociology in Year Three) established in the larger group lecture referred to above. Here a tutor would have $18-20$ students in a well-equipped classroom.
c. A double-period taken later in the day in which teaching within the students! choice of specialisation was developed. For example, the Infant Specialist might develop the work of Plaget; her Junior colleague the Initial Teaching Alphabot whilst the Secondary speciallst would be introducing methods of teaching the less academically able pupil.
d.
a single-period devoted to a tutorial. In this situation the students would be asked to comment (in groups of 4 or 5) on set reading. The tutorial fulfilled the secondary function of

> familiarising the Tutor with the needs, strengths and wealnesses of his charges. It also helped him to reduce the size of the teaching unit in an estabilshment which was being enlarged contimally in terms of bulldings and successive intakes of students.

The above figures were not dissimilar from those reported by Robbins (1963).

Thus, for most Students there was required a degree of commitment in terms of effort which was not excessive. Those students who had opted to work towards entry to the B.Ed. degree course had extra work in the form of attendance at lectures and reading prior to taking a 'Bridging Examination'. The calibre of this latter work vas higher than that expected of the threeyear students in general.

Over the year, the Student was also expected to prepare for a number of varied tests and essays. Such preparation was expected to form a part of his 'fres' time and to this end ample library accomodation had been provided. The student also had his own study bedroom which he could use as and when he so wished.

A form of 'continuous assessment' was in operation throughout the three separate year groups. Ey this method, each student had various kinds of work assessed upon completion. The marks wore totalled and
averaged at the end of each year. By the time the student reached the final terms of the Third year. he had accumulated a total of $75 \%$ of his total marks and grades. A final examination was used to assess the three-year course and added the remaining $25 \%$ of the marks necessary to pass the course and so obtain a certificate. A weighting method allowed the marks gained in each of the three years to be added to that Eained from the final examination.

Three separate teaching practices were assessed, one being conducted in each year of the course. In general, only the mark gained for the Third and final practice was placed on the Certificate but discrepancies between marks awarded to the same student on different teaching practices were carefully scrutinised and great efforts were made to be falr and to be seen to be fair. Students on every course were kept fully informed of how they were progressing and avenues were open to them should they wish to question the awarding of any particular mark or grade.

## E. Problems of Discipline and Social Control.

As in every large institution, problems concerning the maintenance of an acceptable pattern of behaviour and level of effort on the part of the student occasionally arose. Most of those conceming residential infringements were dealt with by the individual Hall Committee or by the Resident Warden himself. More serious cases or those involving repeated excesses of one
kind or another were dealt with by the Personal Tutor and the appropriato Head of Department or, if very serious by the Vice-Principals who might pass the man on to the Review Comaltee. This comittee (which was post-Weaver) had the problem (along with other committees on certain specific aspects) of dealing with serious offences or persistent offenders. If the committee recomended that certain action should ensue, the Principal was called in to have the final word. In most cases the decision of the comittee was upheld.

The infringements within the college were relatively few in number and ranged from parking offences to persistent refusal to work at the required level. There wero also offences involving men students being found in the rooms of women students after midnight but such occurrences were rare.

[^1]
## CHAPTER 5

AHALYSIS OF THE DATA.

THE SOCIOMXTRIC DATA.
A major hypothesis of the present investigation has been that
"... the most important single piece of
data that will predict the sociometric
groupings will bo the primary
philosophical orientations; and further,
that the secondary philosophical
orientations will have a small but
significant predictable effect on such groupings".

## A. The Frimary Philosophical Orientations.

From the point of view of the primary philosophical orientations in relation to the sociometric data, expert opinion suggested that if the new data in the form of the mubers of choices in each of the four possible cells for each respondent (e.E. Student A knows 50 people well of whom 20 are Vocationalists like himself whilst the remaining 39 are spread 10,10 and 10 between Academics, Collegiates and Nonconformists respectively) were expressed as percentages of the total number of persons designated as being 'known well' by any single individual, further analysis could be undertaken. This Fas done and the data were then deemed amenable to a simple one-way analysis of variance treatment. The tables given in the Appendix pp $563-575$ inc. summarise
the results for each separate philosophical orientation in terms of the following four analyses.
a) Men choosing Men friends.
b) Women choosing Women friends.
c) Men choosing Vomen friends.
d) Women choosing Men friends.

Detailed coments are reserved until the completion of the presentation of the sixteen tables and only concern points of interest which support or fail to support the hypothesis. The writer was aware of the limitations imposed by using the F-ratio followed by conditional t-tests with sociometric data particularly when using samples of different sizes. He concluded, having read the wor: of Boneau (1960) and later Lewis (1963) that since widespread generalisations were not to be a major part of the study and that Boneau's conclusion concerning the robustness of the t-test would be sufficient safeguard against the adoption of the t-test when not all of the basic assumptions could be fully checked. For example, in this latter context, with the small numbers encountered in the Academic Women and the fonconformists (both Men and Vomen) the normal tests of skewness and kurtosis were not sensitive enough to detect meaningful differences and divergences from normality. When the second-choice orientations in relation to the first-choice of orientation were considered very small samples indeed were compared. However, as Lewis (1968) p. 36 has clearly indicated
"It is the combination of unequal sample sizes with (suspected) unequal population variances that must be guarded against".
and because of this the writer had tended to be cautious when interpreting results where elther the variances appear to be abnormal or where the actual size of $t$ has proved to be fairly small (but significant).

The 16 tables are given in the Appendix pp 563 - 575 inc. whilst a detailed summary of the main points to emerge from this analysis is given below.

The important detalls which arise from Tables 69
to 84 can be summarised as follows.

## 1. The Vocationalists

In none of the four analyses (1.e. Men choosing Men, Women choosing Women etc.) was the hypothesis verified. Out of a total of twelve cases in which the mean score of the Vocationalists needed to have been higher than that of the three remaining groups for the acceptance of the hypothesis for this sample, only in four cases (three of which included the Nonconformists and one the Academics) was this the case. Thus, in general terms (i.e. the majority of the differences calculated) the hypothesis was not verified.
2. The Academics

For the Academic Hon the hypothesis that they would choose fellow Academics as friends or people whom they know well in preference to men from any of the three
remaining orientations was verified. In each case the difference was significant beyond the . 001 level.

For the Academic Nomen the position was not as clear with them being significantly higher than both the Collegiates and Nonconformists but not the

Vocationalists. The Academic Men did not choose Academic Vomen as friends in preference to Women from the three remaining groups. This latter finding also held true for the Academic Women choosing Men as friends from groups other than the Academic orientations. Thus, out of a total of 12 cases in which the Academic means were expected to be significantly higher than those of the three remaining groups, only in five of the relationships did this hold true.

## 3. The Collegiates

The Collegiate Men in choosing other Men friends; the Women choosing homen friends and the Women choosing Nen friends each chose significantly more Collegiates than members of the other three groups. In the case of the Collegiate Men choosing Women friends, they had a significantly higher mean score than both Academics and Nonconformists but were not significantly different from the Vocationalists.

Thus, of twelve possibly significantly higher means, the Collegiates had eleven of them and in the one case where this was not so they were not significantly higher or lower.

The Nonconformists irrespective of within or across sex choices chose more Nonconformists in significantly higher numbers in preference to members of the three remaining groups. of the 12 possibly significant differences, they had the significantly higher mean in each and every case and in the majority of cases, this difference was significant beyond the . 001 level. In the case of the Nonconformists, this finding corroborates the findings referred to elsewhere in this study which indicated the close-knit fashion in which this relatively small sample of students conducted themselves.

SUMMARY
From the point of view of the primary philosophical orientations, the Nonconformists were the only group for whom the hypothesis was verified. To a slightly lesser extent (1.e. 11 out of a total of 12 possible sienificant differences) the Collegiates indicated an affinity with each other in preference to choosing friends (or people whom they know well) from any of the other orientations. This also held true for the Academic Men when choosing other Men and was partly true of the Academic Vomen when choosing other Women. It did not hold true when each sex chose Academics of the other sex. For the Vocationalists, the hypothesis was not verified since in none of the four separate analyses were they in possession of the significantly higher mean score when compared to all the remaining groups. They had the significantly higher mean in four out of twelve comparisons. Thus, the Nonconformists followed by the

Collegiates and Academic Men were the only samples which illustrated any substantial degree of grouping together in terms of choice of friends taken from the same primary philosophical orientation.
B. The Second-Choices of Philosophical Orientation in Relation to the First-Choice of Orientation.

The actual distribution of Second-choices of Philosophical Orientation when viewed in relation to the First or Initial Choice of Orientation was as follows. The distribution here adheres to the lines of the example given below.

Example - How many of the 53 Men who chose Vocationalist as their first Philosophical Orientation chose Academic, or Collegiate, or Nonconformist as their second choice of orientation? The answers were 32, 14 and 7 Men respectively.

The complete table of twenty-four cell entries was as follows:

Table 8 | The Second Choice of Philosophical |
| :--- |
| Orientation of the Samples of ten |
| and Vomen Students in Relation to |
| their First Choice of Orientation. |

|  |  | Men | Yomen |
| :--- | :--- | :--- | :--- |
| Vocationalists who chose Academic as their |  |  |  |
| 2nd choice | 32 | 28 |  |
| Vocationalists who chose Collegiate as their |  |  |  |
| Znd choice |  |  |  |

Men Women
Academics who chose Vocational as their and choice ..... 18 ..... 14
Academics who chose Collegiate as their and choice ..... 14 ..... 11
Academics tho chose Nonconformist as their 2nd choice ..... 4 ..... 1
Collegiates who chose Vocational as their and choice ..... 44 ..... 78
Collegiates who chose Academic as their and choice ..... 39 ..... 32
Collegiates who chose Nonconformists as their 2nd choice ..... 20 ..... 19
Nonconformists who chose Vocational as their 2nd choice ..... 7 ..... 5
Nonconformists who chose Academic as their 2nd choice ..... 7 ..... 6
Nonconformists who chose Collegiate astheir 2nd choice159
It will be noted from the above table that some of the cell totals are very small and as such challenge the concepts of normality of distribution and homogeneity of variance associated with the proposed analysis outlined below. Expert opinion was sought concerning this point and the conclusion reached by the present writer was that whilst the results appeared to be of value, their interpretation had to be made with caution because of the possible violation of some of the basic assumptions of importance in this kind of analysis.
Basically, the analysis replicated that used for the deciphering of the data gained from the Primary or

First-choice Philosophical Orientations. In other words, the data for each cell and each person were expressed as percentages of the total number of persons whom any aingle individual of a particular philosophical orientation 'knew well!. Tho resulting percentages indicated whether the person in question had more friends who had the same secondary-philosophical orientation in rolation to the first-choice of orientation or if in fact they occupled a different cell. By totalling the individual percentages for each of the cells tho resulting data were amenable to a revele one-way analysis of variance desien. A total of 48 analyses were completed based upon orientations and the four criteria of:
a) \#en choosing Men
b) Men choosing Women
c) Homen choosing Vorion
c) Momon choosing Yen

The data are summarised in 48 short tables given In the Appendix pp $576-595 \mathrm{in}$. In each table only the t-tests which directiy concern the hypothesis are reported, for example, in Table 85 there were three possible t-tests viz Academics $v$ Collegiates, Academics v Nonconformists and Collegiates $v$ Nonconformists. The writer was not interested in the third t-test as a part of the hypothesis that the mean for this group of Academics would be significantiy higher than that of elther of the two remaining groups. Thus, in the tables which are given in the Appendix pp $576-595$ although the three t-tests are
given only the two which are of direct relevance are later discussed. A detailed consideration of what has emerged from the tabulated results (to be found in the Appendix pp 576-595 ) is given below using sumaries of the actual statistical data.

The main details from Tables given in the Appendix ip 576-595 can be summarised as follows in Table 9 The table outlines the differences in which the investigator was interested and whether or not the significant differences were in the expected direction. This latter point is indicated by the specific orientation being underlined in the column marked 'Significantly Higher Mean'.


YEN CHOOSTIG MEN

| $\frac{\text { No of the }}{\text { Mnalysis }}$ | Description of the Analysis | Orientations ${ }^{\text {Sig\% }}$ Higher |
| :---: | :---: | :---: |
| A.1. |  |  |
| A.1. | and Cholce of Orientation | Acads $V$ Nonc Acads. |
| A.2. | Voc. Hon who chose Coll. as and Choice of Orientation | Colls $v$ Acads Acads Colls $V$ Noncs Noncs |
| A. 3. | Voc. Men who chose Nonc. as 2nd Choico of Orientation | Noncs $v$ Acads Acads Noncs $V$ Colls N.S. |
| A.4. | Acad. Nen who chose Voc. as 2nd Choice of Orientation | Voc. $v$ colls Vocs. Voc. $v$ Noncs Vocs. |
| A.5. | Acad. Men who chose Coll. as and Choice of Orientation | Colls $V$ Vocs N.S. Colls $v$ Noncs Colis. |
| A.6. | Acad. Men who choss Nonc, as 2nd Choice of Orientation | F-ratio: was non-significant |


| $\begin{aligned} & \text { No. of the } \\ & \text { Mnalysis } \end{aligned}$ | Description of the Analysis | Orientations $\frac{\text { Sig. } \mathrm{H}_{0}}{\text { Hean }}$ |
| :---: | :---: | :---: |
| A.7. | Coll. Men who chose Voc. as 2nd Choice of Orientation | Voc. v Acads Vocs. <br> Voc. V Noncs Vocs. |
| A. 8. | Coll. Men who chose Acad as 2nd Choice of Orientation | Acads $V$ Vocs N.S. Acads $v$ Noncs Acads. |
| A.9. | Coll. Men who chose Nonc. as and Choice of Orientation. | Noncs $v$ Vocs N.S. Noncs $v$ Acads Noncs. |
| A. 10 | Nonc. Men who chose Voc. as and Choice of Orientation | F-ratio was non-significant |
| A. 11 | Nonc. Men tho chose Acad as 2nd Choice of Orientation | Furatio was non-significant |
| A. 12 | Nonc. Men who chose Coll. as 2nd Choice of Orientation | $\begin{aligned} & \text { Colls v Vocs. Vocs } \\ & \text { Colls v Acads Colls. } \end{aligned}$ |

KTN CHOOSING YOMEN

| B.1. | Voc. Men who chose Acad. as <br> 2nd Choice of Crientation |
| :--- | :--- |
| B. Acads $v$ Colls Acads. |  |
| Aocads Noncs Acads. |  |


| B. 4 | Acad. Men who chose Voc. as 2nd Choice of Orientation. | Vocs. v Colls Colls. <br> Vocs. v Noncs Vocs. |
| :---: | :---: | :---: |
| B. 5 | Acad. Men who chose Coll. as 2nd Choice of Orientation | Colls.v Vocs. Vocs. <br> Colls v Noncs Colls. |
| B. 6 | Acad. Nen who chose Nonc, as 2nd Choice of Orientation | Nones $v$ Vocs N.S. Noncs $V$ Colls N.S. |



B. $10 \quad$| Nonc, Yen who chose Voc, as ratio was |
| :--- |
| 2nd Choice of Orientation |

non-significant.
B. 11 Nonc. Men who chose Acad. as 2nd Choice of Orientation

Acads v Vocs, NiS.. Acads v Colls N.S.
B. 12 Nonc. Men who chose Coll. as

Colls $v$ Vocs Vocs.
Colls v Acads Acads.

Ho, of the Description of the Analysis Orientations Sig. H. Analysis.

| C. 1 | Voc. Vomen who chose Acad. <br> as 2nd Choice of Orientation |
| :--- | :--- |
| C. 2 Voc. Vomen who chose Coll. |  |
| as 2nd Choice of Orientation |  |
| C. 3 | Voc. Nomen who chose Nonc |
| as 2nd Choice of Orientation |  |


| C. 4 | Acad. Women who chose Voc. as 2nd Choice of Orientation | Yocs. $v$ Colls <br> Vocs. v IKoncs | $\frac{\text { Vocs. }}{\text { Vocs. }}$ |
| :---: | :---: | :---: | :---: |
| C. 5 | Acad. Women who chose Coll. as 2nd Choice of Orientation | Colls $v$ Vocs. <br> Colls $v$ Noncs | $\begin{aligned} & \text { Vocs } \\ & \text { Colls. } \end{aligned}$ |
| C. 6 | Acad. Women who chose Ionc. as 2nd Choice of Orientation | F-ratio was non-sienificant |  |
| c. 7 | Coll. Vomen who chose Voc. as 2nd Choice of Orientation | Vocs v Acads. <br> Vocs. V fioncs | $\begin{aligned} & \text { Yocs. } \\ & \text { Voc3. } \end{aligned}$ |
| 0.3 | Coll. Women who chose Acad. as 2nd Choice of Orientation | Acads. $v$ Vocs <br> Acads. v Noncs | $\frac{\text { Acads }}{\text { Acads. }}$ |
| 0.9 | Coll. Women who chose Nonc as 2nd Choice of Orientation | lioncs. $v$ Vocs <br> Noncs. v Acads. | Vocs Mones. |
| C. 10 | Noncs. Homen who chose Voc. as 2nd Choice of Orientation | $\begin{aligned} & \text { F-ratio vas } \\ & \text { non-significant } \end{aligned}$ |  |
| C. 11 | Nonc. Vomen who chose Acad. as 2nd Choice of Orientation | F-ratio was non-significant |  |
| C. 12 | Nonc. Women who chose Coll. as 2nd Choice of Orientation | Colls. v Vocs. <br> Colls. V Acads. | $\begin{aligned} & \text { N.S. } \\ & \text { Colis. } \end{aligned}$ |

HOMEN CHOOSING MEN.
D. 1 Voc. Women who chose Acad. as 2nd Choice of Orientation
D.2. Voc. Women who chose Coll. as 2nd Choice of Orientation

D 3 Voc. Vomen who chose Nonc. as 2nd Choice of Orientation

Acads. $v$ Colls Colls Acads. v Noncs R.S.

Colls v Acads. Acad. Colls. v Nencs IN.S.

Noncs, $v$ Acads. N.S.
Noncs. v Colls. N.S.


## A. MEN CHOOSING NGIS

For the Vocationalist Men who chose the Academic philosophy as their second choice the hypothesis was verified. In both comparisons (Analysis 1 in the table for Men choosing Nen) the Mean for the Academics was significantly higher than that of those friends of the Vocational Ven who chose either Collegiate or Nonconformist as their and choice of philosophy.

The above picture was also true for Analysis No. 4 where the 1st Choice Academics who chose Vocationalist as their 2nd choice had significantly more friends in this latter Eroup than in oither of the two remaining groups. For the Academic Men who chose Collegiate as their and choice the hypothesis was verified only as far as the Collegiates were concerned (Analysis No. 8). The same was true of Analysis No. 9. The final significant difference indicated that the Nonconformist Men who chose Collegiate as their 2nd orientation had more friends who also made this choice rather than that of Academic.

As can be seen from the table, the analyses which failed to support the hypothesis that secondary choice of orientation would be predictable in some small degree from the sociometric groupings were numbers A.2, A.3, A. 10 and A.11. Of these, the first two concerned the Vocationalists whilst the latter pair involved the Nonconformists,

## B. MEN CHOOSING HONEN

Of the 14 significant differences (out of a possible total of 24) which occurred, only 6 were in the hypothesised direction. These are to be found in Analyses B.I, B. 4, B.5, and B. 9 respectively. From the point of view of the Vocationalists, the only significant relationships indicated that those who chose Academic as their and choice of orientation had more friends who also followed this pattern of orientation than those who chose either Collegiate or Nonconformist as their and choice of philosophy.

Two of the remaining significant differences were restricted to those Men whose lst choice of orientation was Academic but wero spread over two groups of students who chose different 2nd choice orientations. They indicated that those Academics who chose either Vocational or Collegiate as their 2nd choice of orientation had mean scores for the number of people whom they 'knew well' of the same orientations which were significantly higher in each case than those who chose Nonconformist as their 2nd choice. The final two significant differences indicated that those Collegiate Men who opted for the Nonconformist philosophy had more friends who also indicated these preferences rather than having either Vocationalist or the Academic philosophy as their secondary choice.

In general, the above results lack any definite and clearly interpretable characteristics. The number of significant differences which were either in the hypothesised direction or otherwise did not appear to support any claim other than that outlined in part two of hypothesis number one which suggested that second-choice orientations relative to first-choice orientations would indicate relatively small differences in sociometric groupings based upo these criteria.
C. YONEN CHOOSING WOMEH

Twelve of the differences computed were significant and of this number, nine were in the hypothesised direction. Tro of them indicated that the Academic women whose and choice
of orientation was Vocationallst had more friends who followed this pattern than either of the two remaining orientations. The picture was replicated for the Collegiate Vomen whose 2nd choice was Vocationalist and for those whose second choice was Academic. Five out of the total of six t-tests involving the Women whose Primary orientation was Collegiate were significant and in the hypothesised direction.

The three remaining differences of note are detailed in Analyses C.5, C. 9 and C. 12 and did not appear to stress any particular pattern or configuration of results.
D. WOMEN CHOOSING MEN.

The general finding from the point of view of this sample was that the hypothesis was not verified. Cnly two of the twenty-four computations between pairs of means indicated significant differences in the hypothesised direction. Eoth of the differences indicated that the Nonconformist Women who chose the Academic orientation as their second choice had more Men friends who did the same than those Nonconformist Hen who chose either Vocationalist or Collegiate as their 2nd choice of philosophy. Such a result was surprising in view of the many instances found in the remainder of the investigation which indicated an apparent rejection of the basic tenets of the Academic Philosophy.

[^2]"....... the secondary philosophical orientations will have a small but significant predictable effect on such (sociomatric) groupings".

Data wero analysed for Mon choosing Men; Yen choosing Women; Women choosing Women and Women choosing Men. of the 96 possible significant relationships between the various pairs of means only 27 wero in the hypothesised direction.

They did not appear to represent any particularly clear pattern of relationships beyond the emergence of the 1st Choice Vocationalist Men whose 2nd choice was Academic tending to hold together people of both sexos who knew each other well. Such a pattern was reproduced for the Academic and Collegiato Men and Fomen who nominated the Vocationalist orientation as their 2nd choice but only for single-sex analyses (i.e. Men choosing Men, Women choosing women). It was also repeated for the Collegiate Shen who chose Nonconformist as their second choice of philosophical orientation and for the Collegiate Vomen who opted for the Academic orientation as their secondchoico. For the Nonconformists, the single point of note Was that in only ons case (analysis D. 11 (Women choosing Yen) Nonconfornist Women who chose Academic as their and choice of orientation) were the two significant t-tests
in the hypothesised direction. In two other cases single t-tests were significant in the hypothesised direction but in general the hypothesis for this group was not verified.

## C. The Fourth-Choices of Philosophical Orientation in

Relation to the First-Choice of Orientation.
In order to ascertain the degree of 'rejection'
exhibited by the students towards any of the four orientations the following procedure was used. The original scripts were examined and a tally was made of the numbers who had chosen one or another of the four orientations as thoir FOURTH CHOICS of orfentation in relation to the first. The treatment of the resulting data was essentially that used in examining the second-choice of orientation in relation to the firstchoice. The wititer wished to know (for example), how many of the 53 Men who chose Vocationalist as their first or primary philosophical orientation chosa Academic, Collegiate or Nonconformist as their fourthor last choice of orientation. The answers were 5, 12 and 36 respectively. The complete table of twenty-four cell entries was as follows.
Table 10 The Fourth Choice of Philosophical Orientation
of the Samples of Men and Vomen Students in
Relation to their First Choice of Orientation.

Men Vomen
Vocationalists who chose Academic as their Fourth choice

5
Vocationalists who chose Collegiate as their
Fourth choice 12
Vocationalists who chose Nonconformist as thair 36 Fourth choice

|  | Men | Yomen |
| :---: | :---: | :---: |
| Academics who chose Vocational as their |  |  |
| Fourth choice | 5 | 2 |
| Academics who chose Collegiato as thair |  |  |
| Academics who chose Nonconformist as their | 10 | 2 |
| Fourth choice | 21 | 22 |
| Collegiates who chose Vocational as their <br> $\begin{array}{c}\text { Fourth choice }\end{array}$ <br> $\begin{array}{c}\text { V }\end{array}$ |  |  |
|  |  |  |
| Collegiates who chose Academic as their | 21 | 27 |
| Collegiates who chose Nonconformist as their Fourth choice | 56 | 86 |
| Nonconformists who chose Vocational as their |  |  |
| Nonconformists who chose Academic as their 12 |  |  |
|  |  |  |
| 11 |  |  |
| Honconformists who chose Collegiate as their Fourth choice | 6 | 8 |

As in the case of the 2nd choice oriantations in relation to the first-choice, some of the cell totals given above were very small. In the case of the Academic Women who chose ofther Vocational or Collegiate as their fourth choice of orientation the total numbers involved were two in each case. Such small numbers prevented t-tests being undertaken and therefore analysis of these two very small samples was not undertaken.

For several of the remaining samples, the following results must be approached with caution because of the zmall numbers of students involved. In spite of this limitation and bearing in mind the stringent degree of generality which it is proposed to apply to the total findings of the investigation, it was considered a worthwhile exercise to examino as many eroupings as possible.

The approach used in Analysis B (on pago 183) where second-choice orientations in relation to first-choices were considered, has been the same in the present caso. The data for each cell and each person were given as percentages of the total number of persons whom any single individual of a particular philosophical orientation 'knew well'. The resulting percentages indicated whether the person in question had more friends, who had the same fourth-choico philosophical orientation in relation to their primary orientation, or if in fact they occupied a different cell. Totalling the individual percentages for each of the colls allowed a simple one-way analysis of variance design to be used. A total of 44 analyses were completed ( 48 were completed for 2nd choice orientations but with the fourthchoice orientations $\mathrm{N}=2$ in four cases and these groups were ignored) Details are given on the following shects. Four kinds of choices were analysed:
a) Hen choosing Yen
b) Men choosing Women
c) Women choosing Women
d) Vomen choosing Hen

Tabular details of the 44 separate analyses of variance and conditional t-tests are given on pages 596 to 615 inc. of the Appendix. The following tablo summarises only the two (of the three) t-tests produced by each separate analysis which were relevant to subsequent discussion. The third t-test was retained in the tables given in the Appendix. Thus, the following Table outlines the two differences per
analysis which waro relevant to the hypothesis and whether or not the significant differences indicated sociometric grouping at this tertiary level. This point is stressed in Table 11 by the specific orlentation being underlined in the colum marked "Significantly Higher Mean". It is hypothesised that these fourth-choice or tertiary orientations will nat be predictable from sociometric choices.

ITWN CHOOSING MEN
Table 11 A Summary of the t-tests for the Fourth-Choice of Philosophical Orientations in Relation to the First Choice of Orlentation.

| $\begin{aligned} & \text { Ho o } \\ & \text { Analy } \end{aligned}$ | Description of the Analysis | Orientations | $\begin{aligned} & \text { Sig. H. } \\ & \text { Mean } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| A. 1 | Voc. Men who chose Acad. as 4th choice of orientation. | Acad. v Colls Acad. v Noncs | N.S. Noncs. |
| A. 2 | Voc. Men who chose Coll. as 4 th choice of orientation. | Colls $V$ Acads Colls $V$ Noncs | $\frac{\text { Col1s }}{\text { Colls }}$ |
| A. 3 | Voc. Men who chose Nonc as 4th choice of orientation. | Noncs $v$ Acads Nones v Colls | $\frac{\text { Noncs }}{W_{1} \text { St }}$ |
| A. 4. | Acad. Men who chose Voc, as 4 th choice of orientation | Voc. v Colls Voc. v Noncs | Colls <br> Noncs |
| ^.5. | Acad. Men who chese Coll. as 4 th choice of orientation. | Colls v Vocs Colls $v$ Noncs | Vocs roncs |
| A. 6 | Acad. Men who chose Nonc. as 4th choice of orientation. | Nones $v$ Vocs. Noncs v Colls | $\frac{\text { Noncs, }}{\text { H.S. }}$ |
| A. 7 | Coll. Men who chose Voc, as 4 th choice of orientation. | Voc. $V$ Acad. Voc. V Noncs | Acad. Noncs. |
| A. 8 | Coll. Men who choso Acad. as 4 th choice of orientation. | Acad. $v$ Vocs Acad. v Noncs | N.S. Noncs |
| A. 9 | Coll. Men who chose Nonc. as 4th choice of orientation. | Honc. $v$ Voc. Nonc. $v$ Acad. | N.S. Acad. |


| No. of Analysis | Description of tho Analysis | Oriontations Sig. Hean. |
| :---: | :---: | :---: |
| A. 10 | Nonc. Men who chose Voc. as 4 th choice of orientation. | Voc. $V$ Acad. Acads. <br> Voc. V Colls. N.S. |
| A. 11 | Nonc. Men who chose Acad, as 4 th choice of orientation. | Acad. $v$ Vocs. Vocs. <br> Acad. v Colls Acads. |
| A. 12 | Nonc. Men who chose Coll. as 4th choico of Orientation. | Colls. v Vocs. Vocs. Colls. v Acad. N.S. |
| TEN CHOOSIMG HOMEN |  |  |
| B. 1 | Voc. Men who chose Acad. as 4th choice of orientation. | Acad. $v$ Colls Acads. <br> Acad. $v$ Noncs Acads. |
| 18.2 | Voc. Hen who chose Coll. as 4th choice of Orientation. | Colls. V Acads N.S. Colls. V Noncs N.S. |
| B. 3 | Voc. Men who chose Nonc, as 4th choice of orientation. | Noncs. $v$ Acads.Noncs. <br> Noncs. V Colls.N.S. |
| B. 4 | Acad. Men who chose Voc, as 4th choice of orientation. | F-ratio was non-significant |
| B. 5 | Acad. Ven who chose Coll. as 4 th choice of orientation | Fratio. was non-significant |
| B. 6 | Acad. Men who chose Nonc. as 4th choice of oricntation. | Noncs. v Vocs. N.S. <br> Noncs. $v$ Colls Noncs. |
| B. 7 | Coll. Men who chose Voc, as 4 th choice of orientation. | Voc. $v$ Acad Vocs. Voc. $v$ Noncs |
| B. 8 | Coll. Hen who chose Acad. as 4 th choice of orientation. | $\begin{aligned} & \text { Acad. v Vocs. } \frac{\text { Acads. }}{\text { Acad v Noncs }} \\ & \text { A.S. }_{\text {ce }} \end{aligned}$ |
| B. 9 | Coll. Men who chose Nonc. as 4 th choice of orientation. | Nonc. $v$ Vocs. Noncs. Nonc. $v$ Acad. N.S. |
| 8.10 | Nonc. Men who chose Voc, as 4 th choice of orientation. | F-ratio was non-3ignificant |
| B. 11 | Nonc. Men who chose Acad. as 4th choice of orientation. | Acad. V Vocs. Vocs. Acad. v Colls. N.S. |
| B. 12 | Nonc. Men who chose Coll. as 4 th choice of orientation. | $\begin{aligned} & \text { Col1s. v Vocs. N.S. } \\ & \text { Colls. v Acads.Colis. } \end{aligned}$ |

C. 1 Voc. Women who chose Acad as Acad v colls Colls.
4th choice of orlentation.
C. 3 Voc. Momen who chose Konc. as 4 th choice of orientation.
$\begin{array}{ll}\text { Acad } v \text { Colls } & \text { Colls. } \\ \text { Acad } v \text { Noncs } & \text { N.S. }\end{array}$
F-ratio was non-significant

Nencs V Acads Noncs. Noncs \& Colls N.S.

| C. 4 | Acad. Women who chose Voc. as 4th choice of orientation | $\mathrm{N}=2 \mathrm{df}=0$ |  |
| :---: | :---: | :---: | :---: |
| c. 5 | Acad. Women who chose Coll. as 4th choice of orientation | F-ratio vas non-3ignifican |  |
| C. 6 | Acad. Women who chose None as 4 th choice of orientation | Nonc. $v$ Voc. Nonc. V Coll. | $\begin{aligned} & \mathrm{N}_{\mathrm{N}_{0} \mathrm{~S}_{0}} \end{aligned}$ |
| C. 7 | Coll. Women who chose Voc. as 4th choice of orientation | Voc. V Acad. Voc. V Nonc. | M.S. Nonc. |
| C. 8 | Coll. Homen who chose Acad. as 4th choice of orientation | Acad v Vocs. Acad v Noncs | N.S. Noncs. |
| C. 9 | Coll. Women who chose Nonc. as 4 th choice of orientation | Honc. $V$ Vocs. Nonc. V Acads. | $\frac{\text { Honcs. }}{\mathrm{H}_{.} \mathrm{S}_{0}}$ |

C. 10 Nonc. Vomen who chose Voc. as 4th choice of orientation
C. 11 Nonc. Women who chose Acad. as 4 th choice of orientation
C. 12 Nonc. Homen who chose Coll. as 4th choice of orientation

F-ratio was
non-sig.
F-ratio was
non-sig.
Colls. V Vocs N.S.
Colls. $v$ Acads. N.S.

HOMEN CHOOSING MEH
D.1 Voc. Homen who chose Acad. as 4th choice of orientation
D. 2 Voc. Vomen who chose Coll. as 4 th choice of orientation
D. 3 Voc. Vomen who chose Honc. as 4 th choice of orientation

F-ratio was non-sig.

F-ratio was non-sig.

Noncs, $v$ Acads Moncs.
Nones, $v$ Colls Noncsi

| No. of Analysis | Descrintion of the Analysis | Orientations | $\begin{aligned} & \text { Sig. H. } \\ & \text { Mean } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| D. 4 | Acad. Homen who chose voce as 4th choice of orientation. | $\begin{aligned} & \text { Vocs. } v \text { Colls. } \\ & \text { Vocs. } v \text { Noncs } \end{aligned}$ | N.S. Noncs. |
| D. 5 | Acad, who chose Coll, as 4 th choice of orientation. | $\begin{aligned} & N=2 \\ & d f=0 \end{aligned}$ |  |
| D. 5 | Acad. Homen who chose Nonc, as 4th choice of orientation. | Noncs. v Vocs. Noncs v Colls. | $\begin{aligned} & \text { Honcs. } \\ & \text { Noncs. } \end{aligned}$ |
| D. 7 | Col1. Homen who chose Voc, as 4th choice of orientation. | Vocs, V Acad. <br> Vocs. V Noncs | N.S. Nonc. |
| D. 8 | Coll. Women who chose Acad. as 4 th choice of orientation. | Acads. V Voc. Acads. v INoncs | $\frac{\text { Acad. }_{8}}{\text { Honcs. }}$ |
| D. 9 | Coll. Vomentho chose Nonc. as 4 th choice of orientation. | foncs. $V$ Voc. Noncs, v Acad. | $\frac{\text { Noncs. }}{\text { Noncs. }}$ |
| D. 10 | Nonc. Women who chose Voc. as 4th choice of orientation. | Fwratio was non-siE. |  |
| D. 11 | Nonc. Homen who chose Acad. as 4 th choice of orientation. | F-ratio was non-sig. |  |
| D. 12 | Nonc. Women who chose Coll. as 4th choice of orientation. | $\begin{aligned} & \text { Fratio was } \\ & \text { non-sig. } \end{aligned}$ |  |

From the above table the following points could be nade.
A. IEN CHOOSTITG VENS

Although seventeen out of the possible twenty-four titests reached acceptable degrees of significance, only a total of five indicated that tertiary orientations could be predicted from sociometric or friendship choices. of these five results, three concerned the Vocationalists whilst the Academics and Nonconformists each had one mean which was sisnificantly higher than the othor orientations within the framework of the criterion. For the Vocationalists, two out of three of their significant t-tests indicated that, like
themselves, their iriends also chose Collegiate as the 1east acceptable of the four orientations.

Bo MEN CHOOSING WOMEN
Nine of the 24 differences were significant. They indicated that the Vocationalists and Collegiates (with the higher mean in each of three cases per sampla) were predictable in some degree for tholr tertiary choice of orientation from their sociomotric groupings. The Academic and Nonconformist groups (each heving one significantly higher mean in its favour) were much less predictable from their sociometric groupings. For the Vocationalist Men, two of their three significantly highor means indicated a rejection of the Academic philosophy. For the Collegiates no clear pattern was discemible since the significantly higher means ranged over three separato analyses.
C. 10 OEN CHCOSING WOHEN

The rumber of significant differences was five, only two of which indicated that the tertiary orientations were predictable from sociometric choices. These differences involved the Vocationalists and Collegiates respectively and indicated in a minor way a rejection of the ifenconformist philosophy.
D. VONEN CHOOSILG IEN

Ten of the 24 differences computed were significant. They indicated that in seven of the cases, tertiary
orientations could be predicted from sociometric choices. Tho of the differences involved the Vocationalists and Academics respectivoly, whilst the remaining three were confined to the Collegiates. The tertiary orientations of the Nonconformists were not predictable at all from their sociometric groupings. For the three remaining groups whose significant differences are indicated above, there was a tendency for those who chose the Nonconformist orientation as their fourth and final choice to be in the same sociometric group.

## SUTMRY

The above analysis concerned tho fourth choics orientations of the students in rolation to their first or initial choice oi orientation. The results in terms of actual muberis indicated that it was the Nonconformist philosophy which was the final choice of the largest group of Vocationalists, Academics and Collegiates of both sexes. For the Nonconformists themselves, it was the Vocational philosophy (closely followed by the Academic) which was rejected by tho Men and the Collegiate (followed by the Vocational) by the Women.

The pattern of significant differences indicated that as far as tertiary orientations being predictable from sociometric choices was concerned, the position was weak with a total of only 22 sirnificant difierences being in the direction of verification as opposed to seventy-four which were either non-significant, not-computed (because
of the smallness of the samplo involved) or whose significantly higher means were other than those expected. There was a slight tendency for the significantly higher means which wero in the required direction (to indicate tertiary orientations to be predictable from sociometric choices) to reject the :Ionconformist philosophy.

## ITDEX OF SOCIOMETRIC CLOSENESS AS ASSESSED BY RECIFROCITY OF CHOICES.

The analyses comploted so far have concerned the patterns of acquaintanceship among students who occupied the same or different primary, secondary and tertiary philosophical orientations. Such analyses, important though they were, did not indicate the extent to which the individuals in a group chose one another (1.e. the degree or extent of reciprocity of choice). It was decided, therefore, to devise a measure of 'group cohesion' which would take into account both the degree of reciprocity and the size of the group in which the reciprocity occurred. The following method was employed in an attempt to assess the degree of group cohesion.
a). Each student was given a number which ranged from 1-455, since there was 455 subjects in the population. b) A crossmindox was dovised by which the number of people whom a student had said he 'knew well'and who, in turn, had reciprocated his choice was recorded. c) Each student thus had a number which indicated how many students had reciprocated his choice. A frequency distribution was constructed using the data obtained by this method.
d) These numbers were then converted to a percentage of the total number of students in any particular primary philosophical orientation. Calculations were mado for the following groups.
(1) Men Vocationalists choosing other Men Vocationalists.
(ii) Men Vocationalists choosing Women Vocationalists.
(1i1) Women Vocationalists choosing other Women Vocationalists.
(iv) Vomen Vocationalists choosing Men Vocationalists.

The above pattern was repeated for the three remaining primary philosophical orientations (1.0. Academics, Collegiates and Nonconformists). The data were reduced to percentages and the four orientations were compared with each other. The following example was typical of the procedure.

Yan Vocationalist No. 1 said he knew 30 other Vocationalists 'vell' of whom 20 reciprocated his choice. The sample of Vocationalist Men contained 53 people. Thus, the number of reciprocated choices for this man expressed as a percentage of the total number in this sample was $\frac{20}{53} \times \frac{100}{1}$ which was $37.736 \%$. The higher the percentages of any one orientation in relation to the three remaining orientations, the greater or lesser the degree of group cohesion displayed by that respective sample dependent upon the number of people involved. Details of the four orientations on each of the four possible criteria (e.g. Ven choosing Men: Nen choosing Vomen etc.) are Eiven below together with interpretation of the data.

In the following tables, the column marked 'Score' indicates the actual number of reciprocated choices made for any one person by persons of the same Primary orientation. The second Column marked ' $f$ ' indicated the number of students in one particular orientation who had that number of reciprocated choices, whilst the third and final column indicates the reciprocated frequencies expressed as percentages of the total number of Men or Women in the orientation.

Table 12

Dotails of the Fercentages of Reciprocated choices for the four groups of Men when choosing Men from their om Primary Fhilosonhical Orientation.


| Vocationalists | Academics |  | Colleg | ates | Nonconformists |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Score $\mathrm{P} \%$ | Score I | 8 | Score |  | Score 1 |
| 25 |  |  |  | 10.97 |  |
| 26 |  |  |  | 54.86 |  |
| 27 |  |  |  | 65.83 |  |
| 29 |  |  |  | 10.97 |  |
| 30 |  |  |  | 21.94 |  |
| 31 |  |  |  | 21.94 |  |
| 32 |  |  |  | 21.94 |  |
| 33 |  |  |  | 10.97 |  |
| 34 |  |  |  | 20.94 |  |
| 37 |  |  |  | 10.97 |  |
| 40 |  |  |  | 10.97 |  |
| 42 |  |  |  | 10.97 |  |
| 61 |  |  |  | 10.97 |  |

Ease of comparison between the above samples was achieved by condensing the four tables. Each list of scores (1.e. Column 1 in each case) was divided into fifths, As a result of this, percentages for any particular sample could be totalled within these new coarse categories as an ald to clarifying the data.

Table 13
Analysis NO. 2. Reciprocated choices MEN CHOOSING MEN. A Summary

TOTALLED PERCENTAGES
SCORE VOCATIONALISTS ACADMATCS COLLEGIATES FORYISTS

No. of
Reciprocated
Choices.

| $0-11$ | 84.82 | 52.79 | 37.84 | 27.60 |
| :---: | :---: | :---: | :---: | :---: |
| 12-23 | 15.20 | 47.24 | 33.97 | 65.55 |
| 24-35 | - | - | 24.27 | 6.90 |
| -6-47 | - | - | 2.91 |  |
| 48 and oves | - | - | 0.97 |  |

If it is accepted that as one moves dow the table, the degree of reciprocity increases because more individuals are involved then comment upon the above table could be as follows. Far more Vocationalist Men than any of the three remaining groups had fewer reciprocated choices. Conversely, the Collegiates were the only group who had percentages located in each of the five categories of Score. For all practical purposes however, the first three categories contained all of the percentages of three of the groups and all but a minority of the Collegiate group. The main finding In this analysis was that the degree of reciprocity was clearly higher for the Nonconformists than the Vocationalists whilst the Academics also had a nuch larger percentage in Category 2 (12-23 reciprocated choices) than did the Vocationalists. Overall, howover, it was the Collegiates who had percentages which extended over the whole five categories but as indicated above, the major part of the percentages for this large group was confined to the first three categories. In simple rank order, it was the Collegiates, Ionconformists, Academics and the Vocationalists who exhibited degrees of reciprocity of choice raneing from strong to fairly weak when the inen in these groups were choosing other Men in the same orientations. The position is strengthened further for the Nonconformists and the Academics when it $\$ s$ realised that in these cases the numbers of Men involved were 29 and 36 respectively.

Reciprocated choices - MEN CHOOSING HOIEN



Analysis No, 2 Reciprocated Choices - MEN CHOOSING WOHEN A Summary.

| SCORE <br> (NO. of Reciprocated <br> Choices) | TOTALLED PERCENTAGES |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | VOCATIONALISTS | ACADEMICS | COLLEGIATES | NONCONFORMISTS |
| $0-2$ | 83,68 | 66.67 | 80.59 | 6.90 |
| 3-5 | 11.32 | 25.00 | 10.68 | 51.72 |
| $6-8$ | - | 8.34 | 4.82 | 34.48 |
| 9-11 | - | - | 0.97 | 6.90 |
| 12 and over. | - | - | 1.94 | - |

The pattern of percentages outlined above is not very different from those recorded for MEN CHOOSING MEN in Analysis IIO. 1. Once more, the tendency was for the Nonconformists to display a greater degree of reciprocity, whilst the Vocationalists exhibited a very strong tendency to have a much lower level of rociprocity with nearly $90 \%$ of their reciprocated choices involving fewer than three persons. However, to a lesser degree, but still involving substantial percentages, the Academics and the Collegiates had the majority of their figures recorded in the lowest score category which in this case encompassed 0-2 persons. Thus, in summary, the Honconformists reciprocated the choice of other Nonconformists across the sex barrier to a much more marked degree than did any of the three remaining groups.

Tablo 26 Reciprocated Choices WOMEN CHOOSIMG HOHEN
VOCATIONALISTS ACADMICS COLLEGIATES NONCONFORMISTS Score f \% Score $f \%$ Score $f \%$ Score $f \%$


| VOCATIONALISTS | ACADEMICS | COLLEGIATES N |  | NONCONFORMS |
| :---: | :---: | :---: | :---: | :---: |
| Score f \% Scoref \% Score f \% Score f\% | \% Score 1 | \% Score | $1 \%$ S | Score f \% |
| 29 |  |  | 32.33 |  |
| 30 |  |  | 21.55 |  |
| 31 |  |  | 21.55 |  |
| 33 |  |  | 10.78 |  |
| 36 |  |  | 10.78 |  |
| 41 |  |  | 10.78 |  |
| 46 |  |  | 10.78 |  |
| Table 17 |  |  |  |  |
| Analysis No. 3 Reciprocated Choices - voume choosing vorme |  |  |  |  |
| A Summary. |  |  |  |  |
| Score (1.0. of Reciprocated Choices) | TOTALLED PERCENTAGES |  |  |  |
|  | VOCATIONALISTS | ACADEMICS | COLlegiate | ES FORMISTS |
| $0-8$ | 81.37 | 61.57 | 30.26 | 45.00 |
| 9-17 | 16.97 | 34.64 | 31.02 | - |
| 18-26 | 1.70 | 3.85 | 27.14 | 55.00 |
| 27-35 | - | - | 9.21 | - |
| 36 and over | - | - | 2.34 | - |

As in the case of Analyses 1 and 2, the Vocationalists (in this case Women choosing Vomen of the same primary orientation) had a much weaker pattern of reciprocated choices than any of the three remaining groups of Women. However, they were followed by the Academics who also recorded over

60\% of their scores in the lowest category (involving $0-8$ persons as a measure of the degree of reciprocity). The Nonconformists, and to a lesser degree the Collegiates tended to occupy the higher categories of reciprocity. In the case of the Nonconformists, the picture of a very close-knit comunity was very clear. The finding is given point when the size of the sample involved ( $\mathrm{N}=20$ ) is noted. Such a finding was expected since other evidence already reported in the study (rarticularly in the fora of residential accomodation and a variety of attitudinal data) pointed towards this probably being the case which would emerge.



The fourth and final analysis measured the degree of reciprocity when wown chose ren of the same primary philosophical orientation. The main points of note in Table 19 above, are that each sample save the Nonconformists had a majority of their percentages located in the lowest category (1.e. 0-5 persons). For the Vocationalists and the Academics the percentages were particularly high.

For the Honconformists, the picture was somewhat different with eighty per-cent of the responses involving 11 persons or less.. Dearing in mind that the number of Women involved was only 20 , the degree of reciprocity was quite high. The point is given added weight when it is seen that the remaining percentages involved up to the possible maximurn of 20 persons..

## SUMTARY.

An index of 'closeness' between members of the 0 four primary philosophical orientations was devised which Involved the use of reciprocity of choices. Four comparisons were made involving single-sex and between-sex choices. The main point to emerge was that the Vocationalists wero not closely grouped together when assessed according to the above criterion. As far as Men choosing Men was concerned, the group which displayed the clearest close-knit relationship was the Collegiate orientation. They were followed as far as Men choosing Men was concerned by the Nonconformists and then the Academics. When Women chose other Women the Nonconformists and Collegiates held first and socond rankings respectively followed by the Academics. For the between sexes comparisons, the above held true for the Nonconformists but for two of the three remaining samples, the picture was one of a much weaker degree of reciprocity. The Collegiates in Analysis No. 4 (Vomen choosing Iten) exhibited a somewhat stronger degree of reciprocity (involving more persons) than the Vocationalists or Academics, but still occupied a weaker position than the much numerically smaller sample of Nonconformists.

The adoption of percentages helped remove some of the problems inherent with comparisons involving samples of different sizes. However, such a treatment whilst beneficial does not solve all of the problems. From a practical point of view, it was much easier for (say) a Nonconformist Man or Koman or an Academic Woman to receive
a number of reciprocated choices near to the maximum number of the actual people in this orientation than it was for a Collegiate Man or Homan (total $\mathrm{N}=232$ ) to recelve the same treatment. Thus, whilst accepting the above figures and comparisons as meaningful from the point of view of the hypothesis that, of the four groups formed by the primary philosophical orientations, the Academics and the Nonconformists would be more highly related in sociometric groupings than either of the two remaining groups, the following point needs to be stressed.

In the case of the Collegiates, if large percentages were located in categories of (say) $10-14$ or $15-19$ persons, such figures would represent a fairly low degree of reciprocity from the point of view of the actual number of people in the sample ( $\mathrm{N}=103$ Men and 129 Women) but when applied to the Nonconformists or the Academics they would indicate a high degree of reciprocity and a close-knit structure. Clearly, one would not expect each Collegiate (or to a lesser extent each Vocationalist) to have every other Collegiate to reciprocate his choice. But, even a fairly low number of persons involved for the large sample of Collegiates would possibly indicate a network of relationships similar in magnitude to that of the Nonconformists or the Academics. Examples of such groups are to be found in Analyses 1, 3 and 4. Such groupings indicate a series of reciprocal choices existing within the framework of the larger orientation.

Whilst in the present case, the number of people involved precluded a meaningful construction for analysis of sociograms and related data, the above point is still of some minor importance. However, in the case of the hypothesis outlined above, the present analysis appears to be of value in indicating a degree of reciprocity involving a larger total percentage of the group in respect of the Nonconformists than in the case of the three remaining groups. The pattern of Academic responses whilst tending to support the hypothesis as fir as Analyses 1 and 3 were concerned did not do so in as clear a fashion as that associated with the Nonconformists.

The Fhilosophical Orientations of the Tutorial Staff of the College of Education.

With the exception of the Principal and the two Deputy Principals, each member of the tutorial staff (122 Men and 29 Women) completed an instrument identical to that of the students. The instrument required each member of Staff to rank the four orientations of:

1. Vocationalist 2 Academic 3 Collegiato
2. Nonconformist in order of importance to themselves. An analysis of the resulting data was done for:
a) The Total Sample
b) All Men
c) All Vomen
d) Members of the Education Department
e) Nembers of Departments other than the Education Department, and consisted of reviewing.
(1) the primary philosophical orientations.
(1i) the secondary philosophical orientations in relation to the primary orientation.
(ii1) the fourth choice of orientation.

Item (ii) produced a fragmented picture wich lacked any consistent degree of clarity. This was partly because of the relatively small numbers of people involved. It was decided, therefore, to re-analyse the data as in (i) and (1i1) above and substituting for (1) the pattern of responses for the secend choice of orientation but not in relation to the first choice of orientation.

Details of the data talsen from the scripts of the Tutors is given in Table 20 on the next page.

Table 20 The Primary Fhilosophical Orientations of the Tutors.

| Vocs. Acads. Colls. lona |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 28 | 76 | 37 | 10 | Total Sample ( $\mathrm{N}=151$ ) |
| $15^{\circ}$ | 61 | 25 | 10 | Total Sample less the Iducation Department $(\mathrm{N}=111)$ |
| 13 | 15 | 12 | 0 | Education Department ( $N=40$ ) |
| 7 | 15 | 6 | 1 | Yomen Only ( $N=29$ ) |
| 21. | 61 | 31 | 9 | Men only $\quad(N=122)$ |

Tho trends revealed by the above table are cloar and need little coment. For the Total Sample of 151 Tutors thd Academic orfentation received a preponderance of responses. Of note the larger total of the Collegiate cell at the expense of the Vocationalists. The picture remained the same when the members of the Education Department were withdraw. Both Shipman (1965) and Taylor (1969) have comnented upon the child-centred orientation of those in the Education Department and the subfect centred viewpoint of the members of the Academic Departments. In the above case, such a difference is possibly stressed to a degree but is not particularly marked since the responses of the forty members of the Education Department are spread nearly equally over three orientations with a slisht preference being given to the Academic category. on a single-sex basis it was noted that more Nen chose the

Collegiate orientation in preference to the Vocationalists whist for the vomen the catecories had nearly equal numbers of responses. Such a finding, for the lien is indicative of the revulaion many expressed for the concept of "training" students to become teachers as opposed to preparing young acults in as liberal and all-enveloping manner for entry into the profession as useful members of society. Nany tutors had a distate for the school-college-school cycle followed by the great majority of the student body. Thus, either as a Total Sample or when divided as above, the majority of the College Tutors saw their primary philosophical oricntation as being Academic. Such a finding msy reflect the growing emphasis being placed upon the raising of standards within the profession by the addition of degree courses and the recently operational Open University. Table 21 Tho Second Choice of Fhilosophical orientation of the Tutors.


The above tabular summary clearly indicates an awareness on the part of the Tutorial Staff as to why they are working in a College of Education. Thus, although for thair
primary philosophical orientation they tended to choose the Academic cell, their second choice was Vocational. The large number of Acadenics in the above table have come mainly from the Education Department. The sample of lien again tended to reflect the relative importance of the Collegiate orientation although to a minor degree, This aspect was not nirrored by the sample of vomen Tutors.

Table 22 The Fourth Choice of Philosophical Crientation of the Tutors.
ORIENTATION Description of Eample

Vocs. Acads. Colls, Honcs.

| 8 | 3 | 33 | 107 Total Sample $(N=151)$ |
| :--- | :--- | :--- | :--- |
| 6 | 2 | 22 | 31 Total Sample less the Ed. Dept |
| 2 | 1 | 11 | 26 Education Department $(N=40)$ |
| 0 | 0 | 9 | 20 Yomen Only $(N=29)$ |
| 8 | 3 | 24 | 87 Men Only $(N=122)$ |

The fourth choice of orientation is really an index of 'rejection' since it is in fact the category which remains after the first three rankings have taken place. In the case of the above, for each sample most frequencies were lodsed in the Nonconformist category. of minor note was the mumber of responses placed in the Collegiate category. There were apparently a number of Tutors who saw the Nonconformist orientation as being more acceptable than that
which stressed a full social life and wide ranging extracurricular activities. The $30 \%$ of Homen and $20 \%$ of Hen Tutors who were so oriented were perhaps not as conscious of the 'security' aspect of being a member of the profession as were their colleagues.

A Comparison between the Philosophical Orientations of both students and Tutors.

A comparison of the orientations of the students with those of the Iutors is given in Table 23 The data are given in decending order of importance by sample size.

Table 23 is fairly casy to interpret. The gaps In the table indicate areas where the Men and Vowen of either the student or the tutorial body have orientations which are different from each other or where there were no responses at all. The main findings from the table can be summarised as follows. The Primary Philosophical Orientations. 1. Whereas for the majority of students their primary philosophical orientation was Collegiate, that of the Tutors was Academic. Thus, a discrepancy is indicated between the motivations and practices of both groups.
2. Both students and Tutors had a minority of their respective members listed in the Nenconformist orientation as their first choice.

Table 23 A Comparison of the Primary, Secondary and Fourth Choice Fhilosophical Orientations of Students and Tutors categorised by Sex.


Whilst more students of both sexes indicated a preference for the Vocational over the Academic way of life for their first choice, the results for the Tutors indicated a sex-based difference.

## Tho Secondary Philosonhical Orientations.

4. Tho tro sexes of students were justaposed for their second choice of orientation as far as the Vocational and Academic orientations were concerned. This was also the case for the Tutors as far as their 3 rd and 4 th rankings on the second choice of orientation were involved. In the case of the Women students and Tutors, they agreed on the first two rankings in this area of the table whilst for the Men, agreement lay in the latter two cases.

The Fourth choice of Philosophical Orientation.
5. A Majority of each single-sex group of students and Tutors nominated the Nonconformist orientation as the least acceptable of the four choices.
6. Whereas for the students the next largest figures of 'rejection' were for the Vocational in the cass of the Ken and the Academic orientation for the Women, the Tutors presented a united front in rejecting the Collegiate philosophy.

SURPARY.
A comparison of primary, secondary and tertiary philosophical orientations of both students and staff indicated
some differences of importance. Whereas for their primary philosophy a majority of the student body chose the Collegiate, The Iutors chose Academic, other differences were revealed between the sexes for both students and Tutors. A majority of both Students and Iutors indicated clearly that the least acceptable philosophy was that of the Nonconformists.

Criteria for the evaluation of College-based peer grouns.
Kewcomb (1966) has outlined the conditions which are favourable to the formation of peer groups as follows.

1. Pre-college acquaintance.
2. Propinquity.
3. Similarity of attitudes and interests.

In the development of the above, the witer asked the students to rank the followint four areas in order of importence to them from the point of view of the formation of friendships in College.
a. Studying the same Main Subjects.
b. Ifving in the same Hall of Residence or an adjacent one.
C. Similar social interests.
d. Chance.

1. Pre-college accuaintance.

Newcomb's point concerming the importance of pre-college acquaintanceship as being a factor in the fomation of College peer groups was also investigated and resulted in the following findings.

Table 24 The percentage of each of the groups formed by the primary philosophical orientations who had kown persons in their present orientation prior to entaring Collere.


The lov percentages speak for themselves and inileate the negligible power of this factor in influencing the formation of peer groups in the present setting. 2. Proninquity.

Propinquity deternines the probability of any two persons meeting and,
"... in particular, early propinquaty in coliege - when most other individuals are rolatively indistinguishable, since most of them are strangers - determines the probability of early meeting". Nowcomb (1966 p.7).

In the present case, a study of the College records together with a detailed appraisal of College residential 'sorting' procedures and subsequent woves within and beyond specific halls of residence indicated the following.
(1) In the first term of Year 1, the students were in residence. They were initially allocated to rooms on the basis of similarities in Nain subjects and also (in the case of the hen students, on the basis of subjects in comon with the Resident Yarden). Thus, P.E. men strongly tended to be in one hall of residence and had a varden who lectured in P.F. Requests for transfers were minimal. (i1) The 'rox and Cox' arrangements of the modipied three-term year meant that these students when they entered Year 2 were placed in lodgings for the whole of the year. Strenuous efforts were made to place small groups of students (no more than five as a top Ifmit) in lodgings together if they so requested. In Year 3 these
students spent the entire year in College-based halls of residence. All but a handful were accomodated in single rooms.

Detailed inspection of the list of residents in
Year 1 did not reveal any significent patterning whereas in Year 2 there was a strong tendency for the Academics and the Honconformists to group together from the point of view of living in the same lodgings. This gave a series of small sub-groupings because of the limit placed on the number of students allowed in any single private house.
(iv) At the beginning of Year 3 and during this year transfers were allowed between halls and more frequently between rooms in the same hall. Although the number of transfers was relatively small in terms of the whole student body, such changes markedly concerned the Academics and Nonconformists of both sexes. Thus, in the case of the Men Academics, thirty of them could be found on three floors of the same hall of residence - and furthermore, in each case they strongly tended to occupy one wing of the T-shaped accommodation block. Wuch the same picture applied to the Academic Vomen, 10 of whom lived on one floor (i.e. the same Hall of residence) whilst a further 10 lived either on the floor above or below the first group. of the remaining six Academic Women, four lived in an adjacent hall (1.e. not in the same three-storey block) whilst the two remaining Women in this group lived in two separate halls and did not have common residential attachments. It should be mentioned that it was the policy of the College to call each floor a
hall of residence a 'Hall' in its own right. Such 'Halls' each had their own Resident Yarden and Hall Committee and thus widespread movement from floor to floor was somewhat curtailed after the beginning of the third-year (where choice of Hall was allowed the student in large part) although transfers on any one floor (or hall) were common and frequent.

The above also held for the Nonconformist Men but in a slightly different way. In their case they chose to reside in a small group of six formerly private houses which were now geographically attached to the campus. These houses whilst being relatively comfortable lacked some of the modern conveniences of the more modern blocks of single rooms in which the buik of both Men and Women students lived. Also, in general this accommodation was not in the form of single rooms but in units which housed 2, 3 or 4 persons. Many of the students vigourously opted to avoid Iiving in this form of accomnodation.

The above was not true of the Nonconformists who strongly tended to gravitate to the houses partly because of the inclination to be together and partly because of their general unpopularity with a minority of the domestic staff. Thus, the following position was reached by November of the Third-year of their course.

Twenty-four Honconformist Men lived in five houses which were adjacent to each other or were in the same small geographical area. The figure for the Nonconformist Women In their hall of residence was 16. However, of the remaining

5 Nen and 4 Homen, two members of each sex wers living outside the College campus in comon rented accommodation (i.e. the same house). This latter houses tended to be a meeting place (external to the College campus) for many of the above group. The remaining three Nen and two Women Nonconformists were also day students (1.e, not residents) who did not appear to have much to do with the remainder of the group in this respect even though they shared the same primary philosophical orientation.

The Vocationallsts also tended to occupy specific residential areas in College but to a much less marked degree than the Academics or Nonconformists. Some $55 \%$ of the Vocationalist Nen and $42 \%$ of the Women occupied rooms in halls of residence that were in the same three-floor block whilst the remainder were accomodated in nearby halls. All of the Vocationalist Men and Women thus lived in the more modern College acconmodation and were housed in single roons during the third year of their course.

The Collegiates were the largest group in terms of the primary philosophical orientation. Because of their size ( $103 \mathrm{Men}, 129$ Women) they were to be found in every hall of residence. However, because of the rooms already taken by the Academics and to a lesser extent by the Vocationalists, many sub-groups of Collegiates tended to be living in rooms either adjacent to each other in the same hall of residence or on the floor above or below. This oould be a natural
consequences of having so many members in the group. However, further information given below will help clarify this point. The students were asked to rank the following four items in terms of their importance of making friendships in College.
a) Same Main Subjects. b) Same or adjacent hall of residence.
c) Similar social interests.
d) Chance.

Items $a, c$ and $d$ were repeated for both friends of the same sex and then of the opposite sex. The results in the form of response frequencies and percentages are given In the Appendix pp. 617-618. A slight problem arose with this data since in a falr number of cases, students had written 'Equal first' or 'Equal Second' in the rankings. However, in spite of this reduction of clarity it was felt that the analysis might prove to be useful.

## a) Same Main Subjects (Single sex choices)

Less than $20 \%$ of each sample except the Collegiate Women ( $21 \%$ ) recorded their responses in the lst ranking. When ranks 1 and 2 were combined only the Vocationalist Men and the Collegiate Men and Women indicated that having the same Main Subjects was important in the making of friends in College. The relatively low rankings ewarded by the najority of the Academics and Nonconformists appear to corroborate the findings concerning the actual occupation of College residential facilities referred to above. Table 181 on page 617 of the Appendix gives details of the frequencies.
b) Same or adifacent Hall of Residence.

Table 182 In the Appendix outlines the various percentages given in response to the question concerning the importance of the hall of residence in the context of making friends in College, The percentages in each of the twelve separate cells in the first rank were relatively high overall. They were particularly high for the Nonconformists, Academics and to a lesser extent the Collegiates. The figures for the Nonconformists corroborated in a large part the actual pattern of residence which they enjoyed.

A somewhat surprising feature of the table was the high percentage of Collegiates of both sexes who wero located in the first ranked position. The sheer volume of numbers of this group of Men and Women had probably operated in favour of their residine near to a fellow Collegiato. Also, the College policy of placing together students in Year 1 of their course on the basis of the same Main Subject may have been responsible in part for this relatively large percentage although with the exception of Handicraft and P.F. in the case of the Men, and P.E. only in the case of the Women, this group had members taking a large range of College subjects although the sciences tended to be underrepresented.
c) Similar Social Interests.

The first point of note from Table
183
in the
Appendix is that the Collegiates and Nonconformists had
larger percentages in the first rank than either the Vocationalists or the Academics. This item was frequently ranked 'equal first! with the previous item concerning College residence. A combination of the first two rankings effectively encompassed over 65\% of each sample, with the figure reaching $95 \%$ in the case of the Nonconformist Women. Thether such high percentages in this latter case reflect the residential arrangements organised by this group or whether the reverse is the case is a moot point. The present writer is of the view that the common and clearly seen social interests of this group led in a large part to the domestic arrangements which were in operation.

Whatever the reasons, it is clear from Table 183 that the majority of students in each of the four groups belioved that similar social interests had played a large part in the forming and maintaining of College-based friendships.
d) Chance.

It is clear from the figures given in Table
In the Appendix that the ranking by each eroup of this variable indicated its relative lack of importance. Bearing in mind the comment of Newcomb concerning propinquity of residence and the effect this has upon the probability of early meeting one could question the results from the following point of view. The indication was that in Year 1 of their course following upon their allocation to rooms in accordance with subject bias and the teaching speciality of the Resident Varden,
peer group formation could not be accounted for very clearly In terms of the primary orientations used in the present investigation. However by virtue of the fragmented College year and the fact that Year 2 of their course was spent in Lodgings, the students would appear to have istarted from scratch' in Year 3 in many cases. Evidence for this is not extensive beyond the fact that the patternings (using the criterion of primary philosophical orientations) in Year 1 as far as residential accomodation was concerned vere not nearly so clear as in Year 3 of their course. Thus, although one

> ". .iapannot very well develop peer croup reiationships uith persons whom one has never met" (Newcomb 1966 p.7).
nevertholess, in the present case, such relationships as existed in Year 3 did not appear to have been carried over in any large part from Year 1.

## SUMMARY

a) Single-sex groupings.

Of the four questions designed to elicit responses as to the formation of single-sex peer group in a College setting, those dealing with Halls of Residence and Similar Social Interests appeared to bo closely and positively related to such formations. The element of 'chance' was discounted by a majority of students in each group as being of importance in the foundation of groups of friends.
b) The importance of the above four criteria whon applied to peer groups involving members of the opposite sex.

The data strongly indicated that when Men and Homen each ranked the above criteria in terms of their importance to their choice of friends of the opposite sex the rankings were as follows.

1. For all groups Comon Social Interests accounted for over $75 \%$ of the responses with the Nonconformists having figures in excess of $84 \%$.
2. The Vocmtionalists and Collegiates had the highest total percentages for placing "Same Main Subjects" in the first ranis. The figures were $18 \%$ and $13 \%$ respectively.
3. The Academics did not appear to differ from the other three groups in any marked way.

The Froportion of Friends as Assessed by the above Criteria.
A careful check was made of the above figures for both forms of grouping (1.e. Hen choosing Men, Men choosing Vomen and vice-versa). Cuestions were given in a printed format asking the students to record the proportion of their friencs of both the same and the opposite sex in terms of the criteria given above (1.e. Same Main subjgets, Samo (or adjacent) Hall of Residence, Similar Social Interests and Chance). A key was provided which had categories ranging from 'rione' to 'All'.

The results tallied very closely with the findings illustrated in the above tables. The main conclusions were that:
over $75 \%$ of each group indicated that most if not all their College friends lived in the same Hall of residence or near to it. In the case of the fonconformist Ken this percentage was in excess of $90 \%$.
b. the great majority of the students indicated that nearly all, if not $100^{\circ}$ of their friends had social interests similar to those foliowod by themselves.
c. the percentages of students who said that over a half of their friends studied the same Main subject(s) as themselves are given below.
Table 25
Percentage of Students Studying Same lein Subjects.

| Vocationalists. |  |  | Academics |  |  | Collegiates |  |  | 1roncon= formists. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Men | WO. | Tot. | Fien | Ho. | rot. | iten | bro. | lot. | bien | WO. | Tot |
| 19 | 20 | 39 | 10 | 12 | 22 | 23 | 30 | 53 | 30 | 26 | 46. |

The figure for the Nonconformist Men is surprisingly high but is accounted for in large part by the number of P.E. students in the group. The same point also applied to the Collegiates. In their case, there were 30 Men who took Handicraft as a 'Double Main' subject, whinst a further 27 took P.D. Eor the Vomen the subjects which accounted for the largost muber of students wore Needlework (19) and P.E. (14) with a further eleven doing Craft. Details are given in Table 185 in the Appendix concerning the actual breakdown of the Main Subjects studied.

Analysis of the lst Choices of Main Subjects for the four primary orientations.

The main points of note were the general lack of students studying science subjects, the relative lack of Handicraft students in the sample of Nonconformist Men and the relatively large number of Academic Men taking this latter subject. There was also a relatively large percentage of both Collegiate and Honconformist Men students taking $\bar{B}$. .B. as their first choice of Main Subject.

Analysis of the 2nd Choices of Main Subjects for tho four primary orientations and the pattern of Subsidiary Subiects.

In their second choices of Main Subject, the students were spread over the range of subjects even more than in Main Subject 1. In the present case however; a total of 29 Men and 47 Women students had opted to study their second choice of Main Subject at a 'subsidiary' level. In the above table, the figures for Handicraft were Identical with those for the first choice of Main Subject because the subject was offered as a double main' and was therefore not amenable to treatment as a 'subsidiary' subject.

The data concerning the 'Subsidiary' subjects is given in Table 186 in the Appendix. The information for the Men in each sample appears in the upper left hand corner of the respective cell with the yomen being located in the bottom right hand comer of the cell where 'subsidiary' level candidates are found. This information when converted to percentages resulted in the following table.

Table 26
The percentages of students in each of the lour primary orlentations who had opted to study one subject at a Subsidiary level.

| ORIDNATION | MEN | HOMEN | TOTAL. |
| :--- | :---: | :---: | :---: |
| Vocational | $11 \%$ | $24 \%$ | $18 \%$ |
| Academic | $0 \%$ | $1 \%$ | $1.6 \%$ |
| Collegiate | $17 \%$ | $25 \%$ | $21 \%$ |
| Nonconformist | $17 \%$ | $0 \%$ | $10 \%$ |

Of note in the above table was the relatively high percentage of Vocationalist and Collegiate Vomen. To a lesser extent, the figures for the Collegiate and Nonconformist Men were important since they represent one sixth of each of these groups. The low score of the Academics was not unexpected in view of their choice of primary philosophical orientation. The tendency for the Women to have more of their numbers studying a subject at level a 'subsidiary' /than the Men was completely expected in view of the information gained from analyses concluded earlier in this investigation.

## Analysis of Variance

## 1. Introduction

Twenty-seven variables were regarded as being of especial importance to the investigation. In general they were e1ther published scales designed to assess intelligence, personality, motivation, values and critical thinking or they were taken from attitudinal scales constructed by the writer. To theso variables were added certain College gradings, G.C.E. results and an indication of Social Class Status. The complete list of variables was as follows.

Variable number

## Descrintion

1 ABC.
2. Type(s) of Secondary School(s) attended.

3 Sumation of points for G.C.D. ' $O$ ' and ' $A$ ' levels.
4. Achievement Motivation (Lymn).
5. Total Marks for Education.
6. Composite Academic Score.
7. Total Grades for Teaching Practice.
8. Attitude Scale - Authority and Discipline.
9. Total Marks for Main Subject 1.
10. Total Marks for Main Subject 2.
11. Attitude Scale - Main Subject 1.
12. Attitude Scale - Main Subject 2.
13. Attitude Scale - Zducation.

14 Theoretical Values - Study of Values.
15. Economic Values - Study of Values.
16. Aesthetic Values - Study of Values.
17. Social Values - Study of Values.

18 Folitical Volues - Study of Values.
19. Religious Values - Study of Values.

20 Critical Thinking Ability - Watson Glaser.
21. Intelligence (A.R.5) - Heim.

## Description

22.: Gotionality (16 P.F.) Cattell.
23. Extraversion (16 P.F.) Cattell.
$24 . \quad$ Tendermindedness (16 P.F.) Cattell.
25. Radicalisn (16 P.F.) Cattell.
26. Conscientiousness (16 P.F.) Cattell.
27. Social Class.

## 2. The Non-Significant F-ratio3.

A oneway analysis of variance was computed between the primary philosophical orientations. A summary of the results is given on the adjoining sheets. In the case of the samples of IMT and WOMN only and when they are pooled, the alm has been to draw the readers attention to the main relationships prior to a consideration of those involving fewer comparisons.

The number of non-significant F-ratios for the four groups composed of MEN was 13. They included G.C.E. subject totals, four of the six values moasured by the Study of Values, Critical Thinking Ability, Intelligence, Imotionality, Radicalism and Attitude scales relating to both Main subjects. For the NOMEN the picture was much the same with the exception of Intelligence, Emotionality, Radicalism and Attitude scale for Main subject 1. In these cases, the F-ratio was significant. Details of the non-significant F-ratios are given in Table 188 in the Appendix.
3. Tho semples composed of YMTN ONLX

For the samples composed of IBN the variables for which any one of the four primary philosophical orientations was significantly higher or lower than the three remaining groups are listed below in Table 27
Table 27 Variables for which any one group of MEN was significantly higher or lover than the three remaining eroups.

| Group | Variable number. | Higher/Lower than the three remaining Groups for these Variables. |
| :---: | :---: | :---: |
| Academics | 4 | Higher - Achievement Motivation. |
| Academics | 5 |  |
| Academics | 6 | Higher - Composite Academic Sco |
| Nonconformists | 7 | LOWER - Total Grades for Teaching Practice. |
| Nonconformists | 8 | LOMER - Attitude Scale - Authority \& Discipline. |
| Academics | 9 | Higher - Total Marks for Kain subject 1. |
| Academics | 10 | Higher - Total Yarks for Main Subject 2. |
| Collegiates | 17 | Higher - Social Values - Study of Values. |
| Honconformists | 26 | LOHER - Conscientiousness 16 P. |

In sumnary, the Academics were significantly higher than any of the three remaining groups for a total of ifve variables which could all be accounted for in terms of various aspects of achievement. The Collegiates had the highest score for the Social Values scale of the Study of Values. The Nonconformist group were significantly
lower than each of the other three groups for three factors which tapped areas concerned with practical teaching, attitudes to College-based euthority and discipline and a lack of conscientiousness.

A consideration of the remaining significant differences between any one group and the other groups indicated the following points of interest.

Both the Vocationalists and Academics were significantly higher on Achievement Votivation than either Collegiates or Nonconformists. Thus, the two groups who for different reasons were geared to the basic concept of coming to college to work for differing goals both bore a similar relationship to the other two groups.

It has been hypothesised that the Vocationalists would have significantly higher mean scores for Teaching Fractice. The hypothesis was not verified since the Academics had a significantly higher score than either the Vocationalists or the Collegiates. One reason for this could be that to gain access to the Bridging Course (which for the successful ones led to the B.Ed. degree courso) a mark of C+ had to be obtained on the final Teaching Practice. It was, therefore, an incentive to work hard on the final practice since under the present regulations, a maris below $\mathrm{C}+$ disbarred you from further involvement in the degree seeking process. In a very positive way, therefore, one's career could be truncated.

On the Aesthetic Values scale of the Study of Values, both the Nonconformists and the Academics were significantly higher than the Vocationalists. Thus, the
two groups who were (according to the typology used in the investigation) much 'involved uith ideas' wero shown to have superior scores on the above scale.

As might be expected from the Collegiate group (a group amongst whose aing vas the pursuance of a full social life) they scored significantly higher for Extraversion than the Vocationalists and Academics (groups to whom the College represented aither a future professional 'meal ticket' or a chance for the furtherance of Academic interests).

For the 16 P.F. Second-order factor of Tendermindedness, the Academics had a mean score which was significantly higher then that of either the Vocationalists or Collegiates. One might have expected the Vocationalists to have the highest score on this variable since they were specifically intended to make a career of working with children. of further interest vas the fact that in the case of the samples composed of Vomen, the Vocationalists here did not have the highest mean score.
4. The somples composed of wongn onty

For the samples composed of HOMEN, the variables for which any one of the four primary philosophical orientations vas significantly higher or lower than the three remaining groups are listed in Table 28 on the next pase.

Tablo 28 Variables for which any one group of Vonen
was significantly higher or lower than the
three remaining grouns.

| Group | $\begin{aligned} & \text { Variable } \\ & \text { Number } \end{aligned}$ | Higherllower than the three remainine eroups for these variables. |
| :---: | :---: | :---: |
| Academics | 1 | Higher - Ago |
| Academics | 4 | Higher - Achievement Motivation (Lymn) |
| Academics | 6 | Higher - Composite Academic score. |
| Nonconformists | 3 | LO:IDR - Attitude Scale - Auth. \& Discipling. |
| Academics | 9 | IKgher - Total Mariss for Main Subject 1. |
| Nonconformists | 11 | LOTER - AttitudecScale - Matn Subject 1. |
| Vocationalists | 13 | Higher - Attitude Scale Iducation. |
| Acadenics | 22 | LONER - Mmotionality - 16 P.F. |
| Nonconformists | 25 | Highor - Radicalism - 16 P.F. |
| Ronconformists | 26 | LOWSR - Conscientiousness |

The above table indicates a pattern of results somewhat different from that of the Nen. The Academics were significantly higher than the three remaining groups for a total of five variables four of which were ilnked to achievement in various ways. The sole area where the Vocationalists wore significantly higher than the other groups was that of a nore favourable attitude to Education as a subject.

The Honconformists had significantly lover scores than the threo remaining groups for four variables two of which were attitude scales whilst the remaining two indicated poorer marks for Main Subject 2 and a relative lack of conscientiousness. They were, hovever more radical than their fellot students.

In considerine sienificant relationships, which ranged across fewer than the four groups (as outilned above) the following relationships appeared to be of some importance. The Academics had a significantly higher mean score for Total Marks for Education than both Collegiates and Nonconformists. In the case of the Men, this relationship had extended across all three groups. In view of the typology indicating that the Vocationalists were little concerned with their College the fact that they had a significantly higher mean score than the Academics was unexpected.

For the scale which assessed attitudes to the college subject of Iducation, the Nonconforaists were lower then the Collegiates whilst the Academics in their turn were not significantly different from the Collegiates or Nonconformists. This latter result was unexpected since the importance the Education course played particularly in the future of this group (since a B grading was necessary to proceed to the Bridging course examination) was ereat.

The Aesthetic scale of the study of Values Indicated that for the vomen (as in the case of the men) the Nonconformists had a significantly higher mean score than efther the Vocationalists and Collegiates. on the

Social values scale of the same instriment, the relationship found on the male samples (namely that the Collegiates scored sienificantly higher than the other three groups) was not es extensivo. In this latter case, the Collegiates were only significantly higher than both Acaderics and Nonconformists.

Tho Nonconformists were more anxious than the Collegiates since they had a significantly higher mean scoro for Enotionality on the 16 P.F. questionnalre. Not surprising was the fact that the Collegiates vere sienificantly more extraverted than both the Vocationalists and Academics. This result was in accordance with the finding for the male samples.

A final relationship of note was that the Nonconformists had a simificantly higher mean score for Tendermindediness (2nd order factor 16 P.F. Cuestionnaire) than efther the Vocationalists or the Academics. In the case of the male samples it was the Academics who were significantly higher than the Vocationalists and Collegiates.
2. The Samples Composed of Men + Wonen

The variables for which any one of the four primary philosophical orientations was significantiy higher or lower than the three remaining groups are listed bolow In Table 29. The samples arc composed of YEN and WONEH TOGETHER. By pooling the samples in this manner (1.e. Ten Vocationalists $N=53$ and Vomen Vocationalists $\mathrm{N}=59$ ) a ocmparison between the larger samples of the four primary philosophical orientations was possible.

| Tablo 29 | Variables for which any one eroup was significantly different than the three remaining mroups. |  |
| :---: | :---: | :---: |
| Total Group (Men + Women) | Variable <br> Number. | Hgher/Lower than the three remaining groups for these Variables. |
| Academics | 5 | Total Narks for Education (Higher). |
| Academics | 6 | Hither - Composite Academic Score\% |
| Academics | 7 | Higher - Total Grades for Teaching Practice. |
| Vocationalists | 8 | Higher - Authority and Discipline. |
| Nonconformists | 8 | Lower - Authority and Discipline |
| Academics | 9 | Higher - Total Marks for Main Subject 1. |
| Acadenics | 10 | Higher - Total Marks for Main Subject 2. |
| Nonconformists | 11 | LOWER - Attitude Scale Main Subject 1 . |
| Vocationalists | 16 | LomR - Assthetic Values - Study of Values. |
| Collegiates | 17 | Higher - Social Values - Study of Values. |
| Acadenics | 22 | LOWIR - Motionality - 16 P.F. |
| Nonconfornists | 25 | Higher - Radicallsm - 16 P.F. |
| Nonconformists | 26 | LOWER - Conscientiousness - 16 P.F. |

In addition to the above patterns of significant differences the following ones are of interest and concerm three out of the four groups in most cases. The Vocationalists and the Academics were each significantly older than the two remaining groups.

The Vocationalists had a significantly higher mean score for Total Marks for Education than either the Collegiates
or the Nonconformists. This is perhaps as it should be since this group wero primarily in Collego to propare themselves for a future career in equcation. The Nonconformists had significantly lower mean scores for the attitude scale 'Authority and Discipline! than cither the Academics or the Colleglates. Thus when one considers that the Vocationalists were also significantly higher than each of the threo remaining groups it is apparent that the Nonconformists were significantly lower than each of these three groups.

For the Religious values scale of the Study of Values, the Nonconformists were significantly lower than the Vocationalists and the Collegiates. It was noticeable that the Academics and the Nonconformists vere not significantly different from each other.

The Collegiates had indicated a liking for the social ilfe and extracurricular activities. Thus, they had a mean score for Extraversion which was significantly higher than that of both the Vocationalists and Academics. The relationship did not extend to the Nonconformists. For the second-order factor of Fendermindedness, the Acadenics (not unexpectedly) had a significantly higher mean score than the Collegiates. If the results given in the above table are included here, we find that both Academics and Nonconformists both scored significantly higher than either the Vocationalists or the Collegiates.

Sumarisins the contents of Tables 27 to 29 we get the following picture concerning any one primary



#### Abstract

variables deemed of special importance to the present investigation indicated that the groups of MEN were not significantly different on 13 of the variables. of the remaining 14 variables, in 9 of the cases one or another of the groups was significantly higher or lower than the threa remaining eroups. For the voind the flgures were 10, 17 and 11 respectively. A mumber of important relationships between particular groups have also been outlined.


The general trend of the whole analysis has been that of the Academics having the significantiy higher mean scores for the variables linked with forms of attainment whilst the Nonconformists tended to have the lovest mean scores for certain attitudinal, attainment and personality variables. Complete tabular detalls of the respective analyses of variance can be found in the Appendix pp. $629-$ 658 inclusive.

EACTOR ANALYSES.
In order to ascertain just how the main 27 variables In the investigation would group together, the data for the Thole Sample of 455 students was inter-correlated. The resulting matrix was subjected to a principal components analysis and subsequently rotated to the Varimax criterion. The process was repeated for both Men and Women separately and then for each of the four primary philosophical orientations using hen and Yomen together to givo four samples. The decision not to do separate factor analyses for Men and Vomen based upon primary philosophical orientations (1.e. Vocational Ken and Vocaticnal Yomen analysed separately) was taken on the besis that any factor analysis where the number of variables exceeded the number of subjects (as in the case of Nonconformist Women) would violate some of the assumptions underlying this form of analysis. The 27 variables deemed of special importance were as follows:

| 1. | Age. |
| :---: | :---: |
| 2. | Type(s) of Secondary School (3) Attended. |
| 3. | Summation of points for G.C.E. 101 and 'A' lovols. |
| 4 | Achievoment Motivation (Lymn). |
| 5. | Total Marks for Education. |
| 6. | Composite Academic Score. |
| 7. | Total Grades for Teaching -vetice. |
| 8. | Attitude Scale - Authority \& Discipline. |
| 9. | Total Varks for Main Subject 1. |
| 10. | Total liarks for Main subject 2. |
| 11. | Attitude Scale - Main Subject 1. |
| 12. | Attitude Scale - Main Subject 2. |
| 13. | Attitude Scale - Iducation. |


| 5. | Econonic Values. |
| :---: | :---: |
| 16. | Aesthetic Values. |
| 17. | Social Values. |
| 18. | Political Values. |
| 19. | Religious Values. |
| 20. | Critical Thinking Ability. |
| 21. | Intelligenco A.H.5. |
| 22. | Emotionallty (16 P.F.) |
| 23. | Ixtraversion (16 P.F.) |
| 24. | Tendermindedness ( 16 P.F.) |
| 25. | Radicalism (16 P, F.). |
| 26. | Conscientiousness (16 P.F.) |
| 27. | Social Class. |

## a) Analysis of the thole Samnle.

The factor analysis of the data gained from a total of 455 subjects ( $N=221$ Men and 234 Homen) rovealed 10 factors which accounted for a total extracted variance of 62.292\%. The first factor extracted accounted for twice as much variance as any of the nine remaining factorn. Factors 3, 9 and 10 each accounted for slightly less than $5 \%$ of the total variance in each case.

Dotails of the structure of each factor are Biven In the Appendix whilst a brief explanations of points of interest are given on the following pages.


#### Abstract

a) Factor Analysis No. $1 . \quad$ The Total Sample. Factor 1 Achievement. This factor was an achievement factor with substantial loadings on the main College-based assessments in terms of overall performance. Of particular note was the positive loading of Conscientiousness (16 P.F. Questionnairo) and the larger loading of Lynn's Achievement Motivation Cuestionnaire.


Factor 2 Values.
Three of the value scales from the Study of Values formed the basis of this factor. The link between Religious Values, Tendermindedness (16 P.F. Questionnaire) and a positive attitude to a part of the College course was seen quite clearly. The negative loadngs of the values assessed by the Theorotical and Economic scales were in accordance with previous research reported by Richardson (1965).

Factor 3 Attitudes towards tho College
This attitudinal factor clearly outlined the more positive attitudes held by the older students in the College. Of note was the 'Global' nature of the attitudes towards various aspects of College life. In other words, all four attitude scales loaded on this one factor.

Factor 4 Ase.
This factor gave a fairly complex picture in
which the older students clearly had the poorer entry qualifications. Since stuesents of more mature age were sometimes accepted with minimum academic qualifications bolstered by acceptable and mature attitudes towards this vocation such a result was not surprising. The relationship between the type(s) of school(s) attended and pre-College academic attainment was clear. The negative loading of Total Teachins Practice Grades was perhaps indicative of the oft repeated plea for a student to 'get dom' to the level of his pupils although other interpretations were cqually feasible.

## Factor 5 Aesthetic Values and Personality

This factor was composed of an amalgam of values, personality factors and an attitudinal component. It made some comonsense to regard aesthetes as being tenderminded and holding positive attitudes towards College-based Authority and Discipline. Radicalism in Cattell's terminology means bohemian and analytical rather than being unco-operative and as such the present loading made further sense. Why such persons should not bo conscientious or hold a negative attitude towards Lducation was not easy to interpret. This latter point may be an indication that the students involved regarded much of what was done on the College courso was not of interest to then personally.

Factor 6 Folitical Values.
Those with high political values were shown on this factor to be low on social and aesthetic values and to be analytical and bohemien to some degreo whilst at the same time being unconscientious and holding a low regard towards the subject of Education. This may be the reason why they received low scores for Teaching Practice. A later survey of differences between sexes and primary philosophical orientations may throw further light upon this finding.

## Factor 7 Intellirence and Critical Thinking.

As indicated in the Review of Pertinent Literatura although the majority of reviews showed that intelilgence and critical thinking ability were not synonymous they tended to be correlated. In the presont case, the size and closeness of the two loadings given in Table 276 sugsested a fairly strong relationship. Bearing in mind the manner in which scores were assigned to the type(s) of Secondary School(s) attended, the loading of this latter variable was not surprising.

## Factor 8 Social Class.

This factor was of particular interest since it indicated a construct which revealed what sociologists such as Floud (1962) and Eggleston (1966) have been stressing. Namely, the higher the social class of a person, the 'better' or more academic will be the schools
he will have attended awt the more notivated he will be towards achieving.

## Factor 2 Emotionality

A high loading for Enotionality was linked to a lack of conscientiousness but also to attendance at more academic secondary institutions and holding a positive attitude towards the subject of Education. The low percentage varianco accounted for by this factor indicated the tentative nature of any subsequent interpretation. However, the factor did support in some degree the findings outiined in the Review of Pertinent Literature whilst in other ways (such as the negative loading for Conscientiousness) it did not corroborate previous findings. It should also ibe noted in this context that no criteria of College-based success such as grades and marks loaded on this factor.

Factor 10 Extravorsion
This factor indicated that the more extroverted students received higher teaching practice grades and also tended to exhibit the higher scores for aesthetic and political values. The link with teaching practice might be expected on the basis of the degree of social intercourse required of many teachers. Their outgoing, surgent natures clearly made them less amenable to College-based authority and discipiline. The negative loading for age
was in agreement with current theory concerning the 'mellowing' of one's extroverted tendencies with increasing age. That the extroverts might experience difficulty in coping with the constant requirements of assessment by a continuous process was given some credence by the negative loading of Total Narks for Main Subject 2.

## b) Analyses of the samples composed of

(1) and (ii) WOMEN
indicated that in a number of cases the factors were very similar to each other. It was decided, therefore, to compare the various loadings. cnly loadings above .2 were extracted for further comment.

The analysis composed of the 221 men resulted In nine factors being extracted which accounted for a total of 61.707\% of the variance being accounted for. In the case of the analysis of the scores of the 234 Women on the 27 variables deemed of especial importance, ten factors were extracted which accounted for 63.100\% of the total variance.

Matching was possible over nine factors leaving one factor in the case of the Women. of initial interest was the fact that the two samples accounted for nearly the same percentage of variance extracted by the factors.

In the tables to be found in the Appendir pp 667-671
of factors and factor loadings the samples are placed side by side for ease of interpretation. Comment below is restricted to indicating points of particular interest rather than indicating each loading in turn.

Factor 1 Academic Ach1avement.
This factor was one of academic achievement with both samples having substantial loadings on College-based criteria. Points of particular note included the fact that Total Teaching Practice Grades were much more closely Inked to achiovement for the Ken than for the Women. In the case of the sumation of G.C.E. 'O' and 'At level results the position was reversed. The Men who had hieh achievement were conscientious and tended towards being introverted with low social values whereas loadings on these variables were absent for the Women who instead had a medium-sized loading for critical thinking. Details of tho loadings are given in Table 280 page 667

## Factor 2 Values

In terms of the three substantial loadings. which ware found, the two samples were very similar to each other. In each case, those who were high scorers on the Religious scale of the Study of Values were also low scorers on both Theoretical and Economic values. This was to be expected in part because of the way in which the Study of Values was scored. Of note was that Religious. Values were associated with Tendermindedness (16 P.F. Questionnaire) and Total Mariss for Main Subject 2 for the Komen, whereas the loadings for the Men on these variables were less than ${ }^{+}$. 2. The Men tio hed high Religious Values were also ehown to have a rather negative attitude to Education as a College-based subject. The relevant loadings are given in Table 281 on page 667.

Table 232 on page 668 gives details of the loadings on this factor. of initial importance was the difference in the size of loadings between the Men and Women for the four attitude scales on which the two sarmles had comparable loadings.

Strong positive attitudes for the Men ware associated with Tendermindedness and Conscientiousness (both from the 16 P.F. Questionnaire), for the Women, such attitudes wera accompanied by having attended more selective Secondary Schools and by belonging to a higher social class grouping. The Homen were also high scorers on both Religious and Economic Values but low on Aesthetic Values (Study of Values).

## Factor 4 Social Class.

The structure of this factor was uncomplicated if one assessed loadings in excess of $\pm .2$ only. Higher social status in the Men was associated with Stability, non-Radicalism (16 P.F. Guestionnaire) and attendance at nore selective Secondary Schools. For the Women, it was associated with Radicalism, Tendermindedness (16 P.F. Questionnaire) and a negative attitude to Education as taught in the College. One might have expected Tendermindedness and positive attitudes to College-based work to be rolated in a manner other than a negative one. Details of the factor structure are given in Table 283 on page 663.

## Factor 5 Extravorsion

The number of loadings for both Men and Homen on this factor which were larger then +.2 were feu in number. For the Men, a high score for Bxtraversion (16 P.F. Cuestionnaire) was associated with attendence at more selective secondary establishments, youth and social values. All of these loadings made good sense since extraversion implied a degree of social intercourse and enjoyment whilst attendance at more solective Secondary Schools Implied more 11fe chances later in one's career which at this stage might have led to a degree of confidence in those concerned. The 'mellowing' of one's extraverted tendencies with increasing age also seems acceptable in commonsense terms.

For the sample composed of 234 Women, the high score for Bxtraversion was associated with better grades for Teaching Practice and positive attitudes towards Education as a subject. The research concerning the relationships between teaching ability as assessed by College tutors and Extraversion is not conclusive. Furneaux (1957) has supported the view that Extraversion is a factor in success at College level. Relationships tend to be blurred by the fact that the assessment of practical teaching is done subjectively by men and women who are not armed with any adequate criteria. Tabular details are given in Table 284 on page 669.

## Factor 6 Critical Thinking Ability.

This factor was of particular importance because It clearly linked intelligence and the ability to think critically to attendance at the more selective Secondary schools available to the majority of the Students (1.e. a very small minority had attended Public schools prior to entry to College). Edwards (1950), Watson and Glaser (1952), Dressel and Mayhew (1954) and Rust (1960) have all reported correlations betwoen intelifgence and critical thinieing. Thas, the relationship show in Table 235 on page 669 was in line with current findings in this area.

The remaining loadings above +.2 were four in number. The Men who scored high on both Intelligence (A.H.5) and Critical Thinking Ability (Hatson-Glaser) had low scores for Economic Values (Study of Values) whilst the Women had low scores on Achievement Motivation (Lymn), Aesthetic Values (Study of Values) and had a negative attitude to their First Choice of Main Subject. These results perhaps indicate that those fomen who were intelligent and could thinis critically sas that they need not bo motivated beyond a certain level since their ability trould carry thon through. Alternatively, they may be the people Koerner (1968 p.157) was writing about when he stated:

[^3]One could ask in viev of the above loadings if these Yomen students were accepting the values of a latent function of College life, namely the provision of an environment in which a likely spouse might be found. Evidence for this is sparse and needs much additional work. Later analyses in this investigation might throw more light on this point.

## Factor 7 Folitical Values.

The two samples had cormon loadings on only two variables. In each cass, a high positive loading for Political Values (Study of Values) was associated with a high negative loading for Social Values (Study of Values). Since as was the case with this test, the six values for which scores are awarded are not fully independent of one another the loadings were not surprising. This point also applied to the loadings on Aesthetic and Theoretical values recorded by the Women.

The remaining loadings indicated that the Ven with high scores for Political Values (Study of Values) wero not Conscientious (16 P.F. Cuestionnaire) and had relatively high scores for Emotionality (16 P.F. Cuestionnairo). Tablo 286 on page 670 details the loadings.

Factos 3 G.C.B. Results.
Table 237 on page 670 indicated that for both Men and Women, G.C.E. totals in terms of ' 0 ' and 'A' level passes were associated with youth. In other
words, the older students of either sex had fewer ' 0 ' and 'A' levels. This was not surprising in view of the College policy to accept a number of older candidates who although possibly possessing the ninimum entry qualifications or their acadomic equivalents (in terms of results from examinations now superceded by the G.C.E.) were able to offer personal characteristics deemed to be of Importance to the College Authorities.

Differences between the two groups indicated that the older Men had a positive attitude to Collegebased Authority and Discipilne and were tenderninded (16 P.F. Cuestionnaire) whilst the Women gained high grades for Teaching Practice, had attended less selective Secondary Schools, gained Iow scores for Social Values (Study of Values) and exhibited a degree of Achievement Kotivation (Lymn). For the Women, the results were in accordance with what one would associate with students of mature ase who had opted to enter College. For the Nen, the results were not as clear but the relationship between Age and Attitudo and Tendermindedness (16 P.F. Questionnaire) bears out repeated observation by the writer and many other colleagues ( $1 . e$. such students wore toughminded and supported College policies on behavioural issues very closely).

Factor 9 Components of Neuroticism.
Naming this factor proved to bs difficult beceuse of the pattern of loadings. Also, of the total of eight factors for which comparison between the sexes was possible, the inies were weakest on this factor. However, it was felt that the factor loadings for each of the sexes had sufficient in comon to varrant a comparison being mado.

By adopting the often used procecure whereby the signs accompanying a sories of factor loadings may bs changed in direction as long as tho process is applied to the whole column, the loadings for the sample of Women were mado more meanineful. Tho amended loadings are presented in Colum A in Table 283 on page 671 of the Appendix.

The relationship between Aesthetic Values and Fmotionality and a lack of conscientiousness was much stronger for the lien than for the Vomen. The association between Aesthetio Vaiues and Radicalism (16 P.F. Cuestionnaire) was expected since this secondorder porsonality factor had a "bohemian" component. Both Hen and Vomen who gained high scores for Acsthetic Values were also Tenderminded (16 P.F. Questionnaire). The positive loadings of the personality factors are In accordance with unpublished work by varburton (1969) and cattell (1961) which showed clearly that the thirdorder personality factor of Neuroticism contained the second-order factors I1sted in Table 233 However,
the introversion component was missing in the present case:

Differences between the two sexes on this factor indicated that the Men with strong Aesthetic Values had low Economic Values but moderate Theoretical Values. They also had a positive loading on Achievement liotivation (Lymn). This latter ifinding was of interest since the loading for Conscientiousness (16 P.F. Cuestionnaire) was fairly substantial in size and nefative in direction. However, the loading for Achievenent Motivation was relatively low.

For the sample of Women, a lack of Conscientiousness (16 P.F. Questionnaire) was associated with attendance at less selective institutions of Secondary education and to a lesser extent with Political Values (Study of Values).

The most important inding as far as this factor was concerned was the various degrees of association between the three second-order and single first-order personality factors. They form basic components of the third-order factor of Neuroticism as outlined by Warburton (1969) and Cattell (1961).

## Factor 10 Main Subject 2.

This final factor was extracted from the enalysis of Women students only. It represented a tenth factor for this sample whereas the analysis for Men ceased following the extraction of Factor
number nine. Table 289 on page 671 indicated that this factor mas mainly concerned with the relationships between scores for and attitudes to Main Subject 2.

On this factor, those Vomen who gained high scores for Main Subject 2 also viewed it with a favourable attitude. They were also low scorers on Achievement Motivation (Lymn), Emotionality and Conscientiousness (16 P.F. Cuestiomaire). In addition they came from a lover social class background, gained a relatively high score for Composite Academic Score, Theoretical Values and Radicalism (16 P.F. Questionnaire).

SUMMARY.
An analysis of the scores recorded for 111 Hen students and All Homen students for the 27 variables regarded as being of special importance was undertaken. The factor analysis resulted in the extraction of nine orthogonal factors for Men and ten for Women. Iine of the factors could be matched with the ilrst eight pairings being much clearer than the ninth ono.

## Factor Comparisons between the four Primary Orientations for the basic 27 variables.

The principal components analysis followed by rotation to the Varimax criterion produced 10 factors for each of the four groups (Men and Women combined). The percentage variance accounted for by the analyses was as follows.

|  | Ho. of Factors | Fercentage Variance |
| :--- | :---: | :---: |
| 1. Vocationalists | 10 | 68.459 |
| 2. Academics | 10 | 72.752 |
| 3. Collegiates | 10 | 62.425 |
| 4. Nonconformists | 10 | 76.927 |

In terms of total percentage variance, the Nonconformists and Academics held higher ranks than the two remaining groups. Tables giving loadings in excess of $\pm .2$ are reported in the Appendix pp 674-633 inc. The samples of Men and Women were combined to provide groups which because of their size proved to be more amenable to treatment by factor analytic procedures.

Factor matching proved possible over each of the four groups for a total of eight of the factors whilst two samples loaded on two other factors. In most cases, the comparisons were easy to make on the basis of common loadings of magnitude although in some cases the number of variables involved was very small.

It is not proposed to devote pages of typescript in drawing attention to minute comparisons between the samples. Instead, it is hoped that the following descriptions will prove self-explanatory


#### Abstract

In the main and attention will be confined to points of particular attention. Decimal points preceding factor loadings have been owitted. Latent roots and percentage variance for each factor and each sample are given in a separate table in the Appendix following tables 291 - 300 inclusive.


## Factor 1 Achieverment.

Each of the four primary philosophical orientations was represented on this factor. In each case save that of the Academics, the second choice of Fain Subject also had a loading which in the case of the vocationalists and Collegiates was very substantial indeed. For the Collegiates there was no appreciable loading on Achievement Motivation. Of note was the absence of any loading above $\pm .2$ for the Academics on G.C.E. totals although for them a substantial loading on Critical Thinking ability occurred. Those Honconformists who gained high gradings for variables $5,6,7$ and 9 also tended to be stable.

## Factor 2 Social Class.

A higher Social Class grading was linked with stability for the vocationaliste dnd with success on Teaching Fractice and a poor attitude to Dducation as a subject. In view of their primary interest in teaching such a result as the latter one was clearly a criticism of the course given in Education. For the

Academics, higher soclal status (as neasured) was associated with low grades for practical teaching and for Main Subject 2. This group however had attended more selective Secondary Schools and exhibited a degree of Achievement Motivation as well as a positive attitude to College-based Authority and Discipline. The Nonconformista of higher social status presented an interesting and complex picture. They vere revealed as gaining low grades for both of their Main Subjects and also for their Composite Academic Scoro; as being Extraverted and Tenderminded and lacking in Achievement Motivation. Also, in accordance with Eysenck's (1956) hypothesis concerning tenderminded adults, they did not hold strons Political values.

Factor 3 Attitudes to Main Subjects.
As might be expected, positive attitude scores for each of the two Lain Subjects were allied on three of the four samples with high positive loadings for attitudes to Education as a course. Such attitudes were positively associated with Total Marks for Main Subject 2 (1.e, an attainment loading) on only one of the four samples. On this sample of Nonconformists, such associations were linked to Stability, low Political Values, Extraversion and membership of a higher social class. The remaining loadings were sparse and indicated that the older Academics had the more positive attitudes and were more extraverted. The single extra loadins
for the Collegiates revealed them to hold positive views towards College-based Authority and Discipline also.

## Factor 4 Intellirence.

Substantial loadings for the A.H. 5 test of Intelligence were mirrored by high loadings on the Vatson-Glaser test of Critical Thinking Ability save for the Collegiates who recorded a lower loadins. In general, the remaining loadings although numerous were low. Of note was tho positive association on all samples except the Nonconformists with attendance at more selectivo Secondary Schools (the highest loading being that of the Academics who also recorded a very enistantial loading for G.C.E. subject sumations). Further than the above, very little of particular note was revealed by Table 294 from the point of view of groupcomparisons.

## Factor 5 Age.

With the exception of Age, the groups did not have loadings on any single variable whicts encompassed each of the four samples. Only two variables loaded on three of the samples and indicated that the younser students had the larger total scores in terms of ' 0 ' and 'A' levels and that although Achievement Motivation was positively associated with Age for the Academics, it was negatively linked to Age for both Vocationalists and

Nonconformists. Thus, in the case of the Academics the older members of the group were really making the efforts to succeed in their chosen way of life.

The remaining loadings of note indicated that whereas the older Vocationalists were Tenderminded, the older Acadenics were most decidedly toughminded. In this latter case it was noted that the largest loading for this group was in fact for Tendermindedness and not Age.

Other varlables which loaded on more than one sample indicated that both older Academics and Nonconformists were introverted whilst older Academics and Collegiates had high Aesthetic Values. A difference In the direction of loadings occurred on Variable number 25 with the Nonconformists being very radical and the Vocationalists being non-radical. Finally, both older Vocationalista dind Nonconformists had higher scores for Theoretical Values. N. B. On reflection, bearing in mind that on two columrs 1.e. Academics and Nonconformists) the highest loadings were not for Age it might be prudent to withdraw these samples and leave the matching between the two remaining samples of Vocationalists and Collegiates.

## Factor 6 Values.

By altering the direction of the signs (i.e. + or -) for each loading for the Academics, factor natching in terms of the major loadings was possible
over the four samples of respondents. There were no variables save the two at the head of Table 296 which loaded on each of the four samples above the $\pm .2$ level. As expected by the nature of the Study of Values test, other loadings of substance appeared for most of the values of the instrument and were in accordance with expectations. The fact that they ald not load on each sample, however, was puzzling, although a total of four Values loaded on each of the samples but they were not the same value scales in each case.

Foints of note included the fact that for the Academics, a negative loading for Economic Values was assoclated with a large loading for Introversion whereas for the Nonconformists a lower loading for Economic Values was associated with Tendermindedness, Emotionality and membership of a lower Social Class.

In general, the factor was not clearly defined save for the two Values which were common to all of the samples.

## Factor 7 Conscientiousness.

For the Academics, the direction of loadings was changed to permit a greater clarification of interpretation. only on Variable 26 (Conscientiousness 16 P.F. Questionnaire) were there loadings which extended across the four samples The only other variable which extended across three samples was that of imotionality which associated Conscientiousness with Stability for the

Vocationalists and with Emotional behaviour for both the Academics and Collegiates. Thus, in theso latter groups, those students who consistently worked hard were also prone to worry and to display anxiety to a substantial degrec. Furthermore, in the case of the Academics, they gained lower marks for the Composite Academic Score and had attended less selective Secondary Schools. These loadings were of importance since they appeared to indicate a sub-group of the Academics who whilst working hard for most of the time were not succeeding very well in thair studies in some respects. It would appear in this case that aspirations and effort did not match their ability to cope with particular requirements of the Collego courses.

Finally of note was the fact that for the Honconformist group, high scores for Conscientiousness Were associated with Toughnindedness ( 16 P.F. Questionnaire) positive attitudes to Authority and Discipline and Education as a Main subject but negative attitudes towards Main Subject 1. They did, howover, have the only loading for Achiavement Motivation and this was positive in direction. Tabular dotails are given on page 630.

## Factor 8 Social Values.

The percentage variance accounted for by this factor for the Nonconformists was nearly double that of the Collegiates making it the second most important factor in terms of extracted variance for this group. With the exception of the loadings for Social Values which formed the basis of the factor matching procedure no other
variable had loadings across each of the four samples. Also, two of the three variables which had loadings on three of the samples were measures of Values and since these were not truly independent scores because of the nature of the Study of Values their importance was somewhat reduced.

The main feature of note for the single variable which extended across three samples was that high Social Values was positively associated with Tendermindedness ( 16 P.F. Questionnaire) in each case. Only the Academics failed to have a loading above + . 2. Achievement Motivation loaded negatively for both the Vocationalists and the Nonconformists but for these same samples, Summation of Scores for G.C.E. subjects had positive loadings. This pattern was particularly marked for the Nonconformists.

The Collegiates, whom one would have expected to have had substantial loadings for Extraversion (16 P.F. Cuestionnaire) on this factor falled to do so. The only real point of note was that for them, Total Teaching Fractice Grades were positively associated with Social Values whilst Radicalism (16 P.F. Cuestionnaire) loaded negatively.

The sample with associations between Social Values and ixtraversion was that of the Academics who also had negative loadings on two criteria of achievement and two Attitude scales. Thus, in this case, those Academics who were social, outgoing individuals were not
the ones who achieved the better gradings for academic work nor were they amenable to College-based discipline or to their Second Choice of Main Subject.

## Factor 9 Aesthetic Values

Only two samples were represented on this factor. The pattern of loadings was of limited value because the samples had common loadings on one variable only, namely that of Aesthetic Values. For the Vocationalists, high scores for Aesthetic Values were associated with a negative attitude to College-based Atithority and Discipline and to Kain Subject 2, and positively with Emotionality and better grades for Fractical Teaching.

For the Nonconformists, high Aesthetic Values were associated with Age, Introversion, negative attitudes to Education as a College subject and to better marks for Kain Subject 1.

A range of other loadings for the Study of Values were also present and were in accordance with expectations.

## Factor 10 Extraversion

For the Vocationalists, high scores for Extraversion (16 P.F. Questionnaire) were associated with Radicalism and Political Values, whilst the extraverted Collegiates displayed Political Values but from a more conservative rather than a radical standpoint. Bearing in mind their
philosophy of a love of 'social and extra-curricular activity' the above is perhaps not surprisins. Furthermore, whereas the extraverted Vocationalists had poorer G.C.E. results (in terms of a sumation of points) and were emotional and anxious, the Collegiates in addition to having a predictable range of other loadings for scales from the Study of Values, also had positive attitudes to their first choice of Main Subject and for practical teaching. In the caso of the Vocationalists it would appear that their radical, outgoing, sociable but tense nature had operated against their obtaining G.C.E. passes to somo degree.

The Remainine Factors.
The following four factors could not be matched to each other. Three samples are represented, the omission being the Vocationalists. Two of the non-matched factors belonged to the Academics. Each of the four factors is presented below with a brief coment.

Table 30 The residual non-matched factors.
a) Group

Academics Variable
number

| 14 | Theoretical Values (Study of Values) | 885 |
| :---: | :---: | :---: |
| 19 | Religious Values (Study of Values) | -439 |
| 4 | Achievement Motivation (Lynn) | 472 |
| 10 | Total Marks for Main Subject 2 | 471 |

In the above table, Theoretical Values is positively associated with Achievement Motivation and Total Marks for Nain Subject 2. On the basis of the theoretical nature of many College courses one would expect this to be the case.
Tablo 3

## b) Group

 Academics| Variable | nescription of Variable | Loading |
| :---: | :---: | :---: |
| Number | Radicalism (16 P.F. Cuestionnaire) | 715 |
| 25 | Aesthetic Values (Study of Values) | 467 |
| 16 | Attitude Scale - Authority \& Discipline | 353 |
| 8 | Type(s) of Secondary School(s) Attended | 353 |
| 2 | Intelligence (A.H.5) | -353 |
| 21 | Total Teaching Fractice Grades | 243 |
|  |  | Percentage Variance |

For the Academics, Radicalism and Aesthetic Values were positively associated, High scores for this second-order personality factor were associated with positive attitudes, attendance at more selective Secondary Schools, success in practical teaching and in the G.C.E. examinations in terms of the number of passes obtained. Such persons however gained low scores on the A. $\mathrm{H}, 5$ Intelligence Scale.

Table 32

| $\frac{\text { Group }}{\text { Collegiates } \quad \text { Factor ritlo. }}$ Achievement rotivation. |  |  |
| :---: | :---: | :---: |
| Variable Number | Descrintion of Variable | Loading |
| 4 | Achlevement Motivation (Lymn) | 708 |
| 3 | Sumation of G.C.s. ' $D$ ' and 'A' level | -401 |
| 13 | Attitude Scale - Education | 390 |
| 7 | Total Teaching Eractice Grades | 374 |
| 5 | Total Marks for Education | 272 |
| 22 | Emotionality (16 P.F. Cuestionnaire) | 253 |
|  | Fercentage Variance | 4.945 |

Surprisingly those Collegiates who displayed a high level of Achievement Motivation gained fewer G.C.E. passes at ${ }^{\prime} 0^{\prime}$ and 'A' levels. However, they held positive attitudes towards Education as a subject, gained higher grades for practical teaching and Education and were stables. In view of the work load and course requitements of many G.C.E. courses, the negative looding for variable number three above in relation to the loading for varlable number four was unexpected.

| Table 33 <br> d) Group |  |  |
| :---: | :---: | :---: |
|  |  |  |
| Variable |  |  |
| 2 | Type(s) of Secondary School(s) | 861 |
| 24 | Tendermindedness (16 P.F. Cuestionnaire)-385 |  |
| 23 | Extraversion (16 P.F. Questionnaire) | 350 |
| 27 | Social Class | 341 |
| 22 | Emotionality (16 P.F. Questionnaire) | -331 |
| 18 | Political Values (Study of Values) | 320 |
| 1 | Ase | 262 |
| Porcentage Varlance |  | 6.205 |

This factor is of Ereat interest since it clearly indicates that the Nonconformists who went to the nore selective Secondary Schools were Toughminded, extraverted and stable. One could hypothesise that in their case they had to fight against the conservative nature of our more selective Secondary Schools and in doing so needed to display the above qualities.

Of note also was the fact that they tended to come from a higher Social Class and thus tho loadings on the personality factors may also be a reflection of the struggle botween their nonconformity 1m a conformist enviroment. From the loading of Age, they were also older than those who had attended the less selective secondary institutions.

SUMARY
The attempt at matching factors across four
samples was fairly successful in terms of comion high loadings on at least one variable if not more for eight of the ten factors extracted for each group.

However, the picture revealed is not one of great conceptual clarity and does not do much to further this aspect of the investigation. It was, therefore, decided to approach the problem from a different point of view. The writer was interested in ascertaining just how the four groups differed from each other in terms of the 27 variables which formed a main part of the investigation. It was decided, therefore, to perform an analysis which would utilise a multiple stepwise discriminant function in outiining the patterns of variables which best discriminated between pairs of groups and (if possible) the four groups in total.

## The Stepwise Discriminant Function.

Discriminatory analysis is employed when groups of persons are defined a priorit and when the purpose of the analysis 18 to distinguish the groups from one another on the basis of their score profiles. From a mathematical point of view there is no limit to the types of variables that can be employed.

In the present investigation there are nore than two groups. Thus, more than one lincar discriminant function will be needed. For this purpose the multiple discriminant function has been employed.

Nunnally (1967) p. 393 indicates.

> "The first discriminant function dorived is that linear combination of the variables which maximizes the ratio of the betweenmeans to the within-groups variance. Next a second discriminant function is derived which serves as the second-best explainer of variance. In any problem, it is possible to obtain as many discriminant functions as variables or one less than the mumber of groups, whichever is less. Usually there are more variables than groups, in which case the possible mumer of discriminant functions equals the mumer of groups minus one. This leads to a family of linear discriminant functions".

After the weights are obtained, each person receives a score on each discriminant function. The discriminant functions are computed so that the scores on all functions are uncorrelated with one another (orthogonal). For example, the correlation between in and Y2 over all persons in all groups combined would bo zero. As liunnally (1967) p. 394 points out:

[^4]scores within a particular eroup. A sufficient condition for any two discrimination functions to be orthogonal is the sum of cross products of their weights to equal zero. Thus in the system of equations above, the following would hold for the weights on Y1 and Y2:
$$
a_{1} b_{1}+a_{2} b_{2}+\cdots \ldots \ldots+a_{1 c} b_{1 c}=0
$$

The degree of mathematical sophistication required to understand the procedures involved is high and the multiple discriminant function is not a commonly used procedure. Because of this, the ilterature avallable to the non-specialist is scarce. Rulon (1951) was an early worker in the field and details of the computing procedures and a large-scale worked-out example are given by Tledman, Eryen, and Rulon (1952). Andorson (1958) has published an extensive mathenatical treatment of the function and Naxwell (1961) has given a clear account of the computational procedures involved and has illustrated the use of discriminatory analysis with dichotomous variables. Thomdike and Hagan (1959) have also show how it may be used on a major problem.

## The Major computational steps are as follows:

1. 
2. 
3. Instead, what is analysed is a special table consisting of sums of squared deviates within groups.
4. The first set of principal-axes loadings obtained from this table is the set of weights required to
form the first discriminant function Y1. For each varlable, the proper woight is its loading on the factor.
5. 
6. 
7. 
8. 

The second principal-axes factor supplies the weights for the second discriminant function and so on.

As Numally (1967) p. 394 indicates.
"Analogous to methods for obtaining factor scores for people in factor analysis, scores on the discriminant functions are obtained for all persons. The method of analysis ensures that these sets of scores will be mutually uncorrelated over all persons in all groupsn.

In factor analysis the averaged squared loading on a factor indicates the percentage of variance explained by that factor. In multiplediscriminant analysis the average squared weight on a factor indicates the percentage of total variance of all scores explainable by that discriminant.

Also, as in factor analysis, the percentage of variance explained by each discriminant derived in turn tends to fall off rapidiy after the first one. Thus the first discriminant tends to do a much better job of discriminating the groups than does any subsequent discriminant and in most cases, vory little variance is explained by discriminants beyond, the second or third.

## Evaluation of Discriminatory Analysis.

Nunnally (1967) p. 399 offers the following summary:

1. In spite of the differences in the purposes of factor analysis and discriminatory analysis, mathematically they are closely related.
2. 

The multiple discriminant function is based on a Iinear combination of variables "so that in a sense, a linear discriminant function is a factor". (p.399)
3. Linear discriminant functions are obtained by an application of principal-axes factoring to a special matrix concerning indices of discrimination among and within groups. 4. Linear discrininant functions aro special types of factors which serve to discriminate among a priori groups of subjects. "It would be the sheerest of accidents if scores on any such discriminant function corresponded perfectly to scores on any factor obtained from analyzing correlations among variables". (p.399)
5. Discriminatory analysis is primarily of use in understanding the major differences between groups.

STMMARX.
The discriminant function is a wholistic device which tells one how to combine (1.e. by what weights to add) a set of variables to give a total which will show the maximu difference or discriminating power between two or more groups.

In the present investigation, the four groups
formed by the primary philosophical orientations were compared with each other. The variables were the 27 chosen to form the main set of data for detailed analysis. The variables ara listed below:

| Variable number. | Description. |
| :---: | :---: |
| 1. | Age. |
| 2. | Type(s) of Secondary School(s) Attended. |
| 3. | Summation of points for G.C.E. $' O$ ' and 'A' levels. |
| 4. | Achievement lotivation (Lymn). |
| 5. | Total Marks for Education. |
| 6. | Composite Academic Score. |
| 7. | Total Grades $\mathrm{For} \mathrm{Teaching} \mathrm{Practice}$. |
| 8. | Attitude Scale - Authority and Discipline. |
| 9. | Total Marks for Main Subject 1. |
| 10. | Total Marks for Main Subject 2. |
| 11. | Attitude Scale - Main Subject 1. |
| 12. | Attitude Scale - Yain Subject 2. |
| 13. | Attitude Scalo - Education. |
| 14. | Theoretical Values - Study of Values. |
| 15. | Economic Values - Study of Values. |
| 16. | Aesthotic Values - Study of Values. |
| 17. | Social Values - Study of Vaiues. |
| 18. | Polltical Values - Study of Values. |
| 19. | Religious Values - Study of Values. |
| 20. | Critical Thinking Ability - Watson Glaser. |
| 21. | Intelligence (A.H.5) - Heim. |
| 22. | Emotionality (16 P.F.) Cattoll. |
| 23. | Extraversion (16 P.F.) Cattell. |
| 24. | Tendermindedness (16 P.F.) Cattell. |
| 25. | Radicallism ( 16 P.F.) Cattell. |
| 26. | Conscientiousness (16 P.F.) Cattell. |
| 27. | Social Class. |

Details of the actual functions and the related variables for the various pairings of groups (e.g. Vocationalists $v$

Academics) cen be found in the Appendix pp 686-692 inc. A sumnary of the relevant details is given overleaf.

Table. The stepwise discriminant function between Vocationalists and Academics

1) Vocationalists $\vee$ Academics.

| Var. H2. | Description | - IEATS |  | Comment |
| :---: | :---: | :---: | :---: | :---: |
| 6 | Composite Acad. Score | 14.13 | 18.39 | Acads, higher |
| 16 | Aesthetic Values - Study | 25.39 | 30:11 | Acads. Higher |
| 22 | Emotionality - 16 P.F. | 27.49 | 25.39 | Vocs, higher |
| 4 | Achiovement Motivation | 7.25 | 8.36 | Acads, higher |
| 24 | (Lynn). <br> Tendermindedness 16 P.F. (Cattell) | 10.06 | 11.75 | Acads. Migher |

As indicated by the sunction, the Academics had a higher Composite Academic Score, had higher aesthetic values, wero more stable and tenderminded and had a higher level of achievement motivation than the vocationalists.

Table 35 The stepwise discriminant function betwoen Vocationalists and Colleriazes

## 2) Vocationalists $v$ Collegiates.

| Var. |  | HEATS |  | Comment |
| :---: | :---: | :---: | :---: | :---: |
| No. | Descrintion | Vocs. | Acads. |  |
| 1 | Age | 23.00 | 21.21 | Vocs. higher |
| 5 | Total Karks for Education | 7.44 | 6.46 | Vocs, higher |
| 4 | Achievement Motivation <br> (Lymn) | -7.25 | 6.53 | Vocs. higher |
| 15 | Economic Values - Study of Values. | 32.97 | 31.28 | Vocs, higher |

The Vocationalists ware not only oldor than the Collegiates but also gained higher total marks for the subject of Education, Achievement Motivation and economic values. As befits their philosophical orientation, theso results make a good deal of sense.

Table 35
The stepvise discriminant function between Vocationalists and Monconiormists.
3) Vocationalists $v$ Nonconformists

| Var. |  | Means |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 110. | Descrintion | Vocs. | Colls. | Comment |
| 8 | Attitude Scale - Authority |  |  |  |
| 16 | Q disciplins. - study | 48.42 | 42. | Vocs. hichor |
|  | of Values | 25.39 | 32.85 | Noncs. higher |
| 26 | Conscientiousness - 16 P.F |  |  |  |
|  | (Cattell) | 12.13 | 8.89 | Vocs. hieher |
| 25 | Radicalism - 16 P.F. <br> (Cattel1) | 11.79 | 13.35 | Noncs. hither |

The Vocationalists were more pro-College in attitude towaids College-based authority and discipline and were more conscientious than the Nonconformists This latter group were more aesthetically inclined and more radical than the Collegiates.

Tablo 37 The stenwise discriminant function between Academics and Collegiates.

## 4) Academics v Collegiates

| $\begin{aligned} & \mathrm{Var} \\ & \mathrm{No} \\ & \hline \end{aligned}$ | Descrintion | Means |  | Comment |
| :---: | :---: | :---: | :---: | :---: |
| 6 | Composite Academic Scoro | 18.39 | 12.32 | Acads. higher |
| 1 | Age | 23.98 | 21.21 | Acads. higher |
| 4 | Achievement Motivation (Lymn) | 8.36 | 6.53 | Acads. hlgher |
| 22 | Enotionality 16 P.F. | 25.39 | 27.71 | Colls. higher |
| 26 | Aesthetic Values - Study of Values. | 30.11 | 28.11 | Acads. higher |
| 9 | Total Harks for Main Subject 1. | 8.7 | 6.61 | Acads. higher |
| 22 | Intelligence - A.H. 5 (Heim) | 37.62 | 35.08 | Acads. hirhor |

The seven variables which formed the function
indicated that the Academics did better academically than the Collegiates. They were also more motivated towards a high degree of personal achiovement, were more stable, older and intelligent and held higher acsthetic values. Such Pindines are in accordance with their personal philosophical orientation.

| Acaderics and fronconformists. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 5) Academics $v$ Nonconformists, |  |  |  |  |
| $\begin{gathered} \mathrm{Var} \\ \mathrm{NaO} \\ \hline \end{gathered}$ | Description | $\begin{aligned} & \text { Acads. } \\ & \text { acad } \end{aligned}$ | Honc, | Corment |
|  | Achievement Motivation <br> (Lymn) | 8.36 | 6.33 | Acads, higher |
| 26 | Composite Acaderic Score Constiontioumness 16 P.F. (Catteii) | $\begin{aligned} & 18.39 \\ & 12.51 \end{aligned}$ | $\begin{array}{r} 12.29 \\ 8.89 \end{array}$ | Noncs. higher Acads. higher |
| 11 | Attitude Scale - Hain | 63.31 | 57.10 | Acads, higher |
|  | Social veluss - Study of Values. | 40.95 | 40.46 | Acads. higher |
|  | Attitude Scale - Authority \& Discipline. | 47.16 | 42.54 | Acads, higher |
| 23 | $\begin{aligned} & \text { Extraversion } 16 \mathrm{P}, \mathrm{~F}^{2} \\ & \text { (Cattei1) } \end{aligned}$ | 28.29 | 30.56 | Noncs. higher |

The Academics differed from the Nonconformists in being better motivated towards personal achievement and in being more conscientious, they achieved a higher composite academic score. Their attitudes towards Main Subject 1 and College-based authority and discipline were nore positive and although scoring marginally higher on social values, nevertheless they were more introverted than the Nonconformists.

Table 39 The stepwise discriminant function betwoen Collegiates and fonconiormists
6) Colleglatos $v$ Nonconformists.

| $\begin{aligned} & \text { Var. } \\ & \mathrm{No} \end{aligned}$ | Description | $\begin{aligned} & \text { Hea } \\ & \text { colls } \end{aligned}$ | Nonc. | Comment |
| :---: | :---: | :---: | :---: | :---: |
| - 8 | Attitude Scalo - Authority |  |  |  |
| 25 | 16 F | 47.4 | 42.54 13.35 | Colls, higher |
|  | (Cattoil) |  |  |  |
| 17 | Social Values - study of | 44.09 | 40.46 | her |
| 11 | Attitude Scale - Nain Sub. | 2.70 | 57.10 | Colls, higher |
| 16 | Aesthetic Values - Study of Values | $28.11$ | 32.85 | Noncs. higher |

s.x The Collegiates displayed a more positive attitude to College-based authority and discipline and Hain Subject 1 than the Honconformists. In their turn, this latter group were more radical and held stronger aesthetic but not social values than the Collegiates.

## Common elements.

Whether or not to consider possible common 'elements' or variables included in the discriminant function analysis is accepted practice is debatable. However, from a pragmatic point of view and one desiened to clicit further information the above was attempted the details are given in Table 40 on the next page.



The general trends of the above table indicate that:
a. Achievement motivation was found in four separate cells and indicated the superiority of the Academics over the other three groups.
b. Similarly, the Nonconformists had a more negative attitude to College-based authority and discipline than each of the three remaining groups.
c. Other variables whilst not boing common to each of the other functions were found in more than one cell. Thus, the Vocationalists yere lower than either the Academics and the Nonconformists for Aesthetic Values. Other examples may be readily seen from an inspection of the above table which takes into account similarities in both ROWS and COLUNS.

BIOGRAPHICAL DATA.
Through the medium of a fairly extensive survey of blographical data it was hoped to elicit information concerning home background, religious and political preferences and other areas of importance which would prove to be of use. The following analysis is of the data which indicates the extent to which the various groups were similar or different on the forty-two discrete items contained in the Blographical Data. The tabulated data is given in the Appendix pp. 694-715 incwhilst detailed sumnaries of such data are given below. Item No. 1 Age.

The age of most students at intake was 18-19 years depending upon when they obtained their 'A' levels and the date of their birthday. The numbers of students in each of the four primary philosophies who were older than 22 years of age was small. The relevant figures for both the Men and the Vomen were as follows.

|  | $\frac{\text { Voc. }}{}$ | $\frac{\text { Acad. }}{}$ | $\frac{\text { Coll. }}{8(23 \%)}$ |
| :---: | :---: | :---: | :---: |

Of note was the comparatively large number of Vocationallsts over 23 when compared with the other groups and that as far as the Nen were concerned those over 35 years of age strongly tended to be Vocationalists or Academics. Item No. 2 Marital Status

The number of Men and Women who were married was relatively large when one bears in mind that in the main Students arrived at College straight from school. A check
on their ages indicated that many of them had married prior to coming to College. Only a very small minority actually married whilst at College. The regulations concerning financial grants were strictly adhered to by local authorities and a student who married whilst at College received no extra monies for this further responsibility. The only point of note in Table 308 was the very small percentage of Collegiate Men and Vomen who were married, thus living up to their philosophy of having a carefree and enjoyable period of life whilst at College. Perusal of Table 308 concerning the age of the Collegiates indicated that they had a larger percentage of both Men and Yomen who were under 23 years of age than any other group. This finding may in part be indicative of the school-college-school cycle which militates against early marriage.

Item No. 3 College Teaching Speciallzation (Infant - Junior Secondary).

As was the case in many Colleges of Education and the great majority of Primary Schools, the number of Nen who taught Infants was nil. In the case of each group the number of Men who were following a Secondary course was in excess of their fenale counterparts. The women had correspondingly higher percentages located in the Primary sector. Tabulated data can be found on page 694. Group differences were not large. A larger percentage of both Vocational and Nonconformist Men had opted for Primary courses than had the Men in the Academic and Collegiate groups. However, in every group the Secondary Men outnumbered those intending to teach in

Primary Schools. For the Women, the largest percentages occupied the Primary category but this pattern was least marked for the Academics, Both the Vocationalist and Academic vomen had larger percentagos of people engaged In Infant Fork than in Secondary training but this trend was reversed for the Collegiates and the Nonconformists. $\frac{\text { Iten No. } 4 \text { Secondary School Attended - Co-educationalt }}{\text { Slngle sex. }}$

The combined samples of Men and Women vere not much different from each other on this variable except that twenty per cent more Academics had attended single sex schools than had attended co-educational ones. The samples of Men indicated very similar percentages had attended either single-sex or co-educational schools for the Academics and the Collegiates. The Vocationalists and the Nonconformists both had larger percentages attending co-educational schools than single-sex establishments.

For the Vomen, in each of the four orientations more had attended singlemsex schools than those catering for both sexes. The Colleglates however had the smallest difference of only 6\%. Thus, the only group of Women who approached a 50/50 split on this variable were those who had indicated their love of social contact and activity. This held for the Men also but the Academic Men also had a 50/50 distribution. Tabular data is given on page 695. Item No, 5 Size of Secondary School Attended

If we regard 'small' secondary schools to have fewer than 600 pupils and 'large' ones to have numbers in excess of this figure, the following results emerge. Nearly twice as many Vocationalists attended small secondary schools
as attended larger ones. This may account in part for their choice of primary philosophical orientation. The position was similar for the Nonconformists but was not so marked. For the two remaining samples the split approximated to 50\% in each case. Details appear in Table 312 page 695. The samples of Men basically approached a 50/50 division with the Academics having $10 \%$ more members in smaller larger secondary schools. For the Women, in each case, save that of the Collegiates (who had a $50 / 50$ split) larger percentages had attended smaller schools. The case was particularly well marked for the Vocationalists and the Nonconformists. This latter group had indicated repeatedly in College the shortcomings associated with its growth in size and complexity.
Item No. 6 Possession of House Position (Table 313 page 695)
Over a half of each sample except the Collegiate Men and Women and the Nonconformist Men had not held House positions. For practical purposes, the numbers in these groups approximated to $50 \%$. The two further points of note were that an overwhelming percentage of Nonconformist Vomen ( $80 \%$ ) had not held a House position and yet they had the second largest percentage of Vomen holding four or more House positions. Also, the largest percentage of Women holding four or more House positions belonged to the Collegiates. Thus, here was an indication that those Women who were primarily interested in mixing socially and indulging in a range of socially-based extracurricular activities showed that they had been active in this area whilst at school. A visual check of the College records verified the accuracy of these responses.

Item No. 7 Were you a Prefect? (Table 314 page 696)
In each of the samples of Men and Women except that of the Academic Women the percentages of students who had been Prefects far outwelghed those that had not. In the case of the Academic Vomen, the division was exactly 50/50. Mlthough the trend was only slight, there was a larger percentage of Nonconformists and Collegiates who had been Prefects than of the Academics and Vocationalists. For the samples of Men colly, placing the percentages in size order eave the following ranking of those who had been a Prefect Vocational/Academics ( $75 \%$ in each caso), Nonconformists ( $73 \%$ ) and Collegiates ( $68 \%$ ). For the Women, the ranking was Nonconformists ( $80 \%$ ), Collegiates ( $75 \%$ ), Vocationalists ( $61 \%$ ) and Academics (50\%).

Item No. 8 Number of School Societies to which you belonged.
In each case, a majority of the students had been a member of one or more societies in school, although $45 \%$ of Nonconformist Men recorded a score of 0 . Of note was the fact that the percentage of Nonconformist Nomen tho had been a member of three societies was double that of the Vocational Women. Startling differences between the groups were absent and the various percentages did not indicate any marked pattern in favour of one group deviating from the general nomy. The data are given in Table 315 page 696. Item No. 9 Membership of School Team(s) (Table 316 page 697) With the exception of the Academic Women, every other group had over $50 \%$ of their members recording membership of one or more school teams. However, the percentages of Vomen Vocationalists and Nonconformists who had not been members of teams was $46 \%$ and $45 \%$ with a lower $36 \%$ being
recorded by the Collegiate Women. This latter result was yet a further indication of the love of extra-curricular activity by this group of Fomen students. Radical differences between the groups of Men were absent. A similar finding applied to the samples when the sub-samples of Men and Momen were combined.

Iten No. 10 At what age did you first think of becoming a teacher?

A clear trend indicated that the Women in each sample had thought of becoming teachers at an earlier age than the Nen. For the Men, the percentages who had not thought about such a career until after their 17th birthday approximated to $50 \%$ or more of each of the four samples. There was a tendency for the combined sample of Collegiates to have made the decision to enter teaching somewhat earller than the other groups, although they were followed fairly closely by the Vocationalists. Details appear in Table 317 p. 697. Item No. 11 At what age did you definitely decide to becone a teacher? (Table 327 page 702)
Differing percentages of the four samples formed by combining the sexes indicated that they had not yot fully decided to enter teaching. The largest percentage was that of the Nonconformists (35\%) with the Collegiates recording the lowest (10\%) followed by the Vocationalists and Academics. Subsequent personal commuication by the writer indicated that a number of the Nonconformists had in fact not entered teaching at all although the current economic recession was making some of them think again.

The table also indicated that whilst in each sample nore Women than Men had not yet fully decide to enter teaching the position was markedly reversed for all
samples from the point of view of those who had decided to become teachers after 17 years of age. Iten No. $12 \frac{\text { here do you intend to teach when you qualify }}{\text { as a teacher? (Table 328 nace } 702 \text { ) }}$

Both Nonconformist Men and Women had percentages in the 'Undecided' category which were considerably in excess of the other three primary philosophical orientations. The other three groups were not markedly dissimilar from each other. With the exception of the Nonconformists, the Women in each group had larger percentages indicating an intention of working in their own home tow than did the Men. The percentages of Nonconformist Women who intended to teach away from their own home tow or were undecided steadily increased in size as the distance from home increased. This tendency was followed in the main by the Nonconformist Men whereas for the combined samples of Men and Yomen Vocationallsts, the trend was clearly the reverse.

The following figures indicate that in each case, the percentage of Women who intended to teach near to their homes (i.e. at home or within 25 miles of it) was in excess of that recorded by the Men. In the case of the Nonconformists however the difference was only marginal.

|  | Voc. | Acad. | $\frac{\text { Col1. }}{4}$ | $\frac{\text { Noncon. }}{24}$ |
| :---: | :---: | :---: | :---: | :---: |
| Men | 49 | 41 | 53 | 24 |
| Women | 69 | 58 | 53 |  |

By combining the two sexes the following data resulted. Sixty percent of the Vocationalists intended to teach in their home tow or within 25 miles of it wilst the figure for both the Academics and Collegiates was $48 \%$ and $24 \%$ for the Nonconformists. The low percentage of the
lionconformists served to indicate a major differenco in point of view from the other three groups even bearing in mind their indecision as where to teach.

Item No. 13 Did you formerly apply for a University place?
The overall conclusion to be drawn from Table 325
on page 701 and one which was verified from a scrutiny of College records was that the majority of both Men and Komen in each sample did not apply for a University place. With the exception of the Academic lon, the percentages of Women who did not apply for a university place were higher than for the iten in the same sample.

Item No. 14 Has Alsager your first-choice of College?
Whereas for over a half of each somple of Hen, this College was their first choice, for the Vomen the reverse was the case and in the case of the Collegiate Women reached a low of $20 \%$. A larger percentage of Academic Men and to a lessor extent Collegiate Xen made Alsager their first choice than did efther of the other two groups of Men, For the Women, a larger percentage of the Academics and the Nonconformists had named Alsager as their first choice of college than either of the two romaining groups. Examination of the application forms indicated that in the case of all of the students that for those whom Alsager was not the first choice it tended to be the second or third choice. Many students did not complete this question fully, and no reasonable reply was found why this should be so save a preoccupation that it might somehow affect their subsequent careers. In the case of the Nonconformists, nearly all had applied to several Colleges prior to being accepted by Alsager. (Table 326 p. 701 ).

Item No, $15 \frac{\text { How far away from College is your parents }}{\text { permanent residence? }}$
As Table 322 on page 700 indicated, for the Men Vocationalists, Academics and Nonconformists fewer of them had their permanent home nearer to College than did the Women in these groups. However, at the other end of the scale more Women Vocationalists, Collegiates and Nonconformists lived further than 75 miles from College. Group differences were few and indicated that more Academics lived within 25 miles of the College than did the other three groups. Very few Nonconformists of either sex lived within 25 miles of the College and nearly half of the total group of Nonconformists lived within 50 miles of College. The finding for the Nonconformists was perhaps an indication of a wish to be far away from home although appilication data indicated that many of the sample in fact applied to a number of Colleges prior to being accepted by Alsager.

Item No. 16 Type of School attended by Father
As can be seen from Table 323 on page 700 the majority of the students had fathers who had attended Ilementary School. The percentages did not differentiate the primary philosophical orientations to any meaningful extent.

Item No. 17 Type of School attended by Mother. (Table 324 D. 700 )
Following upon the previous variable concerned with the age at which the students' mothers had left school the data for the above variable were completely in character. Group differences were marginal as were differences between the sexes. By far the larger.
percentages of mothers of students in the samples had attended some form of Elementary School.

Item No, 18 Age when father left school. (Table 320 page 699)
No fewer than $60 \%$ of each and every sample had fathers who had left school at the age of 14 years. Such a figure was to be expected in view of the type of school which many of these people had attended. By the time they were 15 years of age the percentage of fathers (of the Men students) who had left school averaged $85 \%$ over the four groups whilst for the Women the flgure was 80\%. Group differences were absent except to indicate that a higher percentage of the fathers of Nonconformists remained at school longer than fathers whose children were in the other three groups:
Iten №. 19 Age when Mother lept school. (Table 321 p.699)
The figures closely approximated those of the fathers. By the time they reached their fifteenth birthday $60 \%$ and over of the Mothers had left school. This figute rose to $76 \%$ after the attainment of the 16 th birthday. Differences between the sexes indicated that for the 14 years of age category the Men students (save the Nonconformists) had smaller percentages than the Women students.

Differences between the groups were only minimal. The main conclusion to be dram was that with the exception of the Academic Men (with a level of $47 \%$ ) over $50 \%$ of the mothers of the students in each sample had left school before they were 15 years of age. These percentages reached their highest level in the Vocationalist Women
with $70 \%$ of the mothers having left school at the age of 14 years.

Item No. 20 Voting Preference of Father.
In the case of each of the samples listed in Table 318 on page 698 the bulk of the percentages were accounted for by votes for efther the Labour or the Conservative party, of note was the fact that save for the Collegiates (both Men and Vomen) and the Nonconformist Men, the majority of the percentages were recorded for the Conservatives. In some cases however, these percentages were not a great deal larger than those recorded for the Labour Party. Thus, although the majority of fathers had attended Elementary School they still voted for the Conservative Party. \& note of caution must be injected here however since the results of Table 318 could not be verified beyond a test re-test situation (as was done with a Pilot sample). Also, how much social desirability has entered into the answering of this question cannot be valldiy assessed. However, accepting the results at their face value, it was interesting to note the considerable percentages of each orientation who had recorded that their fathers (most of whom had attended Elementary School) had voted for the Conservative Party. Item No. 21 Voting Preference of Mother

$$
\text { The main difference between Table } 319 \text { on page } 698
$$

and that for the Voting Preference of Father was the size of the Liberal vote which was much larger in the present case. As in the case of the Fathers' vote, more of the Mothers voted Conservative than Labour except those of

The Vocational Men where a small added percentage vas in favour of the Labour vote.

Differences between the sexes indicated that in the case of the Labour vote each group of hen excopt that of the Nonconformists had a larger percentage than the romen students in the same voting category. For the Conservative the opposite state of affalrs was noted for the groups. The Nonconformist Men had only $10 \%$ of their 'Kothers' votes recorded in the Labour category compared with $20-22 \%$ in the other three groups. The Nonconiormist Women had the largest percentage of votes of the four croups of Women in this category. The Conservative category for the Vocational Ven was 11\% lower than the next nearest group of Men. The same picture emerged For the l:onconformist Women.

The differences between the eroups formed by the primary philosophical orientations were not great. Different percentages were seen but in no case were they radically different from the other groups. Item Io. 22 Social Class origin of Fathor. (Table 329 page 703).

From the point of view of the :Vorkins Class percentages presented in Table 329 there were no radical deviations to be noted. However, there was a difference of $17 \%$ between the largest and the smallest percentages (i.e. Honconformist and Collegiate Women respectively). For the Men in the working Class dimension of the table the percentages were very similar.

On the two remaining social class dimensions the table indicated that in each case the Hen had percentages which were larger than those of the Women. The Vomen
had correspondingly larger percentages in the Upper Middle Class category.

Taking the table as a whole and with the sexes combined the differences between the various percentages for the four primary philosophical orientations were only marginal. A further point of note however was the fact that with 70\% of fatherrs/after completing Elementary school only (as indicated in Table 320 on page 699 of the Appendix) the implication was that many of the so-called 'lower middle class' fathers were among these Elementary school people. Thus, an indication is given here of either the crossing of class-barriers or that aspirationally and attitudinally their children regarded them as originating from the Lower Middle Class. Item Yo, 23 Social Class Origin of Mother (Table 330 p. 703).

In the Working Class category, the Collegiate Men had a percentage which was $12 \%$ lower than that of the next nearest sample (the Vocationalists). The remaining three samples of Men were not substantially different from each other. For the Women in the Working Class category the Nonconformists had the lowest percentage of the four groups (whereas the Nonconformist Men had the largest percentage in this category).

For the Lower Middle Class category the point of note vas the large percentage recorded by the Nonconformist Women. When the sexes were combined, the differences between the groups were not striking. The Collegiates had the smallest percentage located in the Working Class category whilst in the Upper Middle Class the Nonconformists
had a marginally lower percentage than the other three groups.

Item No. 24 The Number of Siblings in the Family
The first point of interest was that whereas approximately $20 \%$ of each group was composed of singletons, the figure for the Nonconformist Men was 31\%. This group also had the lowest percentage save that of the Nonconformist Women for having only one sibling in the family. Thas $59 \%$ of the Nonconformist Men were either only children or were members of a two-child family. (Table 331 page 704). This figure however from the point of view of having one sibling in the family could be matched by some of the remaining groups. The percentases for each group were as follows when the table was condensed to four entries.


By totalling the first two rows for each group the following percentages resulted. Vocationalists Academics Colleriates Nonconformists. Men Ko. rot. Men Wo. Tot. Men HiO. Lot. Men Wo. Tot
$\begin{array}{llllllllllll}55 & 57 & 57 & 73 & 72 & 72 & 56 & 70 & 64 & 59 & 45 & 54\end{array}$

As can be seen, the percentages ranged from a high of 73\% for the Academic Nen to a low of $45 \%$ of the Nonconformist Women, with all but this latter case being in excess of $50 \%$. The percentage for the Collegiate Women for this combination of two rows was $14 \%$ higher than that of the men. Group
differences indicated that more Academic hen came from smaller families than the other three groups whilst the same applied for both the Academic and Collegiato Women when compated with the other two groups.

The only finding of note from the point of viev of the category containing the percentage of students who had 2 siblings was the low percentage of the Academic Vomen. The Nonconformist Men whilst having tho largest percentage of singletons also had the largest percentage of students with three siblings or more. Although in the case of the Collegiate Men this was only marginal. Of especial note was the small percentage of Academic Men in this category. This contrasted with the $35 \%$ of Nonconformist Women who were in this category. Item No, 25 Type of Accommodation Occupled by Family

Marginally fewer Vocationalists of both sexes lived in terraced houses than nembers of the other three groups. The mubers of those living in semi-detached houses wero very similar except that the percentage of Collegiate Women in this category was $8 \%$ lower than any other group of women. Eleven per cent fewer Academic Vomen Iived in detached property than Homen in other groups. The data are given in Table 332 page 705. The differences botween the groups wero minimal on this variable. The orientations exhibited a high degree of uniformity with the great majority of each group occupying either semi-detached or detached property. Item No. 26 The Number of Relativos in the Teaching Profession The percentages of students who had no relatives

In the teaching profession extended from $69 \%$ for the Academic Men to $45 \%$ for the Nonconformist Women. A further six per cent of Academic Men had between 1 and 3 family members in the profession whilst the figure for each of the other groups of both Men and Yomen was between 3 and 4 times higher (i.e. 19\% - 27\%).

The percentages of students who had more than four relatives in teaching ranged from 17\% for Nonconformists Men to $30 \%$ for Monconformist Women with the median percentage being located at $24.5 \%$. Thus, whilst nearly $70 \%$ of the Academic Men had no relatives in the teaching profession, a quarter of them had more than four family members who were teachers. Table 333 page 705 gives details of the data. Item No. 27 The Number of Relatives in the Professions

Fewer than 50\% of each sample except the Academic Women (who had 51\%) had any family members in the professions. There were not many group comparisons of interest except that whereas 43\% of Academic Women had two or more family members in the professions, the figure for the Academic Men was a mere 3\%. The figures indicated that for each sample over 3 rds of each sample of Men had no relatives in the professions whilst the figures for the women varied from $49 \%$ for the Academic Women to a high level of $80 \%$ for the Nonconformist Women. The percentage figures for the groups on the criterion of 'two or more' family members in the professions was indicated by relatively higher figures for the Academic and Vocational Women and the Collegiate and Nonconformist Men. Details of the frequencies can be found in rable 334 on page 706.

Scores for this variable were gained by totalling a series of single points awarded for endorsing items on the following printed list: Sports Club, Theatre, Cinema, Library, Youth Club, Dance Hall, Concert Hall, Swiming Bath, Opera House, rrofessional Soccer or Rugby Club. Table 335 on page 707 indicated that only a minority of each group had 'poor' social facilities at home. Scores in excess of 6 points accounted for more than $78 \%$ in each group except the Academic Women who recorded 65\% in this category. The only real difference of note was that whereas only $9 s$ of the Academic Men had poor social facilities in their home dastrict the figure for the Academic Women was $35 \%$.

Iten No. 22 The Guality of Facilities for Home Study.
If we regard categories 1 and 2 of Table 336 on page 708 as representing necative viowpoints and 4 and 5 as indicating a positive degree of adequacy the points of note are as follows. Over $25 \%$ of the Nonconformist Men indicated inadequate home study facilities which contrasted with the $7 \%$ of the Collegiate Men and was 10\% higher than either of the two remaining eroups. For the Nonconformist Women a similar picture was found but with a low of $6 \%$ being recorded by the Vocationalist Women.

The percentages for the Moderate' category were fairly similar except that the percentage for the Vocational Women was $34 \%$ as opposed to the $15 \%$ for the Nonconformist Vomen. The percentages recorded in categories 4 and 5 were very similar over the four groups when combined to include both sexes. The only points of note were the relatively high percentage of the Academics and the lact when considered in terms of Men only, the Nonconformists had a score of less than $50 \%$ Thus, there were no
startiing differences between the groups but merely points of interest which encompassed the Nonconformists and to a lesser extent the Academics.

Item No. 30 Social Class Area in which Home is situated. In Table 337 on pase 708 it was noted that relatively fev Academic Men but a much higher percentage of Academic Women lived in a working class area. Wth this exception, the Men in each of the groups had larger percentages in the Vorking Class category than the Women.

Group differences in this first category showed a percentage for the Academic Men which was less than half that of each of the other three groups. For the Women, the outstanding feature was the $42 \%$ of the Academic Women.

The Lower Middle Class category revealed very few group or sex differences save a score of $50 \%$ for the Academic Men which contrasted with $12 \%$ for the Academic Women. In the final category (Upper Middle Class) the Nen in each case recorded lower scores than the Women. Group differences were negligible in this category. Iter No. 31 Strength of political oninions held. (Table 333 The Vocationalists (both Hen and Women) had the
lowest percentases of those holding no political opinions whilst the three remaining groups had percentages which were similar to each other (with the Academics recording the highest percentage). For the other categories the differences were not marked except that a far higher percentage (although in reality representing only 4 people) of Itenconformist Homen indicated that they held strons
political opinions. With the exception of the Nonconformists, the Men in each of the other groups had higher percentages In Categories 3 and 4 than tha Women in the samo groups. Item No. 32 Religious or other beliefs. (Table 339 page 709 There are several points of interest to be extracted from the table on page 709. With the exception of the Nonconformist group, the remaining semples each had approximately $50 \%$ of their members recorded as being Christians.

For the Men, the muber who were undecided as yet Erew steadily as one moved across the table from Vocational1sts to llonconformists. For the Homen the results on this category were mixed with the Academics recording a more $1 \%$ compared with the Collegiates $28 \%$. When the sexes were combined the lowest percentase in this category was that of the Academics (11\%) whilst that of the Nonconformists was $37 \%$. The difference between this category and that under the label of Agnostic was that whereas this latter Eroup rejected Christianity and the existence of God because they saw a lack of acceptable evidence, members of the former group (i.e. Undecided) had indicated that it Was upon specific and personal grounds of importance at this particular mosent in time that they were experiencing some degree of indecision. In other words, it was not a fundomental, logically thought-out approach (which tended to characterise the agnostic group) which placed these people in the 'Undecided' category but more of a series of personally-biased subjective opinions and views which might be changed in a relatively short period of time.

Tho Academic Women and Konconformist Men had the largest percentages of agnostics. In this latter case the difference in 3ize from the other groups was $17 \%$

The atheists tended to be minority groups with the highest percentage being the $17 \%$ of the fonconformist Nen. For all but the Acadenic Nomen there were fever or equal numbers of atheists than the samples recorded for each of the other three categories.

The main point to emerge from the table was the apparent rejection of Christianity by a larce majority of both the Nonconformist Men and Women in favour of agnosticiem in the case of the den which contrasted with the indecision of half of the Women. Item No. 33 Erequency of Church Attendence, (Table 340 Over a half of the Nonconformist Nen and just 710 ) under a half of the Nonconformist Women recorded that they never attend Church. The figures for the Vocationalist and Collegiate Men approximated $30-35 \%$ whilst all of the other samples except the Vocationalist Women had approxi--mately $20 \%$ of their numbers in this category. The Vocationalist Women had a very small percentage of nembers who never attended church.

Combinins columns 1 and 2 and 3 and 4 of Table 340 resulted in the following points being noted. The percentages of Yen in columns 1 and 2 ranged from 61 for the Vocationalists to 80 for the Nonconformists. For the Vomen they ranged from $35 \%$ for the Vocationalists to 75\% for the Nonconformists. The above results with tho data in colums 3 and 4 lead one to conclude that as far
as church attendance was concerned, more \#omen than Nen in each sample attended. Also of the groups themselves, the Vocationalists, Academics and Collegiates recorded sinilar percentages of 50\% or more whilst the Nonconformists indicated that only 20\% of the Men and 25\%, of the Somen attended Church on anything like a regular basis.

Iten Mo. 34 Religious Eenomination to which you bolonf if a Christian.

Approximately $45 \%$ of each of the lale samples composed of Vocationalists, Academics and Collegiates indicated that they were not Christians. For the Nonconformist Men this figure escalated to $97 \%$. For the Wonen the ileures ranged from $2 \%$ for the Vocationalist Women to $50 \%$ of the Nonconformists.

The rest of the results indicated that the Church of England absorbed the bulk of the percentages followed by the Methodists and Roman Catholics. The $3 \%$ of the Honconformist Men who had indicated that they were Christians were Roman Catholics. Details appear in Table 341 page 710. Item No. 35. Strenath of Religious Convictions.

The 'Moderate' category contained more percentages than any other for the Vocationalists, Academics and Collegiates whilst for the lionconformists the largest percentages were in category number one although an ocqual percentage for the Nonconformist Yomen was recorded in the Wederate category.

Dy combining categories 1 and 2 as one unit and 3 and 4 for a second division we find that the former unit
(categories $1+2$ ) contained more than $50 \%$ of each sample of Men except the Vocationalists for the Homen, the percentages were below $50 \%$ except for the Nonconformist Homen, Details appear in Table 342 page 711. By combining the sexes the total percentages of students who hed Moderate/Strong religious convictions declined from $60 \%$ for the Vocationalists to $47 \%$ for the Honconformists. In summary, the two points to emerge from Table 342 were the greater percentage of Vocational Men with Moderate/Strong rellgious convictions and the fact that the Academic and Collegiate Hen had substantially larger percentages in the None/Very Mild categories when combinsd than the Homen nembers of these samples. Iten No. 36 The Social Class to which you belong. The differences batween tho Vocationalists, Academics and Collegiates in the Working Class category were very similar to each other. In cach case they were lower than tho Nonconformists. In the Middle Class category another degree of similarity was recorded with the only notable percentage being the $50 \%$ of the Nonconfornist Women. There was a tendency for the percentages in category mumber threc to be slightly larger than in ofther of the other two categoriss. However, thero were fewer Nonconformists in category three than members of the other three philosophical orfentations. Thus there was a tendency for the Nonconformists to regard themselves as occupying a lower social class position than the three remaining groups. Table 343 page 711 contains the actual percentages.

## Item 110. 37 For how many years do you exnect to remain In the reaching lrofession'

Unlike the three remaining groups, $20 \%$ of the Nonconformist Women intended to teach for less than two years. The figure for the Nonconformist Men aithough only 10\% was greatly in excess of that recorded by the other groups of Men.

At the end of four years, between $19 \%$ and $55 \%$ of the Women Intended to have left. This large latter percentage was for the Nonconformist Women. The ilgures for the Homen can be accounted for in large part (except the percentage of Nonconformist Women in category one) by the family cycle. The indications from past experience Indicate that many of these 'early' leavers eventually return to teaching as their children enter school.

Although by the ninth year nearly half of the Vocational Vomen and over half of the Collegiate and Honconformist Homen claim to have left teaching, the eigure for the Academic homen was only 34f:. From their orlentation, one might have expected the Vocational Women to be in this category. For the Men, by their ninth year in teaching over one-fiftll of the Vocationalists and approximately one third of the other three groups intended to have left teaching. Many of these Nen indicated that promotion would (they hoped) have taken them out of the classroom into College work or edministration. Details are given in Table 344 page 712.

By the tenth year, not unexpectedly, more hen than Women still intended to be teaching. The Academic Vomen still had the greatest percentage of Homen followed
by tho Vocationallsts. Less than half the Collegiate and Monconformist Women expected to still be teaching. For the Nen, the fercentages dropped steadily from 79\% for the Vocationalists to $35 ; 6$ for the Monconformists whoreas tho Vocationolist Men had the greatest percentages for remaining the longest in tho teaching profession the case did not hold for the Vocational Women.

Item No. 33 How important is money to you? (Table 345 p. 712 ), Over half of each sample except the Honconformist Hen ( $48 \%$ ) indicated that money was important to them. $A$ much greater percentage of the IMonconformist ITen indicated the relative lack of importance of coney than did the Men in the other three Eroups.

For the Women, the Academics and the Nonconformists had larger percontages in the first tro categories than did the Collegiates and Nonconformists. As might be expected, the Collegiate seen overwhelmingly recoried thoir vote for the fmportance of money although this finding was not as strong for the Collegiate Nomen. These findings were also true of the Acadenic Ken and Women to nearly the same degree.
Itom No. 39 The cuallty of 1119 in Modem Iritain.
Combining categories 1 and 2 into one 'Unsatisfactory' category included approximately $10 \%$ of the Vocationalists and Collegiates, $20 \%$ of the Acadenics and $36 \%$ of the Honconformists when the sexes tere combined. The only single-sex point of note here was the $60 \%$ of the Honconformist Women in this category.

Betveen 20 - 35\% of each eroup except the Fionconformist Women with a scoro of $40 \%$ indicated that life in Eritain was tolerable. Thus all of the Nonconformist Womon found lifo in nodem Eritain either unsatisfactory or tolerable. (Table 346 page 713).

Over 50:' of each sample except the Acadenic Mon (and the Nonconfomist Yomen) found life good. The percentages in these latter two categories when combined gave the Vocationalist Men and the Collegiate Nen totals of 66 and 72 respectivoly.

Iton No, 40 Voting Ereforence (Table 347 page 713)
Nearly threc-quarters of the Vocationalists voted either Labour or Conservative with the slichtiy larger percentages being located in tho latter category. For the other groups, percentages were nearer to $50 \%$. Group differences indicated that whereas 41\% of Vocationalist Yomen voted Conservative the figures for Ncadenic Yomen and Honconformist Yomen were $23 ; \%$ and $10 \%$ respectively. The comparison between the Collegiate Yomen and Monconformist Nomen who voted Labour vere equally worth noting.

The percentages of Men who voted Conservative dropped steadily from $38 \%$ for the Vocationalists to 14\% for the Honconformists. The numbers who voted for the Liberals were not large but indicated that wore than twice the percentars of Acadenic and Monconformist Women voted for this party thon did the Vocationalist and Collegiate Yomen. For the Nen the percentages vere much closer to each other in general but with the Academics recording
only $5 \%$ as opposed to the $10 \%$ of the Collegiates and Nonconformista respectively.

The percentages in the 'Do Not Know' category were comparable fron group to group in general with the exception of tha Non and Women Collegiates tho recorded 25\% or more of their scores in this category. More of the Nonconformists 'would not vote' than any other group with the scora for the Men in this eroup approaching one quarter of the total membership of the group. Item No. 41 The Number of 10 levels Fossessed. (Table 348 The two groups which tended to contain greater ${ }^{\text {mat). }}$ percentages of oldor students wore the Vocationalists and the Academics. These two groups also tended to have the greater percentages of people who had entered College with fewer than 5 10' level subjects.

The nomal 'load' of '0' lovel subjects varied between 5 and 0 . In each sample the majority of the percentages were found in the category formed by grouping together 5, 6, 7 and $8{ }^{10}$ ' Ievels. The percentares of students in each sample who had over elght '0' levo? passes tended to be amall and ranged from $8 \%$ for each sample of Ven except the Nonconformists to the $14 \%$ of the Colleglato Women. The Acadenics as a total croup had a marginally lover. percentage of atucents who had $y$ 'o' lovels or more than the other three groups. Iter 1No. 42 The number of ' $A^{\prime}$ Levols Possessed. (Table 349 Accopting 0 or 1 'A' level subject as bolofe 715) University entrance standard and 2 or 3 'A' levols as being of University entrance standard the follovins results can be noted. In general there was a tendency for the

Women to have marginally botter results in terms of the number of 'A' levels gained than Ken.

In the $0-1$ category the Vocationalists and the Collegiate total samples had larger percentages than both the Academics and Nonconformists. Consequently, both Men and Vomen Vocationalists and Collegiates had lower percentages in the $2-3$ ' $A$ ' level category than had either of the two remaining groups. Only a very small percentage of the Vocationalists (Men and vomen) and Acadenic Men and Collegiate Vomen had obtained more than three ' $A$ ' levels. For the remaining groups the percentage in this category was zero..

In summary, the Nonconformists and Academics of both sexes had obtained more ' $A$ ' level passes than had the two remaining groups.

SUMTARY
Although there were certain notable exceptions to the rule, in general large differences between the four primary orientations were lacking. There were as many differences if not more between the Men and Women as there were between the four primary Eroupings. There was no clear and consistent trend that in terms of the effects of sociological determinants on membership of any one primary orientation that indicated the superiority or deviance from the norm of any one particular eroup.

## Chapter 5 (D)

REASONS FOR ZATERTIG TEACHTLG
A pool of items was assembled which by editing and sorting by a panel of 10 College of Education Tutors was reduced to 15 items. A five-point scheme was devised which utilised the categories Very Important, Important, Uncertain, Unimportant and Very Unimportant. The 15 items were as follows.

## Reasons for Intering Teaching

In deciding to become a teacher how important were the following considerations? Rate each item by placing a mark ( $\checkmark$ ) in tho appropriate category. 1. A desire to be of service to the commuity.
2. A personal interest in pursuing my main subjects for as long as possible.
3. A desire to be a member of a profession. 4. An interest in working with young people. 5. The generous holldays.
6. The day to day vorking conditions such as the short hours and being able to work at your own pace etc.

Lack of qualifications for other courses.
8. Failure to gain admission to a University.
9. Parents' wishes or recomendations.
10. Teacher's wishes or recomendations (Including Headteacher).
11. $A$ wish to have an interesting and satisfying job.
12. The influence of a particular teacher at school.
13. Advice given by the Youth Enployment Officer. 14. Teaching will give me a large degree of security. 15. Other (specify)

A frequency count was undertaken for each item for each of the four primary philosophical orientations and for each sex. The results vere as follows:

Item No, 1 Reason for entering teaching: A desire to be of servico to the comtunity.

Details of the frequency distribution are given in Table 350 on page 717 of the Appendix. Of initial importance were the numbers of Uncertainty' scores. However, bearing in mind the nature of the question this was perhaps to be expected. A further note of interest was the fact that the responses approximated to a bi-model distribution with similar frequencies being recorded by most groups for the categories Unimportant, -Important and Very Unimportant - Very Important. The only exception to this finding was for the Academics whose tallies for the 'Important' category were twice the number recorded for 'Unimportant'.

## Item No. 2 Reason for entering teaching: A personal interest in pursuing my Main subjects for as long as possible.

One might have expected the Acadenics to align themselves in the bottom hall of Table 351 on pasec 717. Inspection of the Table 351 indicated that whilst this was the case for the Academic Men it did not hold for the Academic Women.

Ti.: The above position was also true of the Vocationalist Men and Women with the Nonconformist Fomen having nine scores both above and below the 'Uncertain' grade. For the Collegiates, both Men and Vomen recorded more scorcs under
the Important/Very Irportant headings than at the other end of the scale.

Iten No. 3 Reason for Entering Teaching: A desire to be a member of a profession.

A degree of doubt as to what a profession was or en indication that the students possibly did not regard teaching as a profession was recorded in the form of a muber of 'Uncertain' scores. The frequencies for Important/ Very Important when compared with Unimportant/Very Unimportant were not radically different from each other. More scores were recorded in the latter categories but not in overm whelming numbers. The Academic Hen were more strongly in agreement with the statement than any other male sample. For the Academic Women, the position was reversed with nearly twice as many scores being given for categories 1 and 2. Tabular data is given on page 718.

As might be expected from their outlook the Nonconformists tended to regard the item as unimportant. This held for Both sexes. Each sample of women had proportionately more scores in categories 1, 2 and 3 when combined than their male counterparts, thus indicatins a weaker concern with the item than that of the men. Item No. 4 Reason for Entering Teaching: An interest in working with young neople.

$$
\text { As Table } 353 \text { on page } 718 \text { clearly indicated, }
$$ the bulk of the frequencies were lodged in categorles 4 and 5. However, six of the twenty-nine Nonconformist Men and two out of twenty of the Nonconformist Women recorded scores in

Categories 1 and 2 and 3. The general finding was one of the majority of the students in each of the four primary philosophical orientations regarding an interest in working with youns people as an important criterion in choosing teaching as a career.

Item 0, 5 Reason for entering teaching: The generous holidays.

If the 'Uncertain' scores are temporarily excluded from the analysis, it can be seen from Table 354 on page 719 that the total scores for categorios 1 and 2 were very similar to those for categories 4 and 5 with the exception of Academic Women who recorded nearly twice as many frequencies in catogories 1 and 2 than in 4 and 5. How far the scores were a 'true' indication of their feelings is open to speculation but one might have expected the latter categories to be loaded with frequencies since such things as the current salary paid to teachers is not erossly ezcessive.

It was of note that 26 of the Men and 43 of the Wemonlore uncertain whether or not they had percoived the generous holldays as being a factor in their decision to teach.

Item No. 6 Reason for entering teaching: The day to day vorkeng conditions such as the short hours and baing able to work at your own pace.

Considering the fact that the students had been in school for a total of three month-long teaching practices in addition to a prolonged period of 'observation' in schools the number of responses in the 'uncertain' category was high.

Ono might have expected that their experience to date had allowed them to formate soms form of opinion. However, since the question asked was in the area of 'reasons' for 'entering' teaching the 'Uncertainty' frequencies recorded in Table 355 on page 719 might have been a true indication of an ignorance prior to entering College of what the hours and day to day working conditions involved.

For the other categories, with the exception of Academic Men and Women, the tallies in categories 4 and 5 wore larger than those in categories 1 and 2. The differences hovever vere not large in some cases but in the samples of both Vocational Men and Yomen and Honconformist Vomen they were nearly twice as large as the Unimportant/Very Unimportant categories when totalled to form one group. Item 10, 7 Reason for entering teaching: Lack of qualifications for other courses.

As Table 356 on page 720 indicated, there was a strong indication that (for each group irrespective of sex), there were relatively feu students who regarded their chivy to teaching as boing contingent upon the lack of qualifications for other courses. The number of men and women who applied for entry to Collego after the publication of the G.C.E. results was very small indeed. Item Ho. 3 Reason for entering teaching (rable 357 parse 720 )

This item followed on from Item No. 7 and indicated that the great majority of students irrespective of primary philosophical orientation or sex did not feel that thoy entered teaching as a result of having failed to
obtain a University place. Consideration will be given later to the numbers of students in each orientation who did in fact apply for a university place.

Item No. 9 Reason for entering teaching: Parents wishes or recommendations.

Oniy four students out of a total of four hundred and fifty-ilive listed 'Parents wishes or recomendations' as being 'Very important'. When categories 3, 4 and 5 were added together they still fell short of the summations of categories 1 and 2. Thus, the great majority of students indicated that they did not regard tho wishes of thoir parents as being of importance. Such a finding wais perhaps in accordance with the granting of the vote at 18 years of ase. Details of the actual data are given in 358 page 721 ? Item No. 10 Reasons for entering teaching: Teachers! widhes or recommendations.

The results eiven in Table 359 on page 721 were very similar to those listed for the frequencies given In Item Ro. 9 concerning the wishes of parents. Again, the general trend across all groups was that the wishes or recomendations of a teacher were not important factors in the decision to enter teaching.

Item No. 11 Reasons for entering teaching: A wish to have an interesting and satisfying ioh.

As Table, 360 on page 722 indicated there
was a very strong indication that in each of the eight separate single-sex samples one of the reasons for entoring teaching was that listed above. No sizeable note of uncertainty or dissent from this view was evidenced In the results.

Item No, 12 Reason for entering teaching: The influence of a particular teacher at school.

The results of Iten 10.10 had indicated quite clearly that the wishes and recommendations of teachers were not important reasons for entering college for the majority of students. On the present item the pattern of responses was different in that they were spread more evenly. Howover, as in the case of Item No. 10 there were more frequencies in categories 1 and 2 than in categories 4 and 5 for each of the eight year groups. In the cases of the four samples of lomen, the frequencies In categories 1 and 2 vere in excess of those in categories 4 and 5 to a much greater extent than was the case with the men. Thus for one reason or another, the Women had a much clearer and restricted set of responses on this item than the Nen. Detalls are given in Table 361 page 722.

Item No. 13 Reason for entering teaching: Advice given by tho Youth Zmployment Officer.

Table 362 on page 723 indicated in very clear terms fust how unimportant were the views of the Youth Employment Officer as a factor in the students' decision to enter teaching. In each case the great majority of the responses were located in the Very Unimportant/Unimportant categories.

Iten No, 14 Reason for entering teaching: Teaching will give me a larre derree of security.

Iittle coment is needed to interprot Table 363
on pago 723 Fith the exception of very minor percentages in the first three categories, the overwhelning percentage In cach group of either sex agreed that teaching was a secure
job. These inndines were in agreement with those of Floud (1962) tho indicated that the teachinc profession was inhabited by persons tho had a need for security.

Item No. 15 Reasons for entering teaching: Any other reason?
This item was answered by only 14 students who wore spread over each of the four groups. The reasons given were mainly personal such as teaching being regarded as a challenge or a wish to re-live experiences felt as a child in school. The results were, therefore, not reported in the format of a table.

## SUMMARY

Of the fourteen items wich required a response, eight indicated clearly the opinions of the students. A ninth item (i.e. that pertaining to the influence of a particular teacher) showed that as far as the four samples of Women were concermed it was of importance.

In sumary, the students regarded the following Items as boing important factors in their decision to enter teaching:
(1) An interest in working with young people.
(1i) A wish to have an interesting and satisfying job.
(iii) A wish for a job which gave a lare degree of security.

They also regaried the following Itens as being unimportant to their choice of career.
(i) Lack of qualifications for other courses.
(ii) Failure to gain admission to a university.
(111) Parents wishes or recommendations.
(iv) Teachers' wishes or recomendations.
(v) Advice given by the Youth Employment Officer. Item No. 12, (The influence of a particular teacher at school) vas regarded as beine more unimportant by the Nomen in each sample much more so than the Men.

Large differences between the four primary orientations were generally absent. Such small differences that there were indicated the wish of the Academic Nen to be members of a profession (not supported by the large number of tallies for the Academic women who lodged then In the IUnimportant' category); the Vocational Men and Yomen and Nonconformist Women were nore influenced than the remaining Eroups of students by the prospect of short working hours and beins able to vork at their orm pace; for $25 \%$ of tho Honconformist Men to regard a fallure to gain admission to a university place as being an important reason for entering teaching and for approximately $24 \%$ of Vonconfornist Men to regard parental wishes as being important.

The above results are not strongly indicative of substantial differences between the four primary orientations but they represented the differences of note which occurred.

In an effort to relate the above findings to others concerning the desire or otherwise of students to enter the teaching profession; the four statements given below were presented to them for their endorsement or rejection.

1. I drifted into teaching.
2. I regard teaching as my true vocation.
3. I ail sulted to teaching by temperament.
4. I am suited to teaching by ability.

Each question is analysed below in terms of the percentages lodged by each group of students in particular categories. The basis of sorting as above was the four primary philosophical orientations. Item No. 15 I drifted into teaching

In asking students whether or not they had drifted into teaching an investigator is rumning the risk of receiving unreliable responses. Although precautions were taken by the present writer in the form of test re-test data, the following results are somewhat questionable when regarded in conjunction with those which deal with teaching as a vocation. Details are given in Table 354 on page 724 .

The results indicated that in general terms, fewer Nonconformists and Collegiates had drifted into teaching than the two remaining groups. However, the figures in categories 4 and 5 were high and for three groups approximated $70 \%$ and in the case of the Nonconformists was nearly $50 \%$. Thus, the position indicated by Table was (if accurate) one for concern by Tutors and Headteachers.

## Item No, 16 I regard teaching as my true vocation:

The following question was the opposite to that given above because it asked for positive or negative endorsement of the following statement I regard teaching as my true vocation". The resulting data were sumarised in Table 365 on pago 724 The Nonconformists of both soxes had the largest percentages in the first two categories indicating a lack of belici in teaching as a personal vocation. Not unexpectedly, the Vocationalists had the lowest percentages here., Kore Vocationalist and Honconformist. Women than len were uncertain, whereas for the two remaining broups the percentages were reversed. Group differences in this category were not marked. Thus, by virtue of the pattern of responses outlined in the first two categories, those found in categories 4 and 5 indicated that more Vocationalists and Acaderics then Collegiates and Nenconformists recorded that they regarded teaching as their 'true' vocation. Therefore, one is led to conclude that unless many of the students whose responses were recorded in these two tables had experienced a profound change of heart since entering College their responses in this area (because of a degree of inconsistence) must bo regarded with a degree of suspicion. Item No. 17 I am suited to teaching by temperament.

In Table 366 on page 725 only the honconformists recorded any percentages of note in the Strongly, Disagrec/ Dicagree categories. The category denoting uncertainty was more heavily populated with between $1 / 5$ th and $1 / 3 \mathrm{rd}$
of each group except the ronconformist Vomen (45\%) being located here. Thus, in essence with the exception of the Nonconformist Women, over $60 \%$ of each sample thought that they were suited to teaching by temperament. Item No. 13 I am suited to teaching by ability.

In addition to the above question conceming temperament, the students were asked if they were suited to teaching by ability. The resulting data are given in Table 367 on page 725 which was reduced to the latter three categories by virtue of a marked lack of responses in the categories indicating disagreement.

Approximately 1/3rd of each group indicated a degree of uncertainty as to the relevance of their ability to teaching. In each sample, the number of Men who were uncertain was less than the Momen. Meaningful group differences in this category as in the case of the remaining categories were absent. The table indicated that $55 \%$ or more of each sample indicated that they were suited to teaching by ability.

## SUTMARY

Comment concerning the four tables numbered to $367^{\text {is }}$ restricted to drawing the reader's attention to two points only, namely
a) the apparent contradiction of response patterns
when Tables 364 and 365 were
compared.
b) the fact that the majority of each sample of students indicated that they were suited to teaching by both temperament and ability.

Reasons why students applied to this particular College.

For a number of years a record had been kept of the reasons why students applied for entry to this particular College. Whilst the responses varied from year to year, it was felt by the writer and a number of his colleagues that the seventeen reasons given below and on succeeding pages were representative of the total range. The tables are presented in toto in the Appendix pp 727-732 whilst what follows here is a tabular sumary and brief explanation of the main detalls.

The following table is a summary of Tables 368 to 384 which are given in the Appendix pp 727-732. It is given in terms of the majority percentages lodged in any single category on each individual item. The actual percentages found in the cell indicated below is also given above each number the meaning of which is given in the key accompanying the table.

Table No. 41 , A Summary of the data concerning the Reasons for Entering this Particular College.

Key $1=$ Not Important $2=$ Moderately Important $3=$ Highly important.

Percentages for the category are also given above each cell.


1. The size


2. Ability
 $\begin{array}{llllllllllllll}\text { subjects } & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 1 & 1 & 1\end{array}$
3. Pleas. $\quad 38 \% \quad 52 \% \quad 45 \% \quad 50 \% 53 \% 45 \% \quad 48 \% 49 \% \quad 48 \% \quad 62 \% \quad 40 \% 49 \%$
 buildings
4. Parental

5. The Acad.
reputation

6. Zase of

7. Markinc
by cont. $95 \% \quad 90 \% \quad 92 \% \quad 80 \% ~ 84 \% ~ 83 \% ~ 95 \% ~ 95 \% ~ 95 \% ~ 80 \% ~ 75 \% ~ 78 \% ~$ $\begin{array}{llllllllllllllll}\text { assess- } & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3\end{array}$ ment
procedures
 the Curr.
```
Des. OI
question
                    Wen wo. Mot. Men Wo. Iot, Nen Wo. Hot, Men wo. Iot. 
10 Ease of64% 72% 68% 75% 69% 73% 56% 74% 66% 69% 80% 74%
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certificate
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for a
full social
l1fe.
12 The right
type of
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(sem1-
13 Friends
or rels. }82%80% 80% 89% 92% 90% 86% 77% 82% 90% 90% 90%
who had lllllllllllllllllllll
attend. in
the past.
14 Fleas.
social 39% 42% 42% 44% 50% 40% 43% 47% 45% 58% 40% 44%
climate & 2 2 2 2 llllllllllllll
atmosphere
15 College
within 50% 47% 49% 55% 33% 43% 54% 51% 52% 65% 55% 61%
easy reach 1 1 1 1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1
of home.
16 Coll.
recomm. by
teachers 60% 77% 72% 61% 61% 61% 66% 73% 70% 72% 70% 72%s
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17 A good
chance of
being a 49% 41% 45% 44% 81% 60% 38% 42% 38% 62% 40% 53%
Res. 1 1 1 1 1 1 1 1 3 3 1 1 1 1 1
Student.
```

In summary the main points of interest which emerged from the above table were as follows: 1. Items regarded as being inportant.
a) Each group except the Nonconformists regarded the abillty to pursue speciallst subjects as being of of importance (Item 3).
b) The ability to pursue courses which were Judged by continuous assessment procedures (Item 8).
c) The attractiveness of the curricula offered was important to the Vocationalists and Collegiates (Item 9)
d) Good facilities for a full social life was of importance (Item 11) to the Collegiate Nen and the Nonconformist Vomen.
e) The semi-rural setting of the College was indicated by the Vocationalists and the Academic Men (Item 12).
i) Only the Academic Women noted Item 15 (College within easy reach of home).
B) The Collegiate Women indicated the Importance of being a residential student.

The reador's attention is drawn to the percentages given above cach category in the above table. In many cases,
although this percentage was the largest for that particular sample on that item, it was often less than $50 \%$ of the total sample. The remainder of the percentages on these items were spread over the tro remaining categories in proportions which can be gained from an inspection of any particular table (Appendix pp 727-732).

It was patently obvious that for most of the samples (and all of the samples in some cases) that the following items vere regarded by many students as being of varying degrees of unimportance in terms of the reasons for attending this particular College.

1. Item 1. The size of the College.
2. Item 2. Progressive teaching techniques.
3. Item 5. Farental wishes.
4. Item 6. The Academic reputation of the College.
5. Item 7. Ease of gaining entry.
6. Item 10. Ease of gaining a certificate.
7. Item 23. Friends or relations who had attended in the past.
8. Item 15. College within easy reach of home.
9. Item 16. College recomended by teachers at school. 10.Item 17 A good chance of being a residential student.

Thus, in retrospect, the two items which were endorsed in the clearest fashion were
a) Item 3. The ability to pursue specialist subjects.
b) Iteri 8. Marking by continuous assessment procedures.

Differences between orientations appeared to be relatively unimportant and only served to indicate slight
differences between the Nonconformists and to a lesser extent the Collegiates.

In an attempt to assess the views of the four primary philosophical orientations as to just how well the College achicved 1ts ains, a pool of items was collected in 1967. They were assessed and edited by both Staff and Students and given to the sample of third-year students used in the present investigation When they were in the EIRSN VEEK of their FIRST TERM at College (1.e. Septciver 1967). This assessment vas part of a larger procremme of internal research by the investigator and permission was given for him to use the data in tho present study. Threo years later, In May 1970, the instrument was administered again to the same students who were now in their Third-Year. The instructions wera changed so that whereas in Year-one they were presented as Expectations they were now given as Reallsations. In each case, a five point marking scale was used which renged from Strongly Agree to Strongly Disagree. The questions are given bolow.

Items contained in tha scale to assess Expectations and Realisations of various aspects of Collega Life.

Statement Mumber.

1. I expect to meet the men or woman whom I will marry.
2. I expect to be given a good all-round education.
3. I expect to gain an appreciation of ideas, expand my interests and enrich my intellectual ilfe.
4. I expect to be provided with sound teaching techniques.
5. I expect to spend somo of the time having a good time with my College friends.
6. I expect to be taught how to teach.
7. I expect to have my values and moral standards strengthened.
8. I expect to deepen and extend my knowledge of my First Choice of Main Subject.
9. I expect to deepen and extend my knowledge of my Second Choice of Main Subject.
10. I expect to be provided with a range of extracurricular social and leisure activities.

Contingency tables were set up using data from cach of the two administrations of the test instrument. Thus the writer was able to allocate any particular student to a cell which recorded his 'expectation' and subsequent attitude or 'realisation'. Details for each of the four groups formed on the basis of the primary philosophical orientations are given below.

In reviewing the tables it is of importance to note that the greater the number of frequencies in any cell which forms a part of the DIAGONAL from top left to bottom right of the table, the greater the degree of consistency or agrecment betweennexpectation and realisation. A second point of note howover, is that some students might in fact have very low expectations which are subsequently realised and thus may not be indicative of pro-College expectations or attitudes. Thirdly, in order to increase clarity of interpretation, tho categories of Disagree/Strongly Disagree and Agree/

Strongly Agree havo frequently been combined for descriptive purposes to give two polar categories.

The frequencies for Men are located in the botton Ieft hend corner of each coll whilst those of the Women are in the upper richt hand corner. As a further aid for purposes of comparison the tables have been placed in the Appendix pp 734 to 743 where each question has been placed on a separate page together with the results for each of the four orientations.

Statement No. 1. I expect to meet the man or woman whom I will marry.

## Coment

## Vocational

By far the largest number of frequencies were to be found in the first cell of the table. When the frequencies for Men and Yomen vore totalled scparately for the first four squares (1.0. encompassing S.D. and Disagree) the totals became 36 and 33 rispectively. Thus, the majority of the two samples had not expected to meet their future lirepartner nor had they done so up to this point in time. The result was not in accordance with the generally held view of both Staff and Students that a powerful 'latent' function of the College was a marriage mart. Sixteen of the Vomen had apparently met their future husband in College whereas for the Men in this sample the total was only eight. Academic

The results for the Academics were very similar to those recorded for the Vocationalists. Combining cells to give a total S.D/Disagree component, indicated that 20 of the men and 17 of the Women did not expect and did not find a narriage partner. Unlike the Vocationalists hovever, the number of Acadenic ten who had found marriagable partners was in excess ( 8 to 6) of the Academic Women. Jany of this latter group had expressed the desire in conversation of elther completing further study or travelling abroad before 'sottling down'.

## Collertate

Bearing in mind the admitted love of social life and extracurricular activities of these students, the pattern of results was interesting. of a total of 103 Men , only 28 had not expected to meet a partner nor had they realised such a task. For the fomen the comparable figures were 129 and 49. Both of these figures (1.e. 28 and 49) represented a minority of scores in these samples. This finding was the reverse of that Por both the Vocationalists and Academics. Of further note was the fact that only one man and five women had como to College expecting to find a partner and had done so. Thirty of the men and twentysix of the women had arrived with no positive expectations but had in fact found a person whom they would marry (The mumber who actually married whilst in College was very small for all groups). On the other hand, 50 of the \%omen and 40 of the Men had net the person whom they would probably marry.

## Honconform1st

Although 21 of the Men and 15 of the Momen stated that they had not expected to meet the person whom they would marry, nor had they done so the problem was complex. Many of the group had indicated to the writer (as their Warden) that marriage was an outmoded concept and that they had their own special arranfements. Subsequent checking (after they had left) by the writer by personal visits, established that a number were livine commanally in the Potteries.

Four of the Men and four of the Women had indicated that they had found their marriage partner (in the accopted sense of the term). None of either sex were uncertain nor had they come with any expectations.

Statement No. 2. I expect to be given a good 'all-round! education.

## Vocational

Of this group, forty-two Women and thirty-three Ien arrived at College expecting to be given a good 'allround' education. Five Women and twelve Men did not expect this (which for 4 Vomen and 5 of the Men was subsequently the case). Those in the 'uncertain' category totalled 12 and 7 respectively.

In the event, 17 Men and 26 Women indicated that their expectations had been realised in that they had been Given an 'all-round' education whilst 12 Men and 10 Women revealed that they had not. The major conclusion was that one third of the Men and approximately one half of the Women in this samplo indicated that they had received an 'all-round' education. With the James Report (1972) about to be considered one could speculate on how their recomendations (in the area of 'all-round' education being eiven in Colleges of Education) will face up to these results.

Academic
In both cases the najority of Men and Women Academics
arrived at College expecting to be given an 'all round' education. Subsequent data indicated that 13 of the 36 Hen and 5 of the 26 women did not feel that their wish had been realised. However, a further 10 Men and 14 Women had their desire fulfilled. only 6 Men and 4 Vomen in this group left College feeling uncertain whether their expectations had been met. Thus, from the point of view of expecting the College to provide a good 'all-round' education, nore Hen were dissatisfied than satisfied whereas for tho liomen nearly three times as many of them indicated that their expectations has been realised (i.e. 14 to 5).

Collegiata.
Only 16 Hen and 13 Nomen in this Collegiate group were either not expecting an 'all-round' education from the College staff or were uncertain about it. The remainder (1.0. 116 Women and 87 Men ) all expected the opposite to bo the caso. Subsequent realisation indicated that only 3 Hen and one Woman who had not expected an 'all-round' education did in fact recoive one. The remainder of this Eroup (i.e. 16 Men and 13 Yomen) save four cases had their expectations realised. A majority of the sample, ( 46 of the Men and 52 of the Nomen) had their positive expectations realised. Those in the 'uncertain' category were 17 and 34 respectively.

However, 24 of the Nen and 30 of the Vomen clearly indicated that their expectation in terms of being given an 'all-round' educationhad not been realised. Thus, in
sumary only 51 Men and 56 Women had had their expectations (i.e. either positive or negative) realised. Both these figures represented less than $50 \%$ of each of the two samples based on a sex difference.

## Honconformist

With the exception of one cell, the frequencies for tho Wen ranged between 0 and 2 in the remaining cells. The same finding vas true for the Vomen except that two cells had frequencies in excess of 2 . The findings of note were that eleven of the Nenconformist Men expected to be given a good 'all-round' education and reallsed this expectation For the Homen the score was 2 and hichlighted the difference between the sexes. At the other end of the scale, there wers three Men and five Womenthose negative expectation was realised. In terms of boing given an 'all-round' education irrespective of expectation thirteen Men said that they had but only two Women were in this category.

Statement No. 3 I expect to gain an appreciation of ideas, expand my interests and enrich my intellectual iffe.

## Vocational

The above question was included because of the strong recomendation of the Tutorial Staff who saw their role partly in these terms. From a practical point of view, the table could be reduced to a $2 \times 5$ cell construction. The general trend was that approximately
two-thirds of both the Men and the Homen in the sample expected to benefit from a College course in the above ways and realised this expectation. The number of Men and Women who, irrespective of prior expectation agreed or strongly agreed that they had had their interesta ete. enlarged were 44 and 49 raspectively. Academic

As in the case of the Vocationalists, the frequencies outaide of the Agree-Strongly Agree categories totalled 1 for Men and 0 for Women. When the 'uncortain' category was included the frequencies are still fev in number. Thus, 29 Men and 21 Yomen both expected and realised the details outlined in the question. only 2 Men and 1 Woman had not had their positive expectations realised.

## Collepiate.

As in the case of the Vocationalists and the Academics, the Collegiates found that on this question their expectations were realised. Only one student had his negative oxpectations realised. The Uncertain' category contained relatively fev scores for both sexes. Seven Men and 17 Homen Collegiates were uncertain if their positive expectations had been realised. The overall picture was that in this particular area and with this sample the College had been successful.

Nonconformist
The results for the Nonconformist Men were in accordance with those of the other threc groups in that 23 out of a total of 29 had their positive expectations realised. of the remaining 6 Men , four were disappointed
and two were uncertain.
For the romen, only 6 realised their 'positive' expectations whilst a further 6 wore disappointed having held positive expectations. S1x out of the remaining 8 were uncertain as to whither their positive expectations had been realised.

It was of interest to note the difference in the proportions of Men and Vomen Honconformists on this quastion.

Statemont Mo, 4 expect to be provided with sound teaching technioues.

## Vocational

The above comment was made by many students who arrived at College expecting an apprentice-type course. In the groupings given in Table 333 on page 737 only one Man and one Yoman had not expected to be given sound teaching techniques and had reallsed this expectation. The bulk of the remaining frequencies indicated that 32 of the Men and 29 of the Women had expected and had obtained instruction in sound teaching techniques. However, a further 13 of the len and 11 of the Fomen Vocationalists indicated that their positive expectations had not been realised. Also 6 Ken and 14 Yomen were uncertain if their expectations had reached fruition. This latter result was surprising in view of the experience of schools which these students had enjoyed by this time.

Academic
As indicated in Table 383 on page 737 none of the ven or Women Academics had not expected to be show sound teaching techniques although a small number indicated a degree of uncertainty. Nincteen of the len and 14 of the Vomen found that their positive expectations were realised wilst 8 wen and 3 women did not. As with tho Vocationalists, soveral Men ( $N=8$ ) and a smaller number of Vomen ( $N=4$ ) were uncertain (after threo years at College) whether or not they had in fact been given a range of useful teaching techniques.

## Collemiate

Only a small minority of the 103 Men and 129 Women had negative expectations or were uncertain. The realisation of positive expectations had occurred for 51 of the Men and 69 of the women. Further details indicated that 23 Men and 25 of the romen did not realise these expectations whilst a further 27 Nen and 30 Women were uncertain. Thus, only approximately half of the Men and Homen had their positive expectations realised. Such figures approximated those of the Academics and Vocationalist Women but were marginally lower than those of the Hen in these groups.

## Monconformist

Two of the Nonconformist Women and one Man had not expected to be given sound techniques but only one Woman finished the course by realising this expectation. The majority of the Men had expected some tutorinc in
techniques. Their realisations varied and showed that 13 did not gat satisfaction, 4 were uncertain and 9 were satisfied. For the Women, the figures were 8, 4 and 6 respectively.

These figures indicated that unlike the other three primary philosophical orientations, the Nonconformists had proportionatoly moro dissatisfied or uncertain students of both sexes. Fewer than $50 \%$ of both Ken and Homen in this group expressod any degree of satisfaction in terms of positive expectations being realised.

## Statement No. 5 I expect to spend some of the time having a rood time with my college friends.

Vocational
As might bo expected, the majority of both Men and Yomen Vocationalists had positive expectations. Three years later they clearly indicated that they had in fact spent some of their time having a good time with their College friends.

## Academic

As in the case of the Vocationalists, the great majority of the students expected to have a good time with their friends. For all but two of the Men and one Voman the positive expectation was realised.

Collemiate:
Life the Vocationalists and Academics, the bulk of the Collegiate Nen and Homen had their positive expectations
reallsed. Only one Men out of a total of 103 had not expected to have a good time. In viow of the rubric outlining the Collegiate philosophy it would appear that ho was misplaced from this particular point of view.

## Nonconformist

The Nonconformists closely followed the pattern of the other three groups in that 25 of the 29 Men and 15 of the 20 Woren realised their positive expectations in terms of the question. Only two of the Men and one Woman In this group indicated that their positive expectations had not been realised.

## Statement No. 6 I expect to be taught how to teach Yocational

This question was of importance because both the popular press and more erudite periodicals have been constantly asking what the Colleges do if not show students how to teach children.

In the case of the Vocationalists who, by definition, were in College primarily to learn how to become teachers the results vere of rote. Of the total of 53 Men , seven neither expected to be taught how to teach, nor in their opinion had they been so instructed. The comparable figure for the 59 Women was nine.

The important information given in the table however was that only 14 Men and 8 Nomen had their positive expectations realised. The numbers who had expected to be taught how to teach and had been disappointed were 22 Men
and 31 Women respectively, with a further 6 Men and 5 Women being 'Uncertain'. of the four Men and six Women who began by being Uncertain', four Nen and five Women concluded that they had not been taught how to teach. Thus, the general movement was in the direction of negative viewpoints.

Acadomic
The data Indicated that slightly nore Hen realised their positive expectations than did not. However, when the 'Uncertain' scores were added to elther side of the table the position changed substantially.

For the women the picture was clearer, with only three of the 26 members of the group reallsing their expectations as against 11 who were disappointed. A further six Women who were Uncertain' in their expectations concluded that they had in fact not been taught how to teach.

## Colleg1ate

Of the 129 Women in this sample, 22 had their negative expectations fulfilled whilst the comparable figure for Hen was 8. None of the 9 Yomen who began by being uncertain concluded that they had been taught to teach whilst the figure for the Men was 3 out of 8 with four scores reveining within the 'Uncertain' category. The striking figures were those of the 39 Men and 67 Vomen who whilst expecting to be taught how to teach had not been done so. The comparable figures for those who had realised their positive expectations
wero 32 Hen and 23 Vomen with a further 13 Men and 8 Women being found in the Uncertain catcgory after recording S.A/Agree initially. Again, the College was seen as not having fulfilled ono of its expected roles.

## Nonconformist

Three Hen and three Women were not disappointed in not being taught to teach since this was what they had expected. All of the four Vomen who had Uncertain' expectancies concluded that they also had not been taught to teach.

As in the case of some of the other groups, a considerable number of both Men and Yomen concluded that their positive expectations had not been realised. In the present case, the numbers for each sex who had not realised their expectations in this area outnumbered those who had experienced satisfaction - even when the uncertainty scores were added to the latter category.

## Statement No. 7 I expect to have my values and moral Standards strengthened.

## Vocational

The above question was included since it was observed that a lot of informal discussion at both Staff and Student level was spent discussing the role of the College in the areas of values and morals.

The results were something of a mixed bag with 19 Hen and 17 Vomen realising their negative expectations.

Only two lhen and six Women had their expectations chansed for the better.

For the rost, 11 Hen began being 'uncertain' and ended with 5 having scores in the 'Disagree' category, four romaining 'uncertain' and only two being positive. The Dottoll two ines of the table indicated that six times as many Hen had realised their positive expectations than had been dissatisfied whilst the figures for Homen were 14 to 3.

Academic
For fifteen of the Academic Men and 10 of the women the College was not expected to change their moral standards, nor had it done so. Five of the 10 Men whose expectations were 'uncertain' remained in this category with four of the remainder registering negative viewpoints.

For the Women, the figures were 8, 2 and 4 respectively with only two of them agreeing that they had had their values strengthened. Only 3 Men and 5 women had thoir positive expectations realised whilst the figures for the disappointed ones vere 2 Men and 1 Women respectively with a further 4 Men and 1 Woman being located in the Uncertain' category. The general conclusion reached was that in this area the influence of the College was very slight. Collegiate

Over onc-third of the Men and Women Collegiates indicated that they expected not to have their moral values strengthened. Their expectations were subsequently realised. Of the considerable remainder, only 5 Men and 9 Yomen had failed to realise their positive expectations whilst the
figurcs for those who had were 16 Men and 14 Women. A further 11 iten and 15 Women began and ended by being uncertain whilst of the 29 ren and 43 Homen who began by being uncertain, 13 Men had favourable realisations and 5 did not. The figures for the Women were 16 and 12 respectively.

Overall, the picture was one of the students either not expecting College influence in this area or of uncertainty as to its role. Honconformist.

As might be expected from the students whose primary philosophical orientation was Nonconformist, 15 of the 29 Men and 13 of the Nomen did not expect nor did they find their morals and values to be strenethened through the influence of College. In point of fact only one \%omen did realise her positive expectations and was joined by two other femalo students one of whom had initially discgreed and one who had been uncertain. A further three vomen tho had been uncertain concluded that their morals and values had not been strenethened. A very similar position applied to the Hen, only four of whom had expected a strengthening process which they regarded as being realised. Thoy were counterbalanced by three colleagues who felt that their positive expectations had not been met with a further three former 'uncertains' concluding that values and morals had in fact not been strengthened.

## Statement No. 8 I exmect to deepen and extend my knowledge of my First choice of Maln Subject.

## Vocational

As might be expected with such a question the bulk of the students of both sexes had their positive expectations realised. Of note however was the fact that approximately $9 \%$ of Men expressed dissatisfaction. Academic

As in the case of the Vocationalists, the majority of Men and Vomen Academics realised their positive expectations. Seven of the Men and five of the Vomen were disappointed. Such a finding was of particular interest because the group involved were primarily interested in the academic aspect of College iffe.

## Collegiate

Sixty-3ix of the Collegiate Men and 101 of the Momen felt that their positive expectations had been realised. For the Women this number represented four-fifths of the total whilst for the Nen it indicated approximately a values; of $60 \%$. However, 23 hen and 20 Women felt that their positive expectations had remained unfulfilled. Bearing in mind the frportance of the question to many educationalists these latter figures are of note. Honconformist

The pattern of responses of the lionconformists closely folloved those of the other three primary philosophical orientations, Elghteen of the 29 Men and eight of the 20 vomen indicated tho realisation of their positive expectations. Hovever, an equal number of Women revealed that their positive expectations had not been satisfied. The corresponding number for the then was five.

The two iten and two Women who began by beine 'uncertain' concluded that their lmowledge had been extended.
$\frac{\text { Statement iNo. } 9}{\text { I exnect to decpen and extend ny }}$ Vocational
The above question was of importance if one bears In mind that for at least two out of the three ycars the majorlty of the students were in College thoy had to study two subjects at 'Hain' level. In the case of the Vocationalists, 34 of the Men and 36 Women realised their positive expectation. They were countered somewhat by 15 Hen and 13 Wonen whose positive expectations had not been fulfilled. A minority of four vomen and one Man had their negative expectations realised. Acadenic

As can be seen from Table 393 on pace 742 20 of the Academic yon and 19 of the Women indicated equivalenco betweon positive expectation and realisation. A further 9 Xen arid 6 Women were dissatisfied and indicated a lack of congruence botween expectations and realisation. This left a group of six Hen and one Woman who were uncertain that their expectations had been mot. Collegiate

When attention was concentrated on the bottom two 742 rous of Table 393 on pasy it was noted that 57 Men and 73 Homen experienced the satiafaction of their positive expectations. This was over $50 \%$ of each sample. Of further note was the fact that no fewer than 34 ten and yomen
indicated that their expectations had not been realised. One could hypothesise that such a result might be an indication of perhaps a lack of effort by individuals who tended to stress the extra-curricular aspects of College life. In any event, such a finding was of importance in the context of College teaching because of the importance placed on 'rigorous study' by the tutorial staff of the academic departments. Honconformist.

Thirteen of the Nonconformist Men and 9 of the Women indicated satisfaction of positive expectations. They were counterbalanced by eleven Men and eight Women revealing that their expectations had not been realised. Thus the bulk of the two samples of Men and Women wers in opposition to each other. Only two Men had negative expectations which for both of them were realised.

## Statement No. 10 I empect to be provided with a range of extra-curricular social and loisuro activities.

## Vocational

The above question was included because of the increasing leisure time available to more and more nembers of the population. From Table 394 or page 743 it was clear that the Vocationalists tended to regard the question in positive terms since for 27 Men and 30 \%omen their expectations were realised. A further 12 Men and 4 Women were also satisfied since they had not expected any help and had not recelved any. Oniy one Man and six Women expressed a lack of realisation of positive
expectations.
Academic
Two-thirds of the Academic Men indicated that their positive expectations had been realised, whilst this was true for half of the Women. Relatively few Hen (3) and Yomen (4) held negative expectations which were in fact realised. Finally, only two Men and one Woman Academic indicated that their expectations were unfulfilled. Thus, in spite of the fact that the Academics were chasing academic honours, considerable proportions of the group agreed that a range of extracurricular pursuits and activities was desirable and had in fact been catered for.

## Collegiate

The large proportions of tallies in the Agree/ Strongly Agree categories on both dimensions were expected since this philosophical orientation had indicated the importance of extra-curricular activities and interests.

A total of 78 Men and 89 Women recorded that their positive expectations had been realised. In each case, the figures closely approximated $75 \%$ of the total samples. of the remainder of the students in the sample, those who had initially held negative expectations or were uncertain, the majority of both sexes had concluded that the College had in fact provided a range of oxtracurricular activities and interests. Irrespective of
expectation the mumber of Men who were still uncertain was 11 with the number of Women in this category totalling seven.

Honconformists
Twenty-one out of a total of twenty-nine Men regarded their positive expectations as having been realised. Considering the somowhat bohemian nature of this group this figure was initially regarded as boing high. However, the recent trends in music, fashion and danco appears to the writer to have facilitated such a score sinco these Men were often in the centre of informal 'hops' and occasions of a similar kind.

A more precise question which referred cilly to the activities which the College Staff had provided might have led to a clearer picture being obtained.

For the women, eight out of twenty indicated that their positive expectations had been realised whilst four stated that they had not with a further three being lodged in the 'uncertain' category. The numbers for the Men in these two latter categories vas 2 and 1 respectively.

In the following sumary the statements are repeated and a brief indication is given of the major patterns of frequencies which resulted from the analysis.

Statement No. I expect to meet the man or woman whom I WIII marry.

The majority of the students in each sample except the Collegiate had not expected to neet their marriage partner. None of the groups contained a majority of students who had in fact met tho person whom they would probably marry although the muber for the Collegiate Vomen was 50 out of a total of 129.

## Statement No, 2 I expect to be given a good all-round education.

The majority of students arrived at College with positive expectations. Subsequent realisation varied with the eroups. Tho scores tended to be spread with satisfaction and dissatisfaction being nearly counterbalanced. Aslight trend was in the direction of positive expectations being realized.

## Statement No. 3 I expect to gain an appreciation of ideas. expand my interests and enrich my Intellectual ilie.

Each group had their positive expectations realised. The Nonconformist Women were more undecided than the other three groups.

Statement Ho. 4 I expect to be provided with sound teaching tochniques.

The general trend was for the positive expectations of each group to be realised. However, more Nonconformists Men had negative realisations than positive satisfactions.

Statement No. 5 I expect to spend some of the time having a rood time with my College friends.

Each group indicated strons positive expectations which had been realised.


#### Abstract

Statement No. 6 I expect to bo taught how to teach. The results of this important question indicated that in each group, the majority of Men and Vomen had not had their positive expectations realised. In some cases the numbers of satisfied to dissatisfied students were not strikingly different but sufficient to warrant the above conclusion being made.


## Statement No. 7 I expect to havo my values and moral standards strengthened.

The one striking feature of the results was that nany of the students did not expect to have their moral values strengthened. Of those that did have positive expectations in this area, the tendency was towards a satisfactory realisation of their hopes.

Statement No. 8 I expect to deepen and extend my knowledge of my First choice of rain subject.

In each group and for both sexes the positive expectations were realised for the majority of students. However, inspection of the various cells indicated that not inconsiderable mumbers of stucents had not found the expected satisfaction in this area.

Statement No. 2 I expect to deepen and extend my knowledge of my Second Cholce of dain subject.

Although for the majority of students of each sex in each of the four samples had their positive expectations reallsed, there were a number in each group who expressed dissatisfaction. In the case of the Nonconformists the satisfied/dissatisfied groups were nearly equal in mumbers.

## Statement lio. 10 I exnect to be provided with a range of extra-curricular social end lelsure activities.

The general trend was for expectations either of a positive or negative nature to be realised. The bulk of the students had expressed positive expectations which for most of them brought a large degree of satisfaction.

With the exception of Statement No. 6 which was concerned with students being taught how to teach, the above results indicated that in the majority of cases the expectations of the students whether in a positive or negative (1.e. not expected to happen) were realised.

ERRSONAL VIEH3 OA THACIIMG
This eleven-item questionnairevas devised with a view to ascertaining the personal views of the students towards a range of important criteria. The questionnaire was administered twice during the period of data collection but on each occasion different response categories were used. At the initial testing session the students were asked to indicate the degree of importance which thoy attached to each question. The second administration required them to say how far the question refiected their ow personal standpoint. The followine example illustrates the method used.

Question No. 1 (Initial Adinistration).
It is important that a teacher has a pleasing manner and appearance (i.e. is well-spoken and with dress appropriate to a member of a profession). Resnonse Categories (Initial Administration).

Very Unimportant - Unimportant - Uncertain Important - Very Important. Question No. I (Second Administration).

When teaching, I have a pleasing manner and appearance (1.e. I am vell-spoken and I vear dress appropriate to a member of a profession).

Response Categories (Second Administration).
Strongly Disagree - Disagree - Uncertain Agree - Strongly Agree.

Whilst it is acknowledged that the questions in the second administration were not identical with the
first set of questions and that one might expest a preponderance of favourable responses to occur on the second administration it was felt by the uriter that the technique was of use in tho present investigation.

The data were analysed in the form of contingency tables devised to co-relate initial and second response patterns. Thus, for each person a tally was conducted which indicated how he answered the question on the second administration relative to the first. Each eroup formed by their choice of primary philosophical orientation was analysed separately. A secondary division according to sex was also made within each group. Details of each question together with coment are given below whilst the relevant tables can be found in the Appendix pp 745 to 755 inclusive.

The frequencies for the Ren are given in the upper left hand comer of each cell whilst those for the women are located in the bottom right hand comer. The comment will not deal with each individual response but will be looking for possible differences in patterns of response between the four Eroups of students.

Personal Views on Teaching
Guestion Nos. $1 a / 2 a$ and Description: 1 pleasing manner and appearance (1.e, well-spoken and with dress appropriato to a nembor of the protession).

## Vocational

With the exception of four Women and ono Man,
Table 395 was confined to $31 x$ cells. Tho great majority of the group of both sexes indicated the importance of being well-spoken and professional and also recorded that they folt that they exhibited these qualities. The Collego policy of 'vetting' the dress of the students on tho days when teachins practice or visits to schools wero in oporation nay have accounted for this restricted range of response in part. However, one could concluda that this group who were primarily interested in teaching did in fact actually subscribe to the question.

Acadomic
Relatively few students appeared to be uncertain on this question and only one han regarded it as being unimportant. For the remaining 30 Nen and 22 Women the finding was of congruence between positive requirement and own self-image.

## Collegiate.

A total of 89 Men and 103 Women indicated the importance of the question and also recorded that they too fitted the required criteria, Bleven vomen and five Men were uncertain whether or not they had these
requirements which they regarded as being important.

## Nonconform1st

Whilst a total of 17 out of 29 Men indicated the importance of the content of the question and that their own self-image was in agreement, the figure for Vomen was only 9 out of 20. This latter finding was only $45 \%$ of the sample. of the remaining 21 Homen, 31x agreed with the question but were uncertain as to whether their personal appearance and performance iltted the same category whilst a further three were uncertain in both categories. Only one Voman and one Man flatly rejected the proposition and confirmed their own attributes in the same manner. Even for this group of Nonconformists however, a large proportion of both Men and Vomen agreed with the question and indicated their personal conformity. The dress aspect was surprising because around the College campus the dress and appearance of this group was bizarre and nonconforming.

## Guestion Mos, $1 \mathrm{~b} / 2 \mathrm{~b}$ and Descrintion

Tha ability to gain the respect and confidence of the punils with whom he or she deals.

## Vocational

$$
\text { Only } 9 \text { of the } 25 \text { cells in Table } 396 \text { on page }
$$

746 were occupled. Of note was the fact that whilst all except one Woman regarded the question as being of importance, 10 Women and 9 Men were uncertain whether or
not they had the necessary ability to gain the respect and confidence of their pupils. This group had placed teaching as its prime interest and vocation.

## Academic

Unlike the Vocationalists, this group of Academics irrespective of sex found the question important and further indicated that their own seif-assessment was also in this direction. Only $1 / 12$ th of the Men and $1 / 8$ th of the women were undecided as to whother thoir own expertise paralleled tho undoubted importance of the idea.

## Collegiate

All of the 103 Men and 127 of the 129 Women indicated that they regarded the question as boing of importance. Of these eroups, approximately $9 \%$ of the Men and $1 / 6$ th of the Women wero uncertain as to whether they were equal to the importance of the idea.

## Vonconformist

Tablo 396 on pago 746 indicated that
all of the 29 Men and 20 Women Nonconformists wera in agreement with the statement. However nearly $1 / 4$ of the Hen and exactly $1 / 4$ of the Women indicated uncertainty as to whether they personally were able to fulfill the criteria laid down in the question.

## Cuestion Kos. Ic/2c and Description

 An ability to set on well with collearues. (Table 397 p. 747)
## Vocational

All but two Men and the full complement of Vomen agreed that the question was important. Nearly E0\% of the Nomen and $90 \%$ of the Men also saw their own self-image in positive terms with the remaining percentages being located largely in the uncertain category.

## Academic

All of the hen and $80 \%$ of the Women recorded opinions which showed congruence between the importance of the topic and thoir assessment of their own ability. Again, however $1 / 5$ th of the vomen exhibited a degrea of uncertainty as to their orm ability in this area.

## Collegtate

Ninety per-cent of the Men and eighty-four per cent of the Yomen recorded scores which indicated congruence between the importance of the question and personal self-assessment. As with the Vocationalists and Academics, the proportion of Women indicating uncertainty at the level of self-assessment was in excess of the Men and represented just less than $1 / 6$ th of the total female students in this sample.

## Nonconformist

All but four of the 29 lhen and one homan saw the question as being of importancs. Of these positive responses, $75 \%$ of tho Nen and $60 \%$ of the Women indicated that they had the abllity to get on well with colleagues. The remaining four Nen and seven Vomen recorded a degreo, of uncortainty.

Cuestion Nos, $1 \mathrm{~d} / 2 \mathrm{~d}$ and Descrintion (Tab1o 393 pape 748) The ability to comunicato effectively with the pupil.s. Vocational

The ability to comunicate effectively with pupils is at the heart of the teacher's task. In the above sample all of the Ken and Women agreediwith this statement. Subsequent recording of tho self-assessment Indicated that all but three of the hen and 12 of the Vomen belleved that they were able to comminicate effectively with their pupils. These latter groups were uncertain of their ability in this arca. inilst the number of Fen in this latter catogory was very small, for the Vomen represented $20 \%$ of the total.

Academic
With tho excertion of 5 Men and 4 Women who
were Uncertain the remainder of the students in this sample saw the need to communicate effectively with their pupils. They also indicated the bellef in their abillty to do so.

## Collegiate

Eighty-seven of the tien and 98 of the Women Collegiates clearly indicated that they both regarded the question as fmportant and could in fact communicate effectively with children. Nearly $25 \%$ of the Women and $15 \%$ of the Men were uncertain whether or not they could commicate effectively with children.

## Nonconform1st

All but three of the Nonconformist hen indicated congruence between the importance of comanicating with children and their abillty to do so. The former three were somewhat uncertain. For the Women, although all indicated the importance of the question, only $75 \%$ stated that they were certain that they could commicate with their pupils. This figure was greatly in excess of that recorded by the Nen.

Cuestion Nos. $18 / 2 e$ and nescrintion (Table 399 pace 749) An appearance of confidence in front of children. Vocational

In the case of both Men and yomen Vocationalists, only one student of each sex expressed uncertainty of agreement with the view posed in the question. However, subsequent self-appraisal indicatod that no fewer than $19 \%$ of the Hen and $32 \%$ of the Komen expressed doubts as to thoir ability to appear confident in front of children. It should be noted that the Vocationalists were those students who had indicated a special interest in teaching as a career.

Academic
All of the Academics indicated the importance of appearing confident in front of children. The selfassessment showed that one sixth of the Nen and slightly more than one quarter of the Nomen were uncertain as to whether they could display such confidence.

## Collogiate.

All but eight :omen students indicated that a teacher should appear confident in front of children. Of these eight, two concluded that they could in fact appear conficent in front of their pupils. Whilst tho preponderance of frequencies indicated agreement between Importanco and self-assessment, it must bo noted that irrespective of initial position, no fewer than $20 \%$ of the Nen and $37 \%$ of the Nomen expressed uncertainty that they had the ability to appear confident in front of their young charges.

## Kenconformist

The majority of the frequencies for both Non and Women indicated close agreement botween the importance accorded to the question and the ability of the eroup to fulfill tho requircment. Only $10 \%$ of the Men indicated uncertainty as to their ability whilst the Pigure for the Vomen was 20\%

Question Nos. $18 / 2 f$ and Description
A broad cultural mowledge, (rable 400 Dage 750 )

## Vocational

The majority of the Nen and Vomen Vocationalists agreed that a broad cultural lnowledse was important to a teacher. Sone $20 \%$ of the I:en in agreement and $10 \%$ of the Nomen however vere uncertain whether or not they had such knowledge. A amall minority of four Nen and three Women disagreed with the roquirement and also indicated that they did not have a broad cultural knowledse.

## Acadomic

A large majority of the fcademic Men and Women indicated that they agreed with the question. None disagreed with it and only three were uncertain. The main point of interest was that 10 Nen and 10 vomen indicated that they were uncertain whilst a further three Men and seven vomen rocorded that they did not have a broad cultural knowledge. This left a minority of the Vomen and 21 of the 36 Hen who both saw the importance of having a broad cultural knowledge and also indicated that they had such a knowledse.

## Collealate

A small minority of four Men andrine Nomen indicated that they did not feel that a broad cultural knowledgo was important to the teacher. Of these students, only the six Vomen concluded that they did not have such a
moviedge, whilst three of the Men were uncertain. Of the large remainder, nincteen Fomen and 14 Men recorded that they did not have a broad cultural knowledge, whilst a further 35 hen and 48 Women were uncertain. This left a group of 36 Men and 25 Yomen who indicated the importance of the question and agreed that they had the necessary knowledge. Thus, only approximately $1 / 3 \mathrm{rd}$ of the Hen and $1 / 5$ th of the Women recorded a degree of congruence between agreement of the need and possession of a broad cultural knowledge.

## Nonconformist

The two points of note concerning the above table are that a) barely 50\% of the sample of Nen and $35 \%$ of the Homen indicated a positive degree of agreement between recognition of the importance of the question and their possession of such a quality and $b$ ) that one third of the Men and over a half of the women indicated that they were uncertain of whether they had a broad cultural knowledge.

Cuestion $1 g / 2 s$ and Description High administrative ability. (Tablo 401 pege 751) Vocational

One of the consequences of building larger and larger schools is that the day to day administration becomes more complex. The position is made more difficult by the ever-increasing volume of technological equipment
and audio-visual materials available to teachers. For other reasons also, the young teacher has to have administrative skills. For these reasons, the above question was included.

In the case of the Vocationalists, the responses were varied with only a minorlty of both sexes acknowledging the importance of high administrative ability and concluding that they also had such ability. A further 13 Vomen and 7 Men whilst agreoing with the question concluded that they were Uncertain as to their own ability in this area. The remainder of the responses indicated varying degrees of uncertainty and disagreement as to the importance of the question with the main emphasis being laid in the uncertain category.

## Academic

As in the case of the Vocationalists, only a minority of the samples ( 10 Men and 7 Women) indicated that they both agreed with the need for high administrative ability and their possession of it. The number who actively disagreed was very small (one Man and one Women) whilst those who felt that it was important but lacked the ability themselves was restricted to one $\operatorname{Han}$ and Lour Homen ${ }^{2}$. The remainder of the sample indicated varying degrees of uncertainty.

## Collegiate

Only 20 Men and 19 Women Collegiates indicated
a degree of congruence between the noed for high administrative ability and the belief that they had such ability. The bulk of the remaining members of the group exhibited various patterns of uncertainty whilst only 10 Men and 19 Yomen regarded the question as unimportant. Of the uncertain ones, most saw the ability as important but were not surs whether they themselves possessed it.

## Nonconformist

A minority of eight Nen and one Woman Nonconformists saw the question as being important and regarded themselves as having administrative ability. An even smaller number ( 2 Men and 2 Women) recorded that whilst regarding the question as important they did not feel that they had such ability. A further 5 Men and 3 Women clearly indicated that they considered the idea unimportant and that they lacked such ability.

Guestion Hos, $1 \mathrm{~h} / 2 \mathrm{~h}$ and Descrintion
A good academic record. (Table 402 page 752)

## Vocational

The system used in the college to record academic progress was one of continuous assessment. By the time the students reached the final (and only) examination of their course, they had amassod 75:6 of their total possible grades. The examination was still important because irrespective of the grades awarded by
continuous assessment up to that point, a pass in the examination was a condition of the award of the final certificate.

Sixteen of the Men and 19 of the Vomen Vocationalists indicated that they both had a good academic record and thought the possession of such a record as being important. Only a very small minority of Men and liomen regarded tho question as unimportant. Irrespective of initial point of view a total of 27 Ken and 38 Women indicated that they had a good academic record. This left a residue of 16 hen and 11 Yomen who were uncertain whether or not they had a good academic record. Thus, $50 \%$ of the Men and nearly twothirds of the Women indicated that they had a good academic record.

## Academic

A total of 22 of the 36 Ken and 19 of the 26 :omen indicated that irrespective of whether or not they regarded the question as important consicered themselves to have a good academic record. A further 12 Men and 5 Women indicated that they were uncertain as to their present performance. A negligible number regarded tho area covered by the question as unimportant. Thus, the majority of the Men and homen in this sample considered themselves as having a good academic record.

## Collegiate

As in the cases of both the Vocationalists and Academics, the Collegiates had a minority of people who both regarded the question as unimportant and indicated that they did not have a good academic record. A larger muber stated that whilst they did not regard the area as important they in fact had good academic records. Irrespective of opinion of the need for a good academic rocord, 48 Men and 62 Women concluded that they had good academic gradings. This left a total of 26 Men and 31 Homen who regarded the question as important and regarded themselves as having a good academic record.

## Nonconformists

Only 7 of the 29 Men and 4 of the Nomen Nonconformists considered the question to be important and acknowledged that they had a good record themselves. Nore than half of the Nen regarded this area as unimportant whilst the ifgure for the Women was $30 \%$. Nearly $1 / 3 \mathrm{rd}$ of the Ken and $1 / 3 \mathrm{rd}$ of the Yomen were uncertain whether they had a good academic record. Irrespective of the importance of the question, only 11 Men and 6 Vomen indicated that they had a good academic record.

## Cuestion Nos. $11 / 21$ and Description

## A sound knowledge of recent dovelopments in the technioucs of teaching: (Table 403 page 753).

## Vocational

Only a very small minority of Men and Women regarded the area covered by the question as beins unimportant. A proportion of the sample (1.0. 20 Men and 31 vomen) indicated that they regarded the question as important and that they had in fact been given a sound lenowledse of modern teaching techniques. Those who irrespective of their indication of the importance of the area concluded that they were uncertain whether or not they had been instructed in sound teaching techniques totalled 21 Nen and 18 Yomen. Thus, if wo regard the scale as being concerned with self-assessments only (1.e. Columns Agree/Strongly Agree only) we have a group of 25 Hen and 32 Yomen who recorded that they had in fact been given a sound knowledge of modern developments in teaching. Theso figures represented approximately $49 \%$ of the Hen and $52 \%$ of the Vomen Vocationalists.

## Academic

Only 6 Men and 2 Women regarded the question as unimportant. Of these, five Men recorded uncertainty as to their own self-progress in the area. IThe majority of the students in this sample agreed with the importance of the content of the question but only 13 Men and 13 Women indicated that they had received such treatment.

This compares with three Men and Women who said that they had not and 14 Men and 8 Women who were uncertain, Thus only $1 / 3 \mathrm{rd}$ of the Men and $1 / 2$ of the Homen actually concluded that they had been given a sound knowledge of recent techniques in teaching.

## Colleriates

Only a small minority of 3 Nen and 3 homen decided that the area tapped by the question was undmportant. A further group of 17 Mon and 17 Women vere undecided. Those who agreed with the importance of the question and who also concluded that this had happened to then was 38 Men and 46 Vomen. Irrespective of initial assessment, the mumbers who indicated that they had not been given a sound knowledge of recent teaching techniques was approximately $40 \%$ of the Mon and $50 \%$ of the Women.

Nonconformists.
For each sex those who both regarded the question as important and considered themselves in receipt of such knowledge were less than $50 \%$ of the total sample of Nonconformists. IVen when the first assessment (1.0, the importance of the question) is ignored the figures still remain below 50\% of each sample.

Question Nos. $11 / 21$ and Description
A sound knowledge of child nsychology (Table 404 page 754) Vocational

The ebove question was included since $25 \%$ of the College course was contained in this area. Also, such knowledge would appear to be of vital frportance to the student and teacher. It was of note therefore that although only a ainority of the Vocationalists had doubts as to 1 ts importance, only 13 Ren and 20 Women indicated that they had a sound knowledge of child psychology. The number of students who were uncertain totalled 28 Hen and 34 Homen. Thus, the indication was that for this sample the acceptability of the College course in child psychology was lacking somewhat since all of these students had spent fifteon weeks or more in schools ( 10 of which were after the course in child psychology).

Academic
A very small minority of both Men and Women Academics indicated that they regarded a sound knowledge of child psychology as being unimportant. The studonts who concluded that they had in fact been given a sound knowledge of this area of psychology totalled 26. The figures represented approximately $36 \%$ of the Nen and $50 \%$ of the Women with the bulk of the remainder being uncertain.

## Collegiato

As in the caso of both Vocationalists and Academics, only a minority of the Collegiates expressed a view that the area was unimportant to them. Of the 19 Hen and 21 Women who were uncertain as to its importance, the majority remained in this category. A further 10 Men and 12 Women indicated a lack of knowledge in this area. The remaining group which recoried positive scores on both criteria (i.e. expectation and self-assessment) totalled 36 hen and 40 Women which when expressed as percentages represented $35 \%$ and $31 \%$ respectively.

## Nonconformist

Irrespective of whether or not they thought a knowledge of child psychology to be important, only $44.8 \%$ of the hen and $30 \%$ of the Voren indicated that they had a sound knowledse of this important area. A further $31 \%$ of the ten and $50 \%$ of the women were uncertain as to their own knowledge whilst two Men and three Women indicated that they frankly had not got a good knowledge of this area of psychology.

Question Lio3. $1 k / 2 k$ and Descrintion (Table 405 nage 755 ) The ability to make accurate diamoses e. R. of maledjustment, reading difficulties, physical defects etc.

## Vocational

Although the area covered by the above question
lies in the realm of qualified experts, nevertheless, many teachers appear to have to make preliminary diagnoses prior to expert help being scught from outside the school setting. In the present case, a large majority of the students agreed that it was of importance although only $36 \%$ of the nen and $17 \%$ of the Women concluded that they had such ability. A further $35 \%$ of tho Mon and $61 \%$ of the Yomen were uncertain as to their ability in this area leaving some $11 \%$ of tho Nen and $20 \%$ of the Women who indicated that they did in fact not have such abilitios.

## Academic

Excopt for three Men and one Woman, the data In Table 405 on pago 755 was confined to the botton two rows of entries. Of note was the fact that the 'Uncertain' category contained more frequencies than elther the disagree or the agree areas of the table (1.e. $34 \%$ of Men and $27 \%$ of Women). Only $28 \%$ of the Men and $23 \%$ of the vomen indicated that they did not have such abilities.

## Colleatate

The ereat majority of the responses vare confined to the bottom two rows of Table 405 on page 755 Thus, with the exception of 8 ken and 10 Women who ofther regarded tho area as unimportant or
were uncertain, the majority of the students considered the content of the question to be important.

Of particular note was the fact that whilst (irrespective of initial response conceming the importance of the question) $23 \%$ of the Ken indicated that they did have such abilities, a further $23 \%$ did not whilst 54\% were uncertain. For the Women the comparable figures were 19, 23 and 50\% rospectivoly. Thus, in this sample over half the Mon and Yomen would be leaving College uncertain as to whether they had a useful and usable basis of child diagnoses otc.

## Monconformist

All but two of the Women and all but five of the Men regarded the question as being important and most of these frequencies were recorded in the uncertain category. Irrespective of initial response conceming the importance of the area, $34 \%$ of the Men and $15 \%$ of the Women concluded that they did not have the ability whilst those that did were $28 \%$ and $10 \%$ respectively. This left $38 \%$ of the Hen and $75 \%$ of the Women who were uncertain as to their possession of such abilities.

SUMMARY
Just how far the eleven questions and the patterns of response were valid indications of areas of importance and true indications of the viewpoint of the
students in the four samples is hard to say. The preliminary rellability study indicated clearly that a high degree of consistency was present between the test and the re-test. On this basis the following conclusions were dram.

Question 1a/2a.
A nleasine manner and apnearance (1.e. well-spoken and with dress annropriate to a member of the profession).

Each eroup regarded the question as important and a large majority of the students considered that they displayed these qualities. This latter category was not 30 clearly developed for the Nonconformists.

Question No. $1 \mathrm{~b} / 2 \mathrm{~b}$.
The ability to grain the respect and confidence of the mupils with whom he or she deals.

The question was regarded as important by each of the four groups. With the exception of the Nonconfornists who recorded about $25 \%$ of their responses in the 'uncertain' category a large majority of the other groups stated that they had such an ability.

Cuestion No. $1 \mathrm{c} / 2 \mathrm{c}$. An ability to ret on with colleagues.

The results were very similar to those recorded for question $1 \mathrm{~b} / 2 \mathrm{~b}$. Again, the Nonconformists did not have percentages of agreement on both criteria
(1.e. expectation/realisation) as did the three remaining Ercups. The position was particularly marked for the Nonconformist Women.

Guestion No. $1 \mathrm{~d} / 2 \mathrm{~d}_{\text {. }}$
The ability to commicate effectively with pupils.
The importance of the question was endorsed by the four groups. Each group also indicated that it had such an ability but for the Vocational Women, the Collegiate Hen and Womon and tho Nonconformist Women a number of responses vero located in the 'uncertain' category.

Suestion Ho. 1e/2e.
An appearance of confidence in front of children.
Each of the four groups endorsed the importance of the question. Acknowledgement of the possession of the trait came from each group in general but there was a tendency for each group of Vomen to have a number of responses located in the 'uncertain' category.

## Question No. $11 / 25$.

## A broad cultural knowledse.

In general, the students in each group were in agreement that a broad cultural inowledge should bo possossed by entrants to the teachins profession. Each group had a sizeable group of students who concluded that they did not in fact have a broad cultural knowledge whilst many others accorded their responses
in the 'uncertain' category. For the women in each of the four orientations less than $50 \%$ of each sample indicated that they had a broad cultural knowledse whilst this was true of the Collegiato lien.


#### Abstract

Cuostion Ho. 1s/2s. High administrativo ability. Although a small majority of each of the four Eroups concluded that the question was important there were many responses efther in ciagrecement or in the uncertain categories. The general conclusion concerning whethor or not tho students in each group had such a level of administrative ability was that many were uncertain with the remainder being divided between agreement and disagreement with a tendency torards agrecment having fractionally more responses.


## Cuestion No. Ih/2h.

A rood academic record.
Tho results vere mixed and indicated that whilst many students considered the question important, conslderable percentages (ober $50 \%$ in the case of the Honconformist Men) indicated that many students did not regard tho area as important or were uncertain.

Only a half of the Vocationalists indicated that they had a good academic record. Milst the Academies had over $50 \%$ of the responses in agreement, the Collegiates had fever with many frequencies being
located in tho uncertain category, Less than 50\% of the Nonconformists of each sex indicated that they had a good academic record.

Gestion No. 11/21.
A sound knowledise of recent devolonments in the technioues of teaching,

A majority of the students in each of the four groups indicated that the question was important. The number of students who indicated that they had a sound knowledge of recent developments in the techniques of teaching was less than 50\% in the case of each of the four samples of Men whilst this held true for the Academic, Collegiate and Nonconformist Women. For the remaining frequencies more were located in the uncertain category than in vievpoints expressing a lack of knowledge of recent developments.

Cuestion No. 21/21. A sound knovzedge of child nsychology.

Although a cajority of students in each sample indicated that a knowledge of child psychology was inportant, there were a number of responses located in both the unimportant and uncertain catecorios. The numbers of students who regarded themelves as having a sound knowledse of child psychology were in a minority in each case.

Of the remainder in each group many were located in the uncertain category with a minority indicating that they did not have such knowledge.

Cuestion No. $7 k / 2 k$.
The ability to make accurate diegnoses ( 0.0 . of
maladjustment, reading difficultie3, physical defects etc)
A majority of each of the four groups of students
indicated that they regarded the question as important. In deciding whether or not they had such ability themselves, the students tended to be uncertain with more responses being located in this category than in either the Disagree/Strongly Disagree categories or their polar opposites.


#### Abstract

In retrospect the numbor of important differences between the eroups mere very few indeed. The main conclusion of note was that the groups were very similar and that the results mainly indicated areas of discrepancy between the aims and intentions of the College tutorial staff and the student assessments of the same items. From this point of Vicw, the four ercups terded to present a united front. The relovant detalls conceming these overall areas of discropancy were as follows:


a) Cuestion No. $1 \mathrm{~d} / 2 \mathrm{~d}$ The ability to comunicate effectively with pupils received a number of responses (mainly from Women) who were uncertain as to their degreo of effectiveness in this area.
b) The above finding was supported by the finding that a number of Vowen in each oricntation appeared to express
doubts as to their ability to appear confident in front of children (Cuestion NO. 1e/20).
c) Less than $50^{\prime}$ of each group of Yomen and Collegiate Sen indicated that they had a broad cultural knowledge. Since most of these Vomen would be enterinc Primary schools one might have assumed a broad cultural lnovledge to have been an important requisite for enhanced teaching and a positive aid in educating children. Evidence for this assumption is lacking and limits the validity of tho point.
d) Bearing in mind the oft-quoted complaint of headteachers that many of the products of our Colleges of Iducation ars full of theory but cannot even mark a register, the results of Cuestion $\mathrm{lg}_{\mathrm{g}} / 2 \mathrm{~g}$ concerning the need for and possession of hith administrative ability were interesting. Nany students wero not sure if such an attributo was important, or if in fact they possessed it. Although a amall majority of students resarded the point as boing important and expressed possession of the quality, the numbers who were in disagreement or were uncertain were considcrable.
e) Cuestion $\mathrm{ih} / \mathrm{hh}$ concerned the importance of a good academic record. Shipman (1965) indicated that deep and extensive academic study was one of the basic tenets of College education. The results with the
present samples indicated that many students (over 50\% of the Nonconformist (lon) either did not regard the area as boing frportant or wero uncertain. With the exception of the Academics, each of the orientations had considerable percentases of irequencies indicating that they either did not have eood academic records or were uncertain.
f) One night have supposed that a sound knowledge of recent developments in the techniques of teaching (Cuestion $11 / 21$ ) would have been at the forefront of the aims of members of the college staff (and in particular those employed as mombers of the zucation Iepartment). Nevertheless, a majority of each orientation of both scxes except the Vocationalist Yomon indicated that they did not feel that thoy had been elven a grounding in recent developments in the techniques of teaching. In addition, notable percentages of frequencies woro located in the IUncertain' catecory for many of the samples.

ह) Tho findings for cuestion $1 y / 2 j$ concerning a sound lonowledse of child psychology were similar to those for cuestion 11/21 in that a mafority of students in each orientation of either sex recorded that whilst they regarded a knowledge of child psychology as being of importance, they did not possess such a knowledge. The assescments were made after the completion of all of the College courses on psychology. Such findings indicate quite clearly the way in which the intentions
of College Tutorial staff and student reception were at odds with one another.
h) EInally, in deciding whether or not they had the ability to nake accurato diagnoses of maladjustment, reading difficulties and physical defects otc. (Muestion $1 k / 2 k$ ) the students in general recorded a large cecreo of Uneertainty. Mhether or not such diagnoses ought to be made by nor-specialists is a moot point but since such areas were certainly Given extensive treatinent in Primiry school methodology and to some extent in Sccondary clanses the record of rosponses vas intercstins.

In olght out of the total of cleven areas sempled, the results in terms of the possossion of mowledec, skills and expertise indicatod points of discrepancy batween tho aims of tho College and the actual recorded observations of the students. Sucis Indings corroborate in some ways those of Shipman (1965) who postulated a dichotony between what students indicated to their tutors in public and what their more fundamental and important 'off-stage' opinions and attitudes actually were. The only evidence which the present writer has that the views and opinions recorded abovo were in fact 'off-stage' Viewpoints (and thorefore tho more valuablo ones to elicit) was the fact that tho coments of futors
on what students had often said that thoy had obtained from a lecture, seminar or tutorial were much more in Ine with the assumptions of the Mutor than what has actually been recorded abovo. To this oxtent tho present records and the observations of the Tutors of thoir om courses revealed areas of discropancy of Importance and worthy of further consideration in the Ature.

In an attempt to assess the views of the students towards
a) the Fersonal Tutor system
b) College residential facilities.
the following items were collected. Pilot work reduced the original number to those outlined below. The College spent a lot of time and effort in trying to ensure that each student had a tutor to whom he could turn in times of trouble. Also much money and time was spent in continually improving residential, day-room (i.e. rooms whers you could work or leave your belongings prior to returning to College lodgings) and lodgings facilities. The vetting of lodgings went on continuously and often resulted in improvements being made or landladies being added to or removed from the College iist. In view of these precautions, the results which follow are somewhat surprising.

The question was asked - "inen you are having difficulty with College work which of the following people do you see? Rank categories in order of importance to yourself using the number 1 to indicate your first choice and so on, but ignore categories which you never consider at all. The categories were as follows:
a) Other students
b) My Personal Tutor
c) the particular Subject Iutor
d) Other Tutors
e) No one at all.

The rankings which emerged were interesting because although there were relatively few differences of note between particular primary philosophical orientations, the results indicated the very limited extent to which the College was succeeding in the area of fostering the personal welfare of the students. The following summary indicates the main findings of the enalysis and is followed by a display of the individual tables. Category Ranking No. of Groups involved

1
No one at all All.

The remaining categories, viz:other students, my Forsonal Tutor, the particular subject tutor and other tutors were not mentioned at all by a large majority of the groups. The small points of note which emerged were as follows.

## Category - Other Tutors.

This category was not mentioned by between one third and one half of the Vocationalists and Academics. The figures for the Colleglate Women and the Nonconformists (both Men and Women were somewhat higher). It was ranked second in order of importance by roughly $1 / 3$ of each group although the Nonconformist score was only 16\%. There was a tendency for the Vocationalists and Academics who ranked it at all to give it a higher rank than the Collegiates or the Nonconformists. Category - Other Students.

This category was ranked second in order of importance by a minority of the students. This finding zs
is only of minor importance but it adds information in a small way to the total picture of rankings.

Category - My Personal Tutor.
Although the overwhelming proportion of students In each group did not rank this category at all; $14 \%$ of the Nonconformists gave this category first ranking. Such a result was expected in view of the frequent contact with College tutors and administrative staff which these students had which ended in acrimony and bad feelings. SUMMARY

The following tables outline the rankings which emerged from the analysis. The main point of note was the fact that in spite of the time and effort which the College Administration placed upon personal welfare the figures indicate that in general (and in particular as far as the Personal Tutor system was involved) they were not succeeding in integrating tutors and students at this level of social intercourse.
Table 42 Categoxy - IVo one at all.


Table 43 Category - Other Tutors.

| Ranking | Vocationalists. | Academics | Collegiates | Konconformists. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men mo. Mot. | Men Mo. liot. | Men ro. lot. | Men Vo. | Tot. |
| Not | 36\% 52\% 46\% | 39\% $50 \% 44 \%$ | 47\% 67\% 53\% | 66\% 85\% | 74\% |
| Ranised. | 193150 | $14 \cdot 13 \quad 27$ | $49 \quad 86135$ | 1917 | 36 |
| 1. | $\begin{array}{ccc}11 \% & 14 \% & 13 \% \\ 6 & 8 & 14\end{array}$ | $\begin{array}{cccc} 8 \% & 19 \% & 13 \% \\ 3 & 5 & 8 \end{array}$ | $\begin{array}{lll} 11 \% & 6 \% & 8 \% \\ 11 & 8 & 19 \end{array}$ | $\begin{array}{cc} 10 \% & 5 \% \\ 3 & 1 \end{array}$ | $8 \%$ |
| 2. | $\begin{array}{lll} 36 \% & 29 \% & 32 \% \\ 19 & 17 & 36 \end{array}$ | $\begin{array}{lcc} 41 \% \\ 15 & 23 \% & 34 \% \end{array}$ | $\begin{array}{lll} 38 \% & 23 \% & 30 \% \\ 39 & 30 & 69 \end{array}$ | ${ }_{6}^{21 \%} 10^{\prime}$ | $\begin{gathered} 16 \% \\ 8 \end{gathered}$ |
| 3. | $\begin{array}{ccc} 17 \% & 5 \% & 11 \% \\ 9 & 3 & 12 \end{array}$ | $\begin{array}{lll} 6 \% & 8 \% & 6 \% \\ 2 & 2 & 4 \end{array}$ | $\begin{array}{lll} 3 \% & 3 \% & 3 \% \\ 3 & 4 & 7 \end{array}$ | $0: 0$ | 0 |
| 4. |  | $\begin{array}{ll} 6 \% & 3 \% \\ 2 & 2 \\ \hline \end{array}$ | $\begin{array}{lll} 1 \% & 1 \% & 1 \% \\ 1 & 1 & 2 \end{array}$ | $\begin{aligned} & 3 \% \\ & 1 \end{aligned}$ | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ |

Table ${ }^{4!}$
Category - Other students.

| Ranking | $\begin{aligned} & \text { Vocation- } \\ & \text { alists. } \end{aligned}$ | Academics | Collegiates | Honconformists. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men wo. cot. | Hen \%o. Tot. | Men Wo. Tot. | ben |  | Tot. |
| Not | 55\% 78\% 67\% | 72\% 73\% 73\% | 76\% 72\% 74\% | 86\% | 95\% | 90\% |
| Ranked | 294675 | 261945 | $79 \quad 94173$ |  | 19 | 44 |
| 1. | $\begin{array}{llll} 9 \% & 0 & 4 \% \\ 5 & 0 & 5 \end{array}$ | $\begin{array}{lll} 6 \% & 0 & 3 \% \\ 2 & 0 & 2 \end{array}$ | $\begin{array}{lll} 2 \% & 3 \% & 3 \% \\ 2 & 4 & 6 \end{array}$ |  | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |
| 2. | $\begin{array}{ccc} 21 \% & 12 \% & 16 \% \\ 11 & 7 & 18 \end{array}$ | $\begin{array}{ccc}14 \% & 19 \% & 16 \% \\ 5 & 10\end{array}$ | $11 \%$ $19 \%$ $15 \%$ <br> 11   | $14 \%$ 4 | 5\% | $\begin{gathered} 10 \% \\ 5 \end{gathered}$ |
| 3. | $5 \% \quad 10 \%$ | $\begin{array}{llll} 8 \% & 8 \% & 8 \% \\ 3 & 2 & 5 \end{array}$ | $\begin{array}{lll} 8 \% & 4 \% & 6 \% \\ 8 & 5 & 13 \end{array}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |
| 4. | $\begin{array}{ccc} 6 \% & 2 \% & 4 \% \\ 3 & 1 & 4 \end{array}$ | $\begin{array}{lll} 0 & 0 & 0 \\ 0 & 0 & 0 \end{array}$ | $\begin{array}{lll} 3 & 1 & 2 \\ 3 & 1 & 4 \end{array}$ |  | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |
| 5. |  |  | $\begin{array}{ll} 1 \% & 0 \\ 1 & 1 \\ \hline \end{array}$ |  |  |  |

Table 45 Category - My Personal Tutor.

| Ranking | Vocation alists. |  |  | Academics |  |  | Colleriates |  |  | Nonconformists |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hen wo, tot. |  |  | Men wo. Tot. |  |  |  |  |  | Hen | Wo. | 10 |
| Not Ranked | $92 \%$ | $\begin{aligned} & 90 \% \\ & 531 \end{aligned}$ | 30\% | $\begin{aligned} & 89 \% \\ & 32 \end{aligned}$ | $\begin{aligned} & 92 \% \\ & 24 \end{aligned}$ | 90\% | 37\% 92\% 91\% |  |  |  | $\begin{aligned} & 80 \% \\ & 160 \end{aligned}$ | $\begin{aligned} & 82 \% \\ & 40 \end{aligned}$ |
| 1 | $\begin{aligned} & 4 \% \\ & 2 \end{aligned}$ | $\frac{25}{1}$ | $\frac{3 \%}{3}$ | $\frac{8 \%}{3}$ | $4 \%$ | $\frac{6 \%}{4 \%}$ | $\frac{3 \%}{3}$ | $\frac{3 \%}{4}$ | $\frac{3}{7}$ | $\begin{gathered} 14 \% \\ 4 \end{gathered}$ |  | $\begin{gathered} 14 \% \\ 7 \end{gathered}$ |
| 2 | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ | $\frac{5 \%}{3}$ | $\frac{4 \%}{4 \%}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 4 \% \\ & 1 \% \end{aligned}$ | ${ }_{1}^{2}$ | $\begin{aligned} & 4 \% \\ & 4 \% \end{aligned}$ | $\frac{1}{1}:$ | $\frac{2}{5}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |
| 3 | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{1 \%}{1}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{2 \%}{2}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{1 \%}{2}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |
| 4 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 3 \prime \prime \\ & \hline \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ |  | $\frac{1 \%}{1 \%}$ | $\begin{aligned} & 0 \\ & 1 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $0$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |
| 5 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{3 \%}{2}$ | $\frac{2 \%}{2}$ | $0$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  | $\frac{3 \%}{4}$ | $\begin{aligned} & 3 \% \\ & 8 \end{aligned}$ | $\frac{3 \%}{1}$ | $1$ | $\begin{aligned} & 4 \% \\ & 2 \end{aligned}$ |

Table 46 Caterory - The Particular Subject Tutor

| Ranking | $\begin{aligned} & \text { Vocation- } \\ & \text { alists. } \end{aligned}$ |  |  | Academics |  |  | Collegiates |  |  | Honconformests |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 10. | , |  | , |  |  |  | ot. |
| Not Ranised | $\begin{aligned} & 84 \% 95 \% 89 \% \\ & 45 \quad 56101 \end{aligned}$ |  |  | $\begin{array}{lll} 77 \% & 96 \% \\ 28 & 25 & 53 \% \end{array}$ |  |  | 35\% 90\% 80\% 83116204 |  |  |  | $\begin{array}{r} 100 \% \\ 20 \% \end{array}$ | $\begin{aligned} & 96 \% \\ & 47 \end{aligned}$ |
| 1 | $\frac{2,}{1}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{1 \%}{1}$ | $\begin{gathered} 14 \% \\ 5 \end{gathered}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 8 \% \\ & 5 \end{aligned}$ | $\frac{1}{1} \%_{1}^{\prime \prime}$ | $\frac{2 \pi}{2}$ | $\frac{1 \%}{3 \%}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |
| 2 | $\frac{4 \%}{2}$ | $\frac{3 \%}{2}$ | $4 \%$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 4 \% \\ & 1 \end{aligned}$ | $2 \%$ | $\frac{3 \%}{3}$ | $3^{2 \prime}$ | $\begin{aligned} & 3 \% \\ & 6 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |
| 3 | $\begin{aligned} & 6, \% \\ & 3 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{3 \%}{3}$ | $6 \%$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{3 \%}{2}$ | $3 \%$ | $\frac{3 \%}{4}$ | $7$ | $7$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 4 \% \\ & 2 \end{aligned}$ |
| 4 | $\begin{aligned} & 4 \% \\ & 2 \% \end{aligned}$ | $\frac{2 ;}{1}$ | $3 \%$ |  | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 6 \% \\ & 6 \% \end{aligned}$ |  | $\begin{gathered} 4 \% \% \\ 10 \end{gathered}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $0$ | $0$ |
| 5 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $3 \%$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $2 \%$ | $\frac{2 \%}{2}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{1}{2} \%$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |

Table 47 Iten - Frequency of Meetings with the Personal mutor.

| Category | $\begin{aligned} & \text { Vocation- } \\ & \text { alist3. } \end{aligned}$ |  |  | Academics |  |  | Collegiates |  |  | Honconformists |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | men Wo. lot. |  |  | 隹边 | Wo. | Iot. | fen | WO. | Tot. | pien | Ho. | Hot. |
| 1. Very |  |  |  |  |  |  |  |  |  |  |  |  |
| rarely or | 8\% | 2\% | 4\% | 14\% | 15\% | 14\% | $8 \%$ |  | 6\% | 17\% | 0 | 10\% |
| never. | 4. | 1 | 5 | 5 | 4 | 9 | 8. | 5 |  | 5 | 0 | 5 |
| 2. Under | $17 \%$9 |  | $21 \%$ |  | $\begin{gathered} 12 \% \\ 3 \end{gathered}$ | $\begin{aligned} & 23 \% \\ & 14 \end{aligned}$ | $\begin{aligned} & 28 \% \\ & 29 \end{aligned}$ |  | $\begin{aligned} & 25 \% \\ & 58 \end{aligned}$ | 38\% | 0 | $\begin{aligned} & 22 \% \\ & 11 \end{aligned}$ |
| once per |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $\begin{aligned} & 39 \% 48 \% \\ & 21.29 \end{aligned}$ |  | $\begin{aligned} & 44 \% \\ & 50 \end{aligned}$ | 28\% | $\begin{aligned} & 50 \% \\ & 13 \end{aligned}$ | $\begin{aligned} & 37 \% \\ & 23 \end{aligned}$ | $45 \%$47 | $\begin{aligned} & 48 \% 47 \% \\ & 62109 \end{aligned}$ |  |  |  |  |
| 3. Once |  |  |  |  |  |  |  |  |  | 55\% | $\begin{aligned} & 34 \% \\ & 17 \end{aligned}$ |  |
| per sub- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| term. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Less | $\begin{aligned} & 21 \% \\ & 11 \end{aligned}$ | $\frac{19 \%}{11}$ | $20 \%$ | $\begin{gathered} 22 \% \\ 8 \end{gathered}$ | $\frac{23!}{6}$ | $\begin{aligned} & 23 \% \\ & 14 \end{aligned}$ | $\begin{aligned} & 13 \% \\ & 13 \end{aligned}$ |  | $\begin{aligned} & 15 \% \\ & 35 \end{aligned}$ |  | 40\% | $\begin{aligned} & 20 \% \\ & 10 \end{aligned}$ |
| than once per week. |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Once | $\begin{gathered} 15 \% \\ 8 \end{gathered}$ | $\begin{aligned} & 7 \% \quad 11 \% \\ & 4 \end{aligned}$ |  | $\begin{aligned} & 6 \% \\ & 2 \end{aligned}$ | 00 | $\frac{3 n}{2}$ | $6 \%$ | $10^{8 \%}$ | $16^{7 \%}$ | $\begin{gathered} 17 \% \\ 5 \end{gathered}$ | $\frac{5 \%}{1 \%} 6$ |  |
| per week |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6. Each Day. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $\frac{1 \%}{1}$ | 0 | 0 | 0 | 0 |

With the exception the Academic lien and the Nonconformist Hen, Category 3 (Once per sub-term) contained the larger percentages for each sample of Men and Women. However, these percentages only exceeded $50 \%$ in the cases of the Acadenic and Nonconformist Vomen. The percentages were spread over five categories and did not indicate any particular pattern except that more Academics saw their personal tutors less frequently than the other groups and that a larger percentase of the Nonconformist Yomen saw them more frequently.

Table 48 Item - My Fersonal Tutor gives me considerable help with my nersonal problems.

| Category | $\begin{aligned} & \text { Vocation } \\ & \text { alists } \end{aligned}$ | Academics | Collegiates | Nonconformists. |
| :---: | :---: | :---: | :---: | :---: |
|  | Men liog Tote | Men wo. rot. | lien wo. Hot. | Men Wo. Iot. |
| 1. S. | 8\% 7\% 7\% | 22\% 8\% 16\% | 18\% 14\% 16\% | 34\% 25\% 31\% |
| Disasree | $4 \quad 48$ | 8210 | $1918 \quad 37$ | 10515 |
| 2. Disagree | 49\% 39\% 43\% | 22\% 27\% $24 \%$ | 37\% 40\% 39\% | 34\% 60\% 45\% |
|  | $26 \cdot 23: 49$ | $8 \quad 715$ | $38 \quad 51 \quad 89$ | 10. 12.22 |
| 3, Uncert. | $\begin{array}{lll} 0 & 1 \% & 1 \% \\ 0 & 1 & 1 \end{array}$ | $\begin{array}{lll}3 \% 2 & 0 & 2 \\ 1 & 0 & 1\end{array}$ | $\begin{array}{lll}2 \% & 2 \% & 2 \% \\ 2 & 3 & 5\end{array}$ | $\begin{array}{lll} 3 \% & 0 & 2 \% \\ 1 & 0 & 1 \end{array}$ |
| 4. Agreo | 32\% 39\% 36\% | 45\% 57\% 50\% | 33\% 33\% 33\% | 20\% 15\% 18\% |
|  | 172340 | $16 \quad 1531$ | $34 \quad 43 \quad 77$ | 639 |
| 5.S. | 11\% 14\% $13 \%$ | 8\% 8\% 8\% | 10\% 11\% 10\% | 7\% 0 4\% |
| Agree. | $6 \quad 814$ | 325 | $1014 \quad 24$ | 202 |

Definite views were indicated by tho very low percentages recorded in the 'Uncertain' category. The Vocational Yomen and the Academics (both Men and Yomen) were the only groups who had more favourable than unfavourable responses. Table 47 from the last item to be reviewed indicated that the Academics did in fact see their Personal Tutors less frequently than the remaining groups.

The main findings from the above table was the contrast between the positive viewpoint of the Academics (particularly the Women) and the strongly negative feelings of the Nonconformists.

Table 49 Item - The College is interested in you as an individual.


The scores polarised between Categories $1 / 2$ and $4 / 5$ with very fow responses being recorded in the uncertain category. For the Vocationalist and Collegiate Ken the responses in Categories $1 / 2$ and $4 / 5$ were similar whereas In the case of the Nonconformist Nen far more indicated a negative attitude. This trend was continued but at a less intensive levol by the Academic Nen.

With the exception of the Academics, each group of Homen had a negative attitude. When the sexes were combined the totals indicated that only the Academies had more responses in Categories $4 / 5$ than in Categorios 1/2.

Table 50. Item - My experience of College Residential facilities is that they are first-class.

| Category | $\begin{aligned} & \text { Vocation } \\ & \text { altata } \end{aligned}$ | Academics | Collegiates | Honconformists. Men Mo. Tot. |
| :---: | :---: | :---: | :---: | :---: |
|  | Men lio. Tot. | Hen lio. iot |  |  |
| Strongly <br> Disagree | $\begin{array}{cc} 15 \% & 10 \% \\ 8 & 13 \% \\ 14 \end{array}$ | $\begin{array}{cc} 17 \% & 27 \% \\ 6 & 21 \% \\ \hline \end{array}$ | $\begin{aligned} & 6 \% 12 \% \\ & 6 \% \\ & 6 \% \end{aligned}$ | $\begin{gathered} 7 \% \\ 2 \end{gathered} \frac{15 \%}{3} \quad \begin{gathered} 10 \% \\ 5 \end{gathered}$ |
| Disagree | $13 \%$ $7 \%$ <br> 7 $40 \%$ | $\begin{array}{ll}36 \% 12 \% ~ & 26 \% \\ 13 & 36\end{array}$ | 1\% $16 \%$ 2\% 22 | $\begin{array}{ccc} 21 \% & 5 \% & 14 \% \\ \hline \end{array}$ |
| Uncert. | $\begin{array}{lll} 2 \% 6 & 2 \% \\ 1 \end{array}$ | $\begin{array}{lll} 0 & 0 \\ 0 & 0 & 0 \end{array}$ | $\begin{array}{lll} 12 \% & 2 \% & 6 \% \\ 12 \end{array}$ | $\begin{array}{lll} 0 & 5 \% & 2 \% \\ 0 & 1 & 1 \end{array}$ |
| Agree | $\begin{array}{ll} 55 \% & 73 \% \\ 29 & 63 \% \\ 43 \end{array}$ | $\begin{aligned} & 41 \% \\ & 15 \\ & 15 \% \\ & 13 \\ & 43 \% \end{aligned}$ | $65 \% 64 \% 65 \%$ <br> 6782149 | $\begin{aligned} & 58 \% \\ & 17 \\ & 17 \\ & 14 \end{aligned}$ |
| Strongly Acree. | $\begin{array}{ccc} 15 \% & 8 \% & 12 \% \\ 8 & 5 \end{array}$ | $\begin{array}{ll} 6 \% & 12 \% \\ 2 & 8 \% \\ \hline \end{array}$ | $\frac{16 \%}{17} \quad \frac{6 \%}{8} \quad \frac{11 \%}{25}$ | $\begin{array}{cccc}14 \% & 5 \% & 10 \% \\ 4 & 1 & 5\end{array}$ |

The Academics indicated a diversity of opinion within their own ranks. Whereas the larger percentage of Vomen regarded the College residential facilities as firstclass only $47 \%$ of the Men subscribed to this view. The Academics were the only group to have no percentages located In the 'uncertain' category. The rest of the samples clearly indicated that they also regarded the facilities as being of a high order. The College residential facilities were warm, comfortable, freely avallablo and therefore tended to be all-purpose for 24 hours of the day.

Table 57 . Item - Hy experience of Collego Day Room: facilities is that they are first-ciass.


Three points of note emerge from the above table. Initially it is noted that the degree of demunciation of the day rooms is large. In no group did less than $74 \%$ of the responses indicate that the day rooms vere anythine but first-class. The general trend (except for the Vocationalists) was for marginally more Wowen than Men in each group to have unfavourable views. Finally, the Academics although having a majority of their percentages located in categories 1 and 2 had relatively smaller percentages here than any of the three remaining groups. The difference in pattorns of response between this item concerning the College 'Day Room' facilities and the previous item concerning College 'Residential' facilities can be explained in the following terms. The "Day Rooms" were utilitarian in the extreme but were expected by many students to replace their residential rooms. -

In providing them the College authorities had no such purpose in mind. Compared with the very comfortable and highly desirable study-bedrooms, the Day-fooms came a poor second. Thus; when the students made comparisons or considered the quality of the Day-Room accommodation they saw them in very negative (and probably very unfair) teras. They were never intended to replace the functions afforded by the study-bedrooms (to which the majortty of the students returned in the third-year of their course).

Table 52 Item My experience of Collego lodgings

| Category | $\begin{aligned} & \text { Vocation } \\ & \text { alists } \end{aligned}$ | Academics | Colleriates | Honconformists. |
| :---: | :---: | :---: | :---: | :---: |
|  | Fen wo. lot. | Men Ho. ${ }^{\text {atot. }}$ | foen lio. iot. | Lan lio. lot. |
| 1. S. | 23\% 20\% 21\% | 22\% 35\% 27\% | 15\% 13\% 14\% | 17\% 20\% 18\% |
| Disagree | $12 \quad 12 \quad 24$ | 3917 | $15 \quad 1732$ |  |
| 2 | 19\% 14\% 16\% | 17\% 19\% 18\% | 14\% 16\% $25 \%$ | 35\% 40\% 38\% |
| Disagree | $10 \quad 318$ | 6.5 .11 | 142135 | $10 \quad 818$ |
|  | 35\% 39\% 38\% | 36\% 38\% 37\% | 40\% 38\% 33\% | 24\% 25\% 24\% |
| Uncert. | 192342 | 131023 | 424890 | $7 \quad 5 \quad 12$ |
| 4. | 2\% 2\% 2\% | $0 \quad 0 \quad 0$ | 1\% $4 \% \quad 3 \%$ | 10\% 0 6\% |
| Agree. | 112 | $0 \quad 0 \quad 0$ | 156 | 303 |
| 5 S | 21\% $25 \%$ 23\% | 25\% 8\% 280 | 30\% 29\% $30 \%$ | $14 \% 15 \% 14 \%$ |
| AEree. | $11 \quad 15 \quad 26$ | 9211 | $31 \quad 38 \quad 69$ | $4 \quad 3 \quad 7$ |

Very fer students had experience of more than two College lodings during their three years at College. This limitation in experience may have resulted in the relatively largo percontago of responses in the iuncertain' category.

The only point of note from the above table was the stronger negative view of the Nonconformists (both Men and Women) and the Academic women and the much more positive view of the Collegiates. It should be noted, however, that approximately one-third or more of each group of Men and Vomen combined indicated a degree of diesatisfaction with College lodgings.

SUMAARY
The maln conclusion to arise from this section
of the analysis was that in spite of the efforts of the College to ensure that the personal walfare of the students was catered for, the students in their turn rejected the scheme. Evidence for this was found in the large proportions of students who when experiencing problems connected with their College work sought no one at all to help them with their needs. Frequencies of meetings with Personal Tutors were not indicative of wide differences between primary philosophical orientations. Tutors did not appear to be consulted by many Nonconformists with personal problems whereas for the three remaining groups the percentages approximated 50/50 in terms of the positive help given by the tutor in the area of personal affairs. There was a general tendency for the Nonconformists to exhibit a negative attitude to this part of College life.

The trend of opinion concerning the various Collego residential, day-room and lodging facilities mas that all groups foum the residential facilitios good (although the Academics indicated some diversity of opinion); that dayroom facilities wera very poor indeed and that the views of the College lodgings facilities were restricted becauso of inmited experience. In this latter case, the negative views of the Nonconformists were once more to the fore.

## SOCIAL PARTICIPATION.

As in the case of the personal welfare of the students, the College Authorities spent time and money in providing extensive facilities such as gymnasia, a licenced bar, a snack bar, swiming facilities, a large lounge for students, a cinema and a host of other items. The specific aim was to provide those items deemed necessary (by both staff and student representatives) for a full social life on the campus. To the writer, the findines of Shipman (1965) were readily applicable here, namely that an increase in size from some 400 or so students to over 1600 in eight short years had resulted in a loss of identity and corporate Iife in the College. The intinate atmosphere (in which a College concert could be quaranteed to attract $95 \%$ of both Staff and Students) had been lost by the time the present third year population had entered College. The 'Box and Cox' system of the modified three-term year made the enjoying of a full social life over any extended period in College very hard to achieve. Fragmentation, in this case had produced an amorphous mass of students, and societies and activities attended by small bands of individuals. The net result was that in some ways the college was regarded by rany students as an area which could service their various professional needs.

The following discrete items were assembled and adopted via a rilot Study to establish their acceptability and reliability. They were intended to sample the area covered by the term 'social participation'. Under the

General statement of
"I have taken part in the following activities during my time at College", the following areas were assessed.
a) Plays and other dramatic presentations.
b) Choir.
c) College games or sports teams.
d) Dances (other than jives or hops).
e) Club activities.
f) Jives and Hops.
E) None of the above.

The details which are given below may be summarised briefly in the following terms. The actual patterns of response are to be found in Tables 406 to 411 in the Appendix pp 757-758.

## a) Mays and other dramatic oresentations.

Over $77 \%$ of each sample save the Nonconformists never took part in dramatic presentations of any kind. For this latter group $52 \%$ of the Men and $80 \%$ of the Women never took part. The remaining 43\% of Nonconformist Men took part either occasionally ( $24 \%$ ) or frequently ( $24 \%$ ). There was a tendency for the Nonconfornist Ven to be members of the Drama Department and thus would be in a more favourable position for more frequent participation.

## b) Choir

The size of the choir and both Staff and student participation had declined somewhat with the growth of the

Collece. Very few members of the population used in the present investigation wore members of the choir. The evidence for this assumption can be seen in Table 407 page. 757.

A minor point of note was that $10 \%$ of the Nonconformist Men were or had been members of the Choir on occasions." As might be expected, attendance at Choir practices was a sien of the need for conservative dress and behaviour.

## c) Collere rames or Sports teams.

Table 408 on page 757 indicated that aperoximately half or more of each sample except the Collegiate hen never Joined Collego sports or games teans. The figures were particularly high for the vocational, Academic and Yonconformist Vomen. The group percentages in the 'Cccasionally' category were similar to each other. Approximately one-third of the Vocationalist and Monconformist Men took part frequently whilst the figure for the Academics was somewhat higher ( $42 \%$ ). As might be expected the Colleglate len had the largest mumber in this category. For the Vomen, only small percentages were Involved with the Collegiates having the largest number. Total percentages were very similar with the Collegiates emerging as the group with the largest number actively involved.

## d) Eances

This item must be reviewed in the context of the infrequency of such dances which totalled three or four each
year. There were no major differences and only the Honconformist Women had over $50 \%$ of the responses in the 'Never' category. Those who attended 'Frequently' tended to occupy the Collegiate and Nonconformist orientations. In this latter case, the Nonconformist Men had a fairly large percentage which affected the total percentage of $\mathrm{Nen}+$ Yomen.

The reality of the situation however was that nearly to a man or woman, the students would leave the hall when 'formal' dance groups were playing and return when the expensive and noisy group of their choice held the stage. Thus, for the reasons given above concerning the relative infrequency of the dances and the programme of temporary exodus, the above results have to be accepted with reservation.

## a) Club Activities.

Fewer of the Collegiates than any of the other groups were located in the 'Never' category and more of them were located in the 'Occasionally' category. The general but not excessive trend was for the Collegiates to be more active in club activities. Of note was that a third of the Vocationalists and one quarter of the Academics and Honconformists were located in the first category. When the eexes were combined, between a third and a half of each Eroup took part in club activities frequently. Sex-based comparisons indicated that the ien were more active in this area of Corlege life than the Fomen.

## f) Jives and Hons.

College-based fives and hops took place twice per week on average and were organised informally by the Students' Union in the Student Lounge. Attendance tended to bo good at these gathering which required only a nominal entry fee or were free.

From Table 411 on page 758 it is clear that fewer Vocationalists and Academics attended than did the two remaining orientations. Differences in the 'Occasionally' category were confined to sex differences with the women having the lower percentages. Thus, the Homen attended more frequently than the Men in each group (a point verified by the number of Women who tended to dance with each other in the absenco of men). When the sexes were combined the Eroups who attended frequentiy in larger numbers were the Collegiates and the Nonconformists (as expected in view of their relatively low scores in the 'never' category).

$$
\text { In summarising Tables } 406 \text { to } 411
$$

outlined on pages 757 and 758 of the Appendix, the following points can be made.
a) A large majority of students had taken part in some form of activity even if only on an occasional basis.
b) Activities such as dramatic productions and the choir were aided by only a very mall minority of the student body.
c)

The Collegiates tended to be more involved than each of the three remaining philosophical orientations.
d)

Simplo statistical computation indicated that in terms of being involved in no activities at all for all or most of the time the following group percentages applied. $\frac{\text { Men ( } \% \text { ) }}{21} \frac{\text { Vomen (\%) }}{4} \frac{\text { Total }(\%)}{12}$
Vocationalists. Academics. $\quad 28 \quad 31 \quad 29$ Colleriates. 6 Nonconformists. $\quad 14 \quad 15$

Detalls of note in the above sumary are the larger percentages of Vocationalist and Acadenic Men and Academic Fomen. Not unexpectedly, the Collegiates and to a lesser extent the Nonconformists had fewer members of both sexes who in fact did not take part in College-based activities.

In addition to the socially-based activities outiined above, the following three questions were asked in an attempt to find out Just how ruch time per week the students used in seeing people of various kinds and just what they talked about. The three questions are given below. 1.

How often in an average week during torm do you meet people of your own age who are not training to be teachors?
2.

In an average week in College how many hours do you estimate that you have spent in informal discussions with other students (not about

College work or gossip) concemins current affairs which interest you?
3. In an average week in Collego how many hours do you estimate that you have spent in informal discussions with other students about your College work?

Detalls of the separate response patterns are given in turn below.

## Question No. 1

Table 412 on page 759 indicates the frequencies and percentages of response to the question in each of the four categories. It can be seen that over $50 \%$ of each sample of Men and Komen were to be found in Category number 1 with the percentages for Collegiate Women and Nonconformist Ken being much higher.

For the samples of Hen, the Vocationalists and Collegiates tended to seo people with a greater frequency than the two remaining groups. For the Yomen, the Academics followed by the Vocationalists and then the Honconformists had the larger percentages. When the sexes were combined to give the four primary philosophical oricntations, there was a stcady drop in percentages in terms of frequency of meeting from the Vocationalists to the lionconformists.

It should be noted that the majority of students had no transport problems and frequently travolled away from

College at weekends. The point being made is that adequacy of transport, the nearness of the M. 6 motorway. (to which the College had easy access) enabled extensive travelling to be undertaken very easily for the majority of students.

## Question No. 2.

The pattern of responses to the second question are given in Table 413 on page 759 The general pattern was one of a degree of similarity between the Eroups. Points of note were that Nonconformists tended to spend more time than tho remaining three groups in informal discussion. They were followed by the Academics, Collegiates and Vocationalists in that order.

Sex differences were not marked but indicated that the Men tended to have marginally larger percentages in Categories 2 and 4 and lower ones in Categories 1 and 3.

Cuestion No. 3.
For the third and inal question the response patterns are outlined in Table 414 on pase 760 . In Category 1 the percentages of the Academic and Nonconformist Women tended to be higher than the other groups. Group differences were not large but indicated that approximately half of each group of Men was recorded in categories 1 and 2 combined whereas for the Women, hicher percentages were recorded in Categories 4 and 5 for each group with the case being more maried for the Vocationalists and Collegiates. With the sexes combined,
the group differences were marginal and indicated that the highest and lowest groups were the Collegiates and the Vocationalists respectively.

SUMARY
The four groups were not widoly divorgent from each other on any of the three questions given above. What differences there were tended to indicato that at least half the students in each sample did not meet people of thoir own age group who were not training to be teachers. Also, there were indications that the Nonconformists spent more time in informal discussion concerning topics other than College work and less time discussing College work than the three remaining groups. Differences between samples of Ien tended to be smaller than between the groups of nomon.

By allotting 2 points to each activity listed by a student as being done frequentiy and 1 point for any done occasionally the resulting scores were totalled to give a global assessment of social activity. The details are summarised in Table 53 below.
Table 53 Item - Total Numerical Score for activities
(a) Frequently (a mark of 2 points)
(b) Occasionaily (a mark of 1 point)

| $\begin{aligned} & \text { Category } \\ & \text { Foints } \end{aligned}$ | Vocationalists |  |  | Academics |  |  | CollegiatesRen wo. Tot. |  |  | $\begin{aligned} & \text { Noncon- } \\ & \text { formists: } \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 10. | Tot. |  |  |  |  |  |  | lot |
| 0 | $11 \%$ | $\frac{5 \%}{3}$ | $\begin{aligned} & 8 \% \\ & 9 \% \end{aligned}$ | $\frac{11 \%}{4}$ | $\frac{15 \%}{4}$ | $\begin{gathered} 14 \% \\ 8 \end{gathered}$ |  |  |  | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{2 \%}{3}$ | $\frac{115}{3}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{gathered} 10 \% \\ 2 \end{gathered}$ |  | ${ }_{2}^{4 \%}$ |
| 1 | $\begin{aligned} & 2 \% \\ & 1 \% \end{aligned}$ | $\begin{aligned} & 8 \% \\ & 5 \end{aligned}$ | $\frac{5 \%}{6}$ | ${ }_{1}^{3 \%}$ | $\begin{aligned} & 4 \% \\ & 1 \end{aligned}$ | $\frac{3 \%}{2}$ | $\frac{1 \%}{1 \%}$ | $\frac{2 \%}{3}$ | $4 \%$ | $\begin{aligned} & 3 \% \\ & 1 \end{aligned}$ | $\begin{aligned} & 5 \% \\ & 1 \end{aligned}$ | $5 \%$ | 4\% |
| 2 | $13 \%$ | $\begin{aligned} & 17 \% 6 \\ & 10 \end{aligned}$ | 17\% |  | $26 \%$ | $\begin{aligned} & 76 \% \\ & 10 \end{aligned}$ | 5\% | $\frac{5 \%}{6}$ | $11$ | $\begin{aligned} & 7 \% \\ & 2 \% \end{aligned}$ | $\begin{gathered} 10 \% \\ 2 \end{gathered}$ |  | 8\% |
| 3 | $\frac{11 \%}{6}$ | $15 \%$ | 15 | 16\% | $\frac{15 \%}{4}$ | $\begin{aligned} & 16 \% \\ & 10 \% \end{aligned}$ | $\begin{aligned} & 6 \% \\ & 6 \% \end{aligned}$ | ${ }_{10}^{86}$ | $16$ | $\begin{gathered} 14 \% \\ 4 \end{gathered}$ | $15 \%$ | $5 \%$ | \% |
| 4 | $\frac{13 \%}{7}$ | $\begin{aligned} & 22 \% \\ & 13 \end{aligned}$ | $\begin{aligned} & 18 \% \\ & 20 \% \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{gathered} 12 \% \\ 3 \end{gathered}$ | $\frac{5 \%}{3}$ | $\frac{11 \%}{11}$ | $\begin{aligned} & 17 \% \\ & 19 \% \end{aligned}$ | $\begin{aligned} & 13 \% \\ & 30 \end{aligned}$ | $\frac{3 \%}{1}$ | $\stackrel{25 \%}{5}$ | 的 | 12\% |
| 5 | $\begin{gathered} 13 \% \\ 7 \end{gathered}$ | $7$ | $\begin{aligned} & 12 \% \\ & 14 \end{aligned}$ | $\begin{aligned} & 8 \% \\ & 3 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{5}{3}$ | $\begin{aligned} & 15 \% \\ & 16 \end{aligned}$ | $\begin{aligned} & 14 \% \\ & 18 \end{aligned}$ | $\begin{aligned} & 15 \% \\ & 34 \end{aligned}$ | $\begin{gathered} 10 \% \\ 3 \end{gathered}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  | 6\% |
| 6 | $\begin{gathered} 16 \% \\ 8 \% \end{gathered}$ |  | $\begin{aligned} & 12 \% \\ & 13 \end{aligned}$ | $\begin{gathered} 14 \% 8 \\ 5 \end{gathered}$ | $\frac{8 \%}{2}$ | $\frac{11 \%}{7}$ | $\begin{aligned} & 18 \% \\ & \frac{19}{} \end{aligned}$ | $\begin{array}{r} 2275 \\ 30 \end{array}$ | $\begin{aligned} & 20 \% \\ & 49 \end{aligned}$ | $\begin{array}{r} 29 \% \\ 88 \end{array}$ | $20 \%$ | $\% 2$ | 26\% |
| 7 | $\frac{11 \%}{6}$ | $\begin{aligned} & 4 \% \\ & 2 \end{aligned}$ | ${ }_{8}^{7 \%}$ | $\frac{11 \%}{4}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{6 \%}{4}$ | $\begin{aligned} & 1595 \\ & 16 \end{aligned}$ | $\frac{11 \%}{14}$ | $\frac{13 \%}{30}$ | $\begin{gathered} 10 \% \\ 3 \end{gathered}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  | 6\% |
| 8 | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ | $\frac{5 \%}{3}$ | $\frac{4 \%}{4}$ | $\frac{11 \%}{4}$ | $8 \%$ | $10 \%$ | $\frac{12 \%}{}$ | $\begin{aligned} & 10 \% \\ & 13 \end{aligned}$ | $\frac{11 \%}{25}$ | $\begin{gathered} 14 \% \\ 4 \end{gathered}$ | $\begin{aligned} & 5 \% \\ & 1 \end{aligned}$ | $5 \% 1$ | 10\% |
| 9 | $\begin{aligned} & 6 \% \\ & 3 \end{aligned}$ | $\underset{1}{2 \%}$ | $\begin{aligned} & 4 \% \\ & 4 \end{aligned}$ | $\frac{6 \%}{2}$ | $2^{8 \%}$ | $\frac{6 \%}{4}$ | $\begin{aligned} & 8 \% \\ & 8 \end{aligned}$ | $2 \%$ | $\frac{5 \%}{1 \%}$ | $\begin{aligned} & 7 \% \\ & 2 \end{aligned}$ | $10 \%$ |  | 8\% |
| 10 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{3 \%}{3}$ | $\frac{2 \%}{3}$ | $\frac{3 \%}{6}$ | $\begin{aligned} & 3 \% \\ & 1 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  | $2 \%$ |
| 11 | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{1}{1} \%$ | $\begin{aligned} & 6 \% \\ & 2 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{3 \%}{2}$ | $\frac{3 \% 6}{3}$ | $\frac{2 \%}{3}$ | $\begin{aligned} & 3 \% \\ & 6 \% \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 0 |  | 0 |
| 12 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 3 \% \\ & 1 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ | $\frac{2 \%}{2}$ | $\frac{2 \%}{3}$ | $\begin{aligned} & 2 \% \\ & 5 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  | 0 |
| 13 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $2 \%$ | $\frac{1 \%}{1}$ | $\begin{aligned} & 3 \% \\ & 1 \end{aligned}$ | $4 \%$ | $\frac{3 \%}{2}$ | $\frac{1}{2} \%$ | $60$ | $\begin{aligned} & 0 \\ & 1 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  | O |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1\% | 0 | 0 | 0 |  | 0 |

The fragmentary nature of the above table was reduced and the position clarified by combining the categories to give four strata. The details are given below.


| No. of | $\begin{aligned} & \text { Vocation- } \\ & \text { alists } \end{aligned}$ |  |  | Academics |  |  | Collegiates |  |  | Nonconformists. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Foints | Hen | Ho. | 10 | Men | 0. | Iot. | Men | Wo |  |  |  | Iot |
| 0 | 11 | 5 | 8 | 11 | 15 | 14 | 0 | 2 | 1 | 0 | 10 | 4 |
| 1-4 | 39 | 62 | 51 | 27 | 57 | 40 | 23 | 32 | 27 | 27 | 55 | 33 |
| 5-8 | 42 | 29 | 35 | 44 | 16 | 32 | 60 | 57 | 59 | 63 | 25 | 48 |
| 9 \& abov | 8 | 4 | 6 | 18 | 12 | 14 | 17 | 9 | 13 | 10 | 10 | 10 |

Althourh the differences were not large, there was a clear indication of more Academics being located in Category 1 together with a lack of Collegiates and Nonconformist Men. For the second category (1-4 points) there were more Women than Men in each group thus indicating a greater activity on the part of the Men. The Vocationallst Men were the highest by a relatively large percentage whilst for the Komen the groups were similar except for the low percentage of the Collegiate Women. Over $50 \%$ of each sample of women except the Collegiates were recorded in this category. Hot unexpectedly, the Collegiates (Men and Women together) had the lowest percentage of the four groups. This gave them the largest
percentage of all the groups in the $5-8$ points category although on a single sex basis the Nonconformist Men had the marginally larger percentage.

The trend in this category was for the Vocationalists and Academics to have lower percentages than the other two groups. Also, sex comparisons indicated that the Men were more active socially than the Homen.

The final category of 9 points or over contained relatively low percentages. The only points of interest vere the larger percentages of the Men in all cases except the Nonconformists and the fact that the Academics had the largest percentages in this category where one might have expected to find more Collegiates than other groups. Such differences although marginal were of note.

The general picture was one of the Collegiates being more active as a group than the other groups followed by the Nonconformists and to a lesser extent the Vocationalists. There was also a clear trend for tho Men In each group to be more active than the Yomen.

## Assessments Concerning the Content and Cuality of College Courses.

With the exception of the annual Teaching Practice of one month's duration, the rest of the student's time in College was spent working in his Main Subjects, Education, and (in his first two years) at a range of supporting Studies involving various aspects of school subjects in common use. In the third year of their course all students except those who had reduced their comitment to one Main and one Subsidiary subject, had to complete an extended study or dissertation on a topic of their choice for each Main Subject and Education.

Students often appeared to differ in thair attitudes towards both the content and the quality of work done in College in the above areas. Therefore, in addition to the global assessment of attitudes already made under the heading of Attitudes to Main Subjects 1 and 2 and Education, the following analysis was made of the attitudes of students to both the content and the quality of work completed in their College courses. It is realisedthat there is a possible basic weakness in such an analysis caused by the lapse of time which had ensured between (say) Supporting Studics in Year $I$ and the time at wisch the students were asked to record their attitudes and opinions. Also, it is perhaps feasible to acknowledge that such attitudes might change from Year to Year of the course as the content and the tutors involved also changed regularly.

However, the writer believes that students tend to display gross overall attitudes which iron out the hills
and dips of attitudinal profiles. By adopting this belief which he supports following a range of observations gained over an eight year period in the College, the $\operatorname{vriter}$ asked the students to indicate by the use of an At to E- scale their overall viewpoint of a) the content and b) the quality of teaching given in the range of subjects which they had studied at College. Permission to repeat this procedure utilising the area covered by Teaching Practice was refused. This was unfortunate since the students had already indicated tho importance of this area of College worls to themselves.

The tables which are Eiven in the Appendix pp 762-782 are sumaries of moro extensive ones which appear in the Appendix pp 783-793 inclusive, but whose clarity was lost amid a number of small responses and percentages. Therefore, in the tables sumarised below, three categories only are given, nemely 1) above average
2) Average
3) Below Average.
A. The Content of the Teaching given in College Courses. Cuestion No, 1 That eracio would you give for the overall content oi the course in your ist Cholce of hain subilect.

In no case in Table 415 on pace 762 was tho percentage located in tho 'average' category groater than $25 \%$. Thus a degree of polarity was to be seen. The tendency in Category 1 (Below Average) was for the Collegiates and Nonconformists to have the higher percentages (i.e. to display a more negative viempoint). In each case in this category except the Ncademic Women (27\%) the Women had the higher porcentages indicating a negative
viewpoint. The samples of hen wero not radically different from each other although the Nonconformists had a relatively higher percentage.

There was a tendency in Category 3 (Above Average) for the Nonconformists and to a lesser extent the Collegiates to have the lower percentages.

Question No. 2 That mark would you give for the overall content of the course for your 2nd cholce of Main subfect?

More of the Nonconformist Men and Women had negative viewpoints than the three remaining samples. With the exception of this group, each sample recorded less than $20 \%$ of the total responses in the 'Below Average' category. The 'Average' category contained very few responses in general. Details appear in Table 416 on page 762.

The range of percentages in the 'Above Average' extended from $72 \%$ to $75 \%$ for the hen and from $55 \%$ to $78 \%$ for the homen with overall group figures being in the 65-75\% category. Thus, over half of each group recorded a favourable attitude (which was not the case for their first choice of Main Subject). Group differences were minimal with the Nonconformist Vomen having a relatively smaller percentage expressing a favourable attitude.

## Question No. 3 that mark would you give for the overall content of the Course for Education?

In Category 1 (Below Average) the percentages for the Men were higher than those of the Yomen in each case. In general, individual group differences were lacking.

The Collegiates and Nonconformists had larger percentages in the 'Average' category than the two remaining groups but the differences were not large. The overall impression wh one of a positive attitude being recorded. Nine out of the total of twelve groups ilsted in Table 417 on page 763 had percentages in excess of $73 \%$ in the Above Average' category, with the Collegiate Men being the only group with a relatively low percentage. In each case, however, the Men had lower percentages in this category than the Women.

Cuestion No, 4 What overall mark would you give for the overall content of the courses in Supporting Studies in Year I?

In summary, Table 418 on page 763 indicated that the Academic :Fomen tended to have more favourable than unfavourable views whilst for the Academic Men the position was reversed. The Nonconformists were clearly much more unfavourable in their attitude than were the Vocationalists and (In the case of the samples of hen only) than the Collegiates. For this latter group the overall trend was towards a more unfavourable rather than a favourable attitude. In no group was there a response rate of over $40 \%$ in the 'Above Average' category whilst in the 'Below Average' category no fewer than five single-sex groups had percentages in excess of this figure.

Cuestion No, 5 What mark would you give for the overall content of your course in Supnorting Studies in Year 2?

The overall impression given by Table 419 on page 763 is one of an unfavourable attitude on the part of most of the students. The percentages in the 'Below Average' category ranged from $52 \%$ to $78 \%$. The groups with the most unfavourable attitudes vere the Academic Men and the Vocational Vomen. When the sexes were combined, group differences were not large but indicated that the Nonconformists had the largest percentage of members with a favourable attitude whilst the Academics had the lowest. This was one of the relatively few cases when the Nonconformists displayed a more favourable attitude towards an aspect of College ilfe than did the other orientations.
B. TIE QUALITY OF THE TEACHING GIVEH IN COLIEGE COURSES

Question No. 6 What mark would you give for the overall
guality of teaching on the course for your ist Choice of
sain Subject?.
With the exception of the Nonconformists, each sample had less than 20\% of their scores located in the 'Below Average! category. of note was the low percentage of the Academic Women. In the 'Average' category, the percentages were relatively low and in no case exceeded 22\%. Details appear in Table 420 on page 764.

The overall impression was one of a favourable attitude with $50 \%$ or over of each sample being recorded in the 'Above Average' category. The percentages extended up to $80 \%$ (Academic Women) and indicated that the Academic Women were very favourably inclined. This position held for tho Academic Men but to a slightly lesser degree. Thus, the Academics had the most favourable attitude followed by the Collegiates, Vocationalists and Nonconformists in that order but with group differences being minimal.

Question No. 7 What mark would you give for the overall quality of teaching in the course for your and cholce of Hain Subject (or Subsidiary Subject)?

In general, the frequency of responses in Category 1 (Below Average) was relatively high with only the Vocational Men and Academic Yomen having less than 30\% of the zcores here. Nearly $50 \%$ of the Nonconformist Men were found in this area. The only differences of magnitude between the groups in the 'Average' category were between the Academic Homen (4\%) and the Academic Men (28\%).

In the final category, elght of the group had frequencies which approximated $50 \%$ of each total. The groups with the lower percentages were the Acadcmic and Nonconformist Men with the Nonconformist Women subscribing but to a lesser extent. Combined samples indicated that the Nonconformists were relatively lower than the three remaining groups. The main sex difference was that of the sample of Academics. Table 421 on page 764 indicates the actual percentages.

## Cuestion Ho, 8 What mark would you give for the overall guality of teaching in the course in Education?

The low percentages for most groups in the Below Average category did not include the Collegiate Men and the Nonconformist Nomen ( $35 \%$ ). This latter percentage gave the combined Nonconformist sample nearly one-quarter of its total responses in this category. This figure was not continued in the 'Average' category with this group having the lowest percentage of the four samples.

The 'Above Average' category contained $59 \%$ or more of the responses of each group with the totals for the Vocationalists and the Academics being somewhat higher than those of the other two groups. (Table 422 page 764).

> Question No. 9 What mark would you give for the overall quality of toaching on the course for Supporting Studies in Year i?

In general the percentages in the Eelow Average category were high and ranged from $19 \%$ for the Academic Women to $45 \%$ for the Nonconformist Women. For the combined samples, the percentages grew larger as one moved from left to right across Table 423 on page 765 The single-sex groupings indicated that the Vocationalist Men had substantially fewer people in this category and the Honconformists more than the two remaining groups. For the Homen, the Academics and the Nonconformists had the lowest and the highest percentages respectivdly.

In the 'Average' category, the Men had lower percentages than the Vomen in each case thus enabling them to have the higher scores in the 'Above Average' category. In this
latter category, because of the relatively high percentages In the two former categories, the only eroup which had responses in excess of $50 \%$ were the Vocationalist Men. Combined sample results revealed that more Vocationalists and Academics tended to have a more favourable attitude to the item.

Cuestion No, 10 that mark would vou give for the overall guality of teaching on the courses for Supporting Studies in Year 2?

The unpopularity of these courses can be gauged from the fact that all the percentages except one in the Below Average' category were in excess of $50 \%$. The Academic Women had a 'low' of $27 \%$ in this category. The only difference of note in the 'Average' category was the $8 \%$ of the Vocationalist Women which contrasted with the $28 \%$ of the Collegiate Komen.

The results in the 'Above Average' category did not indicate any startling differences beyond the percentage difference between the Academic Men and Women with more Women holding a favourable attitude.

A check on the rellability of the above ratings as far as the 'quality' aspect was concemed taken from the point of view of the percentage of Tutors whom the students regarded as being 'Superior' teachers resulted in the following data. Details are given in Table 424 on page 765.

Question No. 11 The pronortion of Tutors in your 1st Choice of rain Subject who are Sunerfor teachers.

A combination of categories 1, 2 and 3 accounted for over 65\% of each group. Group differences indicated that more Nonconformists had unfavourable viewpoints than the three remaining groups. Such high figures for this group might be indicative of the claims from its members of widespread Tutor-prejudice. More Academics than any other group had scores in categories 4, 5 and 6. The negative viewpoint of all but $10 \%$ of the Nonconformist Women was of particular note. Details appear in Table 425 on pare 766.

Cuestion No. 12 The proportion of Tutors in Main Subject 2 who are Superior ieachers.

The picture revealed by Table 426 on page 766 substantially reflected the findings for Main Subject 1 in Table 425 on page 766. Differences between the two tables however included the fact that the Academics had a marginally larger percentage in Categories 4, 5 and 6 than did the other three groups. Sex differences on all samples except the Vocationalists indicated fewer Women than Hen in the bottom half of the table. The overall negative viewpoint outlined for Main Subject I was maintained.

Question No. 13 The proportion of Tutors in Education who are Superior teachers.

Once more, far more students placed their responses In categories 1, 2 and 3 (indicating a negative viewpoint) than in 4,5 or 6. Again, the Nonconformists had the largest percentages in these categories followed by the Collegiates. In each sample except that of the Vocationalists
the Men had the larger percentages.
From the point of view of Main Subjects 1 and 2 and Education, the results leave no roon whatsoever for complacency on the part of the tutorlal staff and clearly add fuel to the coments of the Erowing number of critics who have voiced their opinions of the work oi the Colleges of Education. Tabular details are given on pace 767.

Cuestion Nos.14, 15 and 16 inclusive. Attendance at Courses for Main Subjects 1 and 2 and Education Cuestion No. 14 The total weekly number of neriods students attended at courses for ist choice of Main subject.

Cuestion No. 15 The total weekly number of periods Students attended at courses for and cholce of Main subject.

Question No. 16 The total weekly mumber of periods Students attended at courses in education

Although the College Subject departments did not have regulations governing attendance at lectures, tutorials and practical sessions of various kinds which were different from each other the following results are of somo importance. Initially the students were asked to endorse a category ranging from $0-1$ period per week to over 9 periods to record their attendance at the above courses. Tables 428 to 430 inc. on pages 767 and 763 give detalls of the results.

An inspection of the figures of the attendance of each group at various courses did not indicate any starting features beyond the following observations:
a. . It would appear that a percentage of students in general and the Nonconformists in particular were attending far fewer than the officially laid down minimum number of class periods. Since some of the meatings - in Education in particular - were given for $250-300$ students at one and the same occasion, some students could omit to attend with impunity.
b. The lionconformists tended to attend fewer class periods than either the Vocationalists or the Academics. This tendency was repeated by the Collegiates but to a much smaller degree.
c. There was a tendency for Men in all groups to attend more periods per Main Subject than the Vomen in the same samples although for the Vocationalists this trend was reversed as far as Main Subject 2 was concerned with the exception of category 6 (More than 9 periods). It should be noted that the two courses which tended to require the most time on the part of the students were Handicraft (which was only for the Men) and Drama which tended to attract more Women.

Cuestion No. 17 There are too few timetabled periods per week in my present year.

In answer to the question 'Do you think that there are too few timetabled periods per week in your present year the results were as follows and summarise the data given in Table 431 on page. 769.

Over $50 \%$ of each group thought that there were sufficient timetabled periods in their present year. The number of Men in categories 1 and 2 was smaller than the Women in each sample with the difference being relatively small in the case of the Academics. The overall picture indicated that the Academics regarded their work load in terms of timetabled periods easily sufficient. They were supported (in terms of disagreeing with the statement) by the Collegiates, Vocationalists and Nonconformists respoctively. The apparent extra degree of agreement with the statement by the Nonconformist Homen should be tempered by the fact that as indicated previously a number of them appeared (by their own responses) to attend less than the minimum number of periods.

Guestion No. 18 The amount of work I am reauired to do in College in general is excessive.

Following on from the last question, the data given in Table 432 on page 769 indicated the viewpoints of the four groups towards the viewpoint that the amount of work which the students were required to do in College was excessive':

As in the case of work done as a University student, the students of the College were required to undertake work outside of the set lecture and tutorial periods. The data in Table 432 indicated that for the majority of each orientation of students the work was not excessive. This could be an indication of satisfaction with the amount of work given or that some students did not do more than the
minimum in any case. Evidence for this latter viewpoint came from subjective coments from many of the Staff who often expressed the view that the nom as far as work was concerned and apart from the Bridging and B.Ed. Students was pitched much too low.

In Table 432 the Vocationalists had the larger percentage which agreed with the statement - not the Nonconformists, whilst the Academics and Nonconformists showed the most favourablo attitudes in recording the largest percentages in categories 1 and 2: Categories 4 and 5 contained more Women than Men in each of the cases except the Academics where the difference in favour of the Iten was very small.

Verbal comment by nembers of the student body over a lengthy period of time suggosted that the reasons why the students tended to regard many of their courses and subjects of study as being of limited worth crystallised into the following two reasons.
a) They were boring.
b) Many of them were irrelevant to their future needs as members of the profession.
Just how far these observations reflected the views of the members of any or all of the four primary philosophical orientations was assessed by the following two statements.
(1) I find the work in mich of the College course very boring.
(ii) Many of the things which I am required to do in College will be of little practical value to me when I leave.

Table 433 on page 770 gives the findings with regard to the first statement. Coment is given below.

Ouestion No, 19 I find the work in much of the Colleze course very boring.

The only group of Men and Women together who recorded less than $55 \%$ when categories 1 and 2 were combined were the Nonconformists. The percentages in the 'Uncertain' category vere relatively small with only the Vocationalist Men and Collegiate Men approaching 20\% of their total membership In this area of the table. Thus, by reference to the above and to categories 4 and 5 , more of the Nonconformists were seen to have unfavourable attitudes or opinions towards the item than any of the three remaining groups. Of these latter groups a larger number of Collegiates displayed unfavourable attitudes than did either the Vocationalists or the Acadenics. The only notable sex differences within any one orientation occurred between the Nonconformist Men and Vomen and the Kon in latter displayed negative attitudes.

Cuestion io. 20 Many of the things which I am recuired to do in Collego will be of IIttle practical value to me when I leave.

Although there was a positive attitude displayed by those students who lodged their responses in categories 1 and 2, such students did not represent a majority of any singlo orientation. In the case of the Nonconformists in general and the Yomen in this group in particular, their negative viewpoint was apparent. However, the number of

Nonconformist ten who placed their responses in the 'Uncertain' category was easily the highest of the four groups of Men students.

The overall impression to be gained from Table 434 on page 770 was that approximately 50 of each group of Sen and Homen when combined, displayed negative viewpoints towards the item with the actual percentages ranging from $47 \%$ for the Vocationalists to $64 \%$ for the Nonconformists. This latter group had show on a number of previous items a strong tendency to be more unfavourably inclined to aspects of College policy and teaching than the three other groups. Of further note in the above case was the fact that more Women than Men in each orientation displayed unfavourable attitudes. This could be because of the preponderance of Homen who would leave College and begin their career in either Infant or Junior schools.

Finally, the following questions were given to the students in order to assess their opinions of their fellow students, their degree of satisfaction with or concern about their chosen career and their attitude towards further study once they had completed their threc-year course at the College. In each case below the question is outlined and followed by a brief explanation of the main findings, whilst the tabular data has been placed in the Aprendix on pages 771 to 782 inclusive.

Question No, 21 There are many students in the College who are 30 wrapped up in chasing high marks that they are close to being fallures as social persons.

The overwhelming percentage of students in each of the four samples agreed with the proposition. Marginally more Women than Men disagreed with the proposition and this was most marked in the Vocationalist group. Not unexpectedly, the Collegiates had the largest percentage for categories $4 / 5$ when combined to indicate overall agreement.

Cuestion No. 22. The important aspects of College life are social in nature rather than to do with study.

The small number of frequencies recorded in the 'uncertainty' category of Table 436 on page 771 indicated a degree of polarity of response. The general Iinding was that the Vocationalists and Academics tended to disagree in larger percentages than did the Collegiates (Ven and Women) and Nonconformist Men who recorded the majority of their responses in the lower half of Table on page 771. of further note was that the Men in each group tended to have more favourable views towards the item than their Women counterparts.

Cuestion No. 23 Many of the students in College are more concerned about their social lives than they are about their academic responsibilities.

The fact that no one strongly disagreed with the item and that the percentages in the 'Uncertain' column were small resulted in the preponderance of percentages being located in categories 4 and 5. over three-quarters of each student group was located in this area of the table.

Minor points of note were that $25 \%$ of the Academic Men displayed negative attitudes towards the item and (surprisingly) $15 \%$ of the Collegiate Vomen were located in this area. Details appear in Table 437 on page 772.

Cuestion No. 24 The degree of academic honesty and integrity 3hown by people not cheating in tests or by taking credit ior work done by other students is hiph in this College.

The only group with a fair number of uncertainty scores 438 on page 772 were the Collegiate Women who had $15 \%$ in this category. The poor view of the honesty and integrity displayed by students in the College could be gauged by the fact that the group percentages for the Strongly Disagree/Disagree were Vocationalists $65 \%$; Academics $72 \%$, Collegiates $59 \%$ and Nonconformists $84 \%$. The percentage for the Nonconformists verified their frequently voiced view that behind the facade of 'pseudo-academic gentility' lay the world of the 'rat race' and self-preservation. In terms of sex differences; the Vocationalist and Academic Men had higher percentages in the unfavourable categories Whereas for the Collegiates and the Nonconformists the poisition was reversed.

The overall picture of group differences indicated that Vocationalist and Collegiate Men had larger percentages in the favourable categories than the Men in the two remaining groups. For the Vomen, the two groups with the larger percentages in this part of thetable were the Vocationalists and the Academics:

Guestion No. 25 Teachers of the age-group (1.e. Infant Junior secondary) which i have chosen to teach have rood pronotion prospects within schools.

The distribution of the four primary orientations as far as actual teaching specialisation in the College was concerned was as follows.
a) There were far more fon than Women training for entry into Secondary Schools.
b) There were more Vocationalist and Academic Vomen preparing to enter Primary schools (and particularly Infant Schools) than Women from the two remaining groups.
c) Nore Vocationalist and Nonconformist Hen were training for entry into Junior Schools than Men from the other two orientations. Eearing the above in mind, the details given in Table 439 on page 773 are interesting. By combining categories 1 and 2 (1.e. Strongly Disagree/ Disagree) to give one single category the points of importance which emerged were that the number of Men was smaller than the Women in each case and that approximately one-third of each sample of Homen was located here. The relative lack of well-qualified Vomen in Primary schools (in terms of qualifications beyond the minfmu certificate) at the present time had not commuicated itself to the Academic Vomen (some of whom remained at College for an extra year to gain a degree in Education) that being in a minority group could enhance their prospects of promotion. Should this have been the
case one might have expected a much lower percentage for this group in the S.D/Disagree category. Thus, in this case the Women were perhaps conforming to their traditional position of being subordinate to Men in terms of promotion and prestige in many of our schools.

The pattern of 'uncertainties' revealed little beyond the high percentage of Nonconformist Vomen and the low figure for the Vocationalist Men. Group differences in general were not large although the differences between the Nonconformists and the other groups was marked. This finding is perhaps indicative of the dilemma felt by many of these students who saw a need to exert their own individual and group identity in a profession which was noted for its degree of conformity.

Following the above figures, categories 4 and 5 revealed the following information.
a) The figures for the Men were larger than those of the Women in each case.
b) Each group of Men had approximately $50 \%$ or more of their total scores in this category.
c) The Collegiate Women were higher and the Honconformist Women lower than each of the remaining groups of Women.
d) The combined samples of Wen and Vomen had similar percentages except the Nonconformists who recorded a lower frequency.

Thus, the overall picture was one of the Men displaying a more positive viewpoint than the Women whilst on a group basis, the Nonconformists exhibited a greater degrec of uncertainty.

## Guestion No. 26 Teachers have high status in the community

Linked to the idea of the relative chances of promotion in their choice of school setting for many students was the concept of status. For many students, status was a topic which appeared to occupy some of their thoughts when they conversed with each other. The above statement was included, therefore, in an attempt to tap the viewpoints expressed by all of the third-year students and to look for possible differences of opinion associated with the four primary philosophical orientations. The tabulated data is given in Table $4 / 0$ on page 773 of the Appendix.

Disagreement with the question was expressed by over $50 \%$ of the Nonconformists and $50 \%$ of the Academic Women. For the remaining groups the percentages ranged from 32\% - $40 \%$ when categories 1 and 2 were combined. The degrec of uncertainty on the part of a number of students can be sauged from the fact that for nine of the samples (oither single-sex or with Men and Women combined) the percentages were $30 \%$ or more and were over 23\% for the remaining three groups. Thus, as shown in categories 4 and 5 of Table 440 which indicated agreement with the statement, approximately one-third of each combined group except the Nonconformists registered
their responses as being favcurable. For the Nonconformists the figures wore much lower and indicated the deviant nature of this group in the context of being different in outlook from the threo remaining orientations. The only sex differences of note were the more favourable impressions of the Vocationalist and Collegiate Men.

## Question No. 27 In general have you enioyed your various studies at this College as much as you had expected to'?

The main findings from Table 441 on page 774 In terms of group comparisons were that the Academics indicated that they were satisfled with their various studies whereas a majority of the Nonconformists were not. The Vocationalists and the Collegiates also indicated that in general they were satisfied with their various courses. The finding for the Nonconformists (the yomen in particular) reinforces other findings in the present study indicating negative attitudes and dissatisfaction with various aspects of College life.

Cuestion No, 28 which one of the following statements most closely describes the way you now feel about a career in teaching?

The fact that of the single-sex samples the Vocationalist Men had the highest percentage in Category 1 was interesting since their orientation was couched in terms of their regarding teaching as a vocation to which they had been attracted. For the Vocationalist komen, the percentage was very much lower. As in other cases, the

Nonconformists had the highest total group percentage in an area (category 1) which expressed possible negative feelings. Detalls are elven in Table 442 on pace 774.

Category 2 contained very large percentages of each group of students leaving relatively small percentages in Category 3 which expressed the view of congruence between choice of career and personal satisfaction. The percentages steadily diminished in size between the Vocationalista and the Nonconformists.

Although the percentage of Vocationalist Nen in category 3 was the largest of any of the four samples of Nen, this sample also contained more people in category 1. Thus; the degree of polarity displayed by this group was also indicative of a muber of the Ken (in the orientation most closely linked to their chosen career) being less than wholeheartedly supportive of teaching even at this late stage in their training.

Cuestion No, 29 How much are you vorried that you might not be happy in a teaching career?

As can be seen from Table 443 on page 775 relatively few students stated that they were concerned a great deal about the prospect of their not being happy in teaching although the figute for the Nonconformists approached $20 \%$. The same findings applied to Category 2.

With the exception of the Nonconformist Women, each group recorded the largest percentage in Category 3. of note here were the considerable numbers who at this late stage in their training (and with three major teaching practices) successfully behind them were expressing a
degree of concern, slight though it was. In terms of overall confidence, the Academics had the marginally larger percentage in Category 4 closely followed by the Collegiates and the Vocationalists with the figure for the Nonconformists being somewhat lower.

## Cuestion No, 30 Aro you conterplating further academic study when you have left College?

As might be expected because of the apparently limited opportunity available to them for promotion in school and their eventual family commitments, more Women in each sample indicated in Table 444 on page 775 that they would not be undertaking further study after leaving College.

Only the Academics (Nen and Women together) had a rolatively small percentage in Category 1 . This finding vas in accordance with their avowed interests. The percentages in Category 2 were low overall with (surprisingly) the fonconformists having the marginally largest percentage.

Category 3 accounted for the bulk of the percentages for each sample and ranged from $49 \%$ of the Vocationalist Women to $84 \%$ for the Academic Men. Such results were perhaps an indication of the avareness that at the present time there is a steady erosion of the opportunities for teachers to pursue their studies further except through the medium of the awards of the Open University. Under current rationalisation programmes there is a clear trend that many universities are removing such qualifications
as the Dip. Ed.or the D.A.S.E. from their prospectuses or to drastically cut back in terms of entry figures in the area of part-time students (into which category many teachers will fall). However, relative ignorance on the part of the students as to what studies were available, for how long and at what cost in both financial and terms concerning the time element per week could be responsible for the results outlined in Table 444 on page 775.

Question No. 31 Comment concerning tho balance between Contimuous Assessment and examinations.

Although 75\% of the final assessment of a student was determined by a process of 'continuous assessment' prior to entering for the final examination (which not only accounted for a minority $25 \%$ of the marks but had to be passed before any certificate could be issued by the appropriate body) there was negative comment from many of the students that the practice of 'springing' an examination upon them without notification prior to entry to the College was singularly unfortunate. There was no large scale mention of the examinations in the College Prospectus and students were often surprised to leam of its presence and importance.

Table 445 on page 776 resulted from asking the students to comment upon the question outlined above. Between one third and one hall of the various groups wanted more continuous assessment and fewer examinations. Group differences were not large
but Indicated that the Academics had the lowest percentage and the Colleglates (marginally) the largest.

The percentages in category 2 were not very dissimilar from each other except that the responses of the Nonconformist Nen were low. The percentages in the final category were low in general but indicated that tho Academics (who by virtue of orientation should do well in examinations) and the INonconformists had the larger parcentages. One could hypothesise that the $31 \%$ of Monconformist Men in this category were opting for a system whereby their manner, behaviour and appearance (which In many cases deviated from the norms of College students in general) were choosing a part of the assessment process which was least liable to subjective bias on the part of the tutorial staff. This hypothesis was wealened considerably by the fact that $51 \%$ of the Nonconformist Hen had indicated a desire for more continuous assessment and fewer examinations.

## cuestion No. 32 Coment concernins the balance between hcademic work and professional training.

The generally accepted ain of College education as being concerned equally with extending a student's academic understanding and increasing his profossional expertise was assessed by the above question, on such a question, one might have expected the Vocationalists and Academics to occupy opposite ends of the continuum formed by the categories of academic and professional studies. Table 446 on page 776 indicated that
for all practical purposes only categories 2 and 3 needod be consulted in analysing the data although in passing It was of minor note that the percentage of Academics in the first category was twico as high as that of each of the other three groups.

With the exception of the Academics who were higher, each group recorded less than a quarter of their responses in category 2. Thus, in the final category the picture was of approximately three-quarters of each group except the Academics (54\%) opting quite clearly for more professional training. Such a finding makes sense in view of the interests of this latter group.

Cuestion No. 33 The standard of professional training
(i.e. training for teaching given in this College is
veryngehe
Comment and views concernins the actual stendard of professional training is summarised in Table 447 on page 777 .

The picture which energed was one of the Nonconformists of both sexes and the Academic Hen expressing a greater degree of dissatisfaction than the remaining groups. Uncertainty scores were very similar to each other except for the relatively low ones of the Academic Hen and the Nonconformist Women.

The single eroup which had $50 \%$ of its responses located in the Agree/S.Agree categories was that of the

Academic Vomen. The percentages for the sexes combined indicated that more Nonconformists held a less positive view of the quality of the professional training given in College than any of the three remaining groups.

## Cuestion No. 34 Have you changed any of your coursessince

 entering College?Although the College made every effort to place students in the Main Subjects of their choice and in the majority of cases this was achieved (with late-comers to the College being governed by the availability of places in any particular subject). Table 443 on page 777 indicated the actual percentages of students in each primary philosophical orientation who had in fact changed one or both of their courses. In this latter grouping, the number who had actually changed both their Main Subjects was infinitesimal (1.0. one person out of 455). An overwhelming percentage of students in each group had not changed a Main Subject course since entering College. However, of those that had, more were Vocationalists and to a lesser extent Collegiates, than Academics and Nonconformists.

Single-sex comparisons indicated that the percentages of hen involved mirrored the findings for the combined sexes whilst the Vomen had percentages that were hardly different from each other. The figures for this sex represented a quarter of each sample whereas those of the Ken were much lower.

## Cuestion Mo. 35 When you came to this College were you accepted for your original choice of suojects?

The above question was further developed by asking the students whether or not they had been acceptedfor their original choice of subjects. The relevant data is given in Table 449 on page 777 which indicated that whilst a large majority of them had been accepted for both their choices of Nain Subject more Nonconformists and to a lesser extent Collegiates had been placed in tho original choices. In the caso of the Vomen (of whom more applied for entry each year to the College than Men) the decisions to admit them to any particular course or subject depended much more strongly on their academic results up to their request for entry. liany Heads of subject departments were keen to accept only those komen students whom they thought would gain full benefit from the courses which they offered. Whilst by the early sumer of the academic year preceding entry, the courses for fen were filling, there were many more places still available for them than for the Women.

Guestion No, 36 Since entering College would you have Iiked to have changed elther or both of your ilain subjects but have not been able to do 30 ?

The data in Table 450 on page 773 indicated that although the majority of students in each group gave a negative answer to the question, fairly high percentages of some groups gave 'Yes' as their answer. Over one-third of the Collegiates and Nonconformists were in the latter category whilst the figures for the other two groups was
nearer 25\%. Single-sex comparisons indicated a markedly Iow percentage for the Academic Women and a particularly high one for the Collegiate Men.

Question No. 37 My tutors have been successful in
Stretching me to the limits of my Intellectual capacity.
A claim by somo College tutors and also by some newspaper editorials and correspondents had indicated a tendency for College students to be regarded as being inferior in intellectual capacity to University students. Research reviewed in the chapter concerning pertinent Ifterature and some of the findings in the present investigation from the variables of intelligence and G.C.E. results suggested that some students had apparently sufficient intelligence and G.C.E. passes at ' $A$ ' level to enter university and read for a first degree.

The above question was included to measure the degree of success the Tutors had experienced (as assessed by the third-year student body) in working the students hard intellectually some of whon were of a fairly high intellectual calibre. Table 451 on page 778 indicated that approximately $50 \%$ or more of each group occupied categories 1 and 2 thus recording a negative viewpoint. The percentages for the Collegiates and the Nonconformists were higher than those of the two remaining groups. All but $5 \%$ of the Nonconformist Vomen were to be found in these two categories. Relatively fewer Women than Men were to be found in the 'Uncertain'
category where in general the percentages were fairly low with group differences being minimal. The two samples who had approximately $25 \%$ of their responses in this category were the Vocationalist and Academic Men.

The removal of the percentages outiined above led to the state whereby in categories 4 and 5 (which indicated degrees of agreement with the statement) when combined to give one category only the Academic Women had a majority of their responses here. The Nonconformist Women had only $5 \%$ of their number recorded here whilst the figure for the Collegiate Vomen was also a relatively low 25\%.

Although the Nonconformist Men had the lowest percentage of the four samples of Men students, the differences in percentages were small. Overall, larger numbers of the Vocationalists and the Academics stated that they had been stretched intellectually than had the Collegiates and (to a much more marked extent) the Nonconformists.

Guestion No. 38 Since I came to College, I have felt that 80 me of my Tutors have given me gradines based more on extraneous and irrelevant factors rather than on the Guality of my work.

A criticism frequently levelled at iutors is summarised above and at the head of Table 452 on page 779 The resulting data indicated that more of the Nonconformists and to a lesser extent the Collegiates had a negative view of College Tutors in the context of the question.

There was also a tendency for moro women Vocationalists, Collegiates and Nonconformists to express unfavourable views. For the Academics, the reverse was the case. However, far more Nen than Women in each sample expressed views of uncertainty. Thatever the reason for such viewpoints, the fact remained that with the exception of the Academic Women, ovor $60 \%$ of each sample indicated either that they were sure that extraneous factors Influenced Tutors or that they wero uncertain (whilst 80\% of the Nonconformist Women were certain of it!)

## Question No. 39 Eoing on the Bridging Course affects the way your work is marked by iutors.

Cuestion No. 38, was developed by asking Cuestion No. 39: that is, whether or not the students belleved that being a member of the Bridging Course (i.e. being prepared for entry to the course leading to the award of the B.Ed. degree) affected the way work was marked by Tutors. The percentages of people in categorics 4 and 5 given in the bottom line of Tablo 453 on page 779 indicated that whilst relativoly fower Academic Men disagreed with the statement than iren in other orientations, a considerable pergentage in this category expressed a poor view of the Tutors concernod. Also, along with the Monconformist Men they had the two largest percentages in the Uncertain'
category. Throughout the table more Women in each sample expressed a negative viewpoint. One wonders if such percentages were a reflection of the fact that the overwhelming preponderance of Tutors were Men (1.e. 122 Men 29 Momen).

The above pattern of responses had been anticipated. It was hoped to develop such viewpoints by the inclusion of the following questions. In the case of the question outlined below, the attention of the reader is drawn to the fact $/ 75 \%$ of the work completed in College was marked using continuous assessment procedures.

Guestion No. 40 The marking and mrading of essays and course work by hutors is aftected by their personal Inke or dislike of individual students.

A negative point of view would be indicated by a preponderance of responses being placed in categories 4 and 5. In Table 454 on page 730 only the Vocational Men and Academic Women had percentages in these categories which were below 50\%. Thus for all groups in general and the Collegiates and Nonconformists in particular the majority opinion was that assessment by the tutorial staff were in fact affected by their personal like or dislike of individual students.

If the 'uncertainty' scores are excluded, the only combined group with over $20 \%$ of responses indicating a favourable attitude towards the Tutors was the Academic, and even in this case it was the weighting of the Women students which raised the total ifgure to this level.

Guestion No. 41 In my experience, my Iutors have been tolerant of argument and disagreement between themselves and students.

The age of the students and the type of tutorial teaching which took part in all courses in varying degrees allowed for much oral work and discussion between Iutors and students. Data indicating just how far disagreements on various points of view were tolerated by.Tutors are given in Table 455 on page 780.

The Nonconformist Women and to a lesser extent the Men indicated a negative viewpoint in an area where tho remaining groups endorsed the favourable pole of the scale with percentages in excess of $50 \%$. In terms of strength of agreement the groups were arrayed as follows; Academics, Vocationalists, Collegiates and, far below, the Nonconformists. The largest difference was between the Academic Women ( $81 \%$ for categories 4 plus 5) and the Nonconformist Women ( $30 \%$ for categories 4 plus 5).

Guestion No. 42 I feel that Tutors fail to understand the problems of the tymical student.

One of the most common cries of certain students was that their problens were not understood by Tutors (1.0. adults who in some ways had a large degree of power and control of what was achieved in College). The data Eiven in Table 456 on page 781 indicated the viewpoints of the various samples. Approximately $1 / 3$ or more of all responses were located in categories 1 and 2 which were indicative of a favourable viewpoint. Notable figures
were for the Academic Women (73\%) and the Nonconformist Nomen (15\%). Nearly 50\% of the Colleglate Men expressed a degree of uncertainty whereas the other groups of Men grouped around the $35 \%$ mark. In this category each sample of Nen was larger than their Women counterparts.

For the two remaining categories when combined, the Women had the larger percentages of the two sexes except in the case of the Academics where because of the frequencies already recorded in earlier categories the position was reversed.

Guasiion No, 43 What proportion of the Staff whom you have met in College would you say are genuinely interested in the problems of students?

A frequently expressed viewpoint by visitors to the College and members of Staff was that the College cared about people in general and students in particular. The question was put to the third-year students and the responses are given in Table 457 on page 781 of the Appendix.

Initially, the overall picture was of the Nonconformists (and particularly the Nonconformist Women) expressing the view that relatively few Tutors were gemuinely interested in the problems of students. The Academic Women occupled the other end of the scale and indicated a more positive viewpoint. The Vocationalists and the Collegiates views occupied positions inclined towards less extreme/and tendins towards the $50 / 50$ situation with a slight percentage in favour of smaller proportions of Iutors being interested in students.

Cuestion No. 44 Taking my College courses as a whole, I am satisfied with the onportunities that i have had to meet with my Iutors privately to discuss course work problems and my prosress.

The above question is self-explanatory and was intended as a development of cuestion No. 43. The data indicated quite clearly that only the Nonconformist Women expressed a strongly negative viewpoint although the scores for the Collegiates and Nonconformists in general in categories 1 and 2 were higher than for either the Vocationalists or Academics.

With the exception of the Nonconformist Women, each of the remaining groups of both sexes indicated that a majority of their members were satisfied with the opportunities for tutorial discussion. Details are given in Table 458 on page 782.

Question No. 45 During my College course to date, I have found that in general my Iutors are competent in what they do.

The final question in this section concerned the overall competence of Tutors. The above question was asked and the responses which resulted are given in Table 459 on page 732 The general inding was that over $60 \%$ of each sample except the Nonconformist Women had a favourable opinion of the competence of the various Iutors who had taught them. Relatively few students expressed uncertainty on this variable with the figure for the Academic Women being particularly low. The Academics (Men and Women together) had the highest percentage of the four groups expressing a favourable attitude whilst the other groups in descending order of size were the

Vocationalists, Collegiates and Nonconformists. Sex differences were not widespread but indicated that the $=$ Academic and Collegiate Men had smaller percentages in categories 4 and 5 when combined than the Homen whereas for the two remaining groups the reverse was the case.

The above results are somewhat different from those revealed by Questions 11, 12 and 13 which concerned the percentages of Tutors in Main Subjects and Education who were 'Superior' teachers. In these cases the general riniing was that sufficient negative viewpoints were recorded to warrant concerm on the part of the College tutorial staff. In the present case, the criterion was obviously regarded as being different from those outiined in Guestion 11, 12 and 13 inclusive. With regard to Question INo. 45, the students were assessing actual performance and not the relevance of such performance to what was probably required in school namely an expertise in teaching as opposed to a range of administrative and personal qualities of use by Tutors in College.

SUMARY
This section of the investigation has been concermed with the assessment of the views of the students towards aspects of their College courses. Particular emphasis was laid on both the content of Main Courses, Education and Supporting Studies and the quality of
teaching offered herein. Other aspects of the work completed in College were examined mainly from the viewpoint of how students in each of the four primary philosophical orlentations regarded their Tutors overall.

The findings tended to indicate that the Academics (and the Academic Women especially) were pro-College in their outlook whilst the Nonconformists (and tho Women in this sample in particular) frequently expressed strongly negative attitudes.

On some of the variables (such as the views expressed concerning Supporting Studies) large proportions of students from each orientation indicated their negative feelings. The results, in part suggested the need for a deeper and more extensive investigation of certain aspects of particular college courses but also that such work was outside of the present investigation at the present time.

## The Course in Education.

The three-year course in Fducation was cormon to all students in some respects whilst following different paths suited to the requirements of the Infant, Junior and Secondary speciallsts respectively. All students followed a 'common core' which included the following six items.

1. Teaching practice.
2. Practical work connected with teaching.
3. The Sociology of Education.
4. The Psychology of Education.
5. The Philosophy of Education.
6. The History of Education.

The students were asked to rank each of the above (from 1 to 6) in order of importance to themsolves. The tables of results are presented in the Appendix pp 796-793 in order of overall ranking. Comment is presented below in the form of a summary of the six separate tables.

From the point of view of the majority of the groups occupying any particular pattern of raniing, the general findings were as follows.

1. Ranking number one was given to Teaching Fractice. This was a fairly clear-cut case for all groups although for the Academics and the Nonconformists, the percentages in category number one were smaller than those of the Vocationalists and the Collegiates.
2. Ranking number two was given to Practical Work connected with Teaching. For each group the majority of
the percentages lay in this rank. However, although the remaining percentages for each group tended to be spread out over all the rankings several points of importance cmerged. For example, this item was given first ranking by $25 \%$ of both Vocationalist and Nonconformist Vomen. When the sexes were combined, twenty per cent of the Vocationalists and nearly one quarter of the Nonconformists gave the item first ranking. The percentages in each group who ranked this item 4th or below were as follows: Vocation-

211sts. Mon Wo. Tot. $\begin{array}{ll}26 & 14 \quad 20\end{array}$

Collegiates Men Ho. Tot. -
221216

Nonconformists Men Yo. Tot. $17 \quad 30 \quad 22$

There was a slight tendency for more Men than Yomen to occupy the lower rankings whilst there were more Academic and Honconformist Women in these rankings than from the two remaining groups.
3. Sociology of Education received the 3rd ranking from all groups except Academic Fomen (4th ranking) and the Nonconformist Men (5th ranking) althcuge in this latter case the percentage in the 2nd ranking cell was only $2 \%$ less than that of the 5th ranking coll. There was a tendency for higher percentages of Academics and to a lesser extent the Nonconformists to be located in rankings 1 and 2 although such percentage differences with the two remaining groups were not large. There was a clear tendency for more Men than Vomen to occupy rankings 4, 5 and 6 in all groups except the Nonconformists.
4. With the exception of the Nonconformist Ren and Women who ranked it 3 rd and the Acadenic Nomen who had $31 \%$ recorded on both rankings 3 and 4, the fsychology of Education was ranked 4th by all groups. Minor points of note were that whereas $24 \%$ of the Academics ranked this subject lst or 2nd, $20 \%$ of the Honconformists ranked it 6 th and last. There was also a slight tendency for more Academics and Collegiates to rank the subject lst or 2nd than 5 th and 6 th whereas for the Vocationalists the trend was reversed. There did not appear to be any notable sex differences.
5. : The Philosophy of Education was ranked 5 th by a majority of all groups except the Academic yomen and the Honconformist Nen and Women who gave it fourth ranking although in the case of the Nonconformists the percentage difference between these two rankings was not large. For $a l l$ groups except the Honconformists and the Academic Homen the picture was clear with approximately $40 \%$ or more of the scores being located in the 5th ranking position. The remaining percentages were spread fairly evenly over the remaining rankings although more Academics and Nonconforaists tended to be found in rankings 1 and 2 than the two remaining groups. The only large sex difference was between the Academic Men and Vomen on ranikings 4 and 5. 6. Approximately 75\% or more of each sample placed the History of Education in the 6th or bottom ranking. The lowest percentase for the combined samples of Hen and Women was that of the Collegiates (72\%). The remainder of the
percentages were mainly located in ranking number 5 and contained slightly more Men than Women in the case of the Academics and Collegiates.

## SUMPARY

The rankings present a fairly clearmcut picture with emphasis being laid on work of a practical nature both in schools and College. The degree of popularity of the four common elements of the education course ranged from Sociology through Psychology and Fhilosophy to the History of Education occupying sixth and last place.

Further work was completed using the above aspects of the course in Education as a basis. The question asked concerned the students' view about whether he or she had received Too little/Just enough/Too much of the above six areas of experience. The relevant tables are presented in the Appendix pp $799-800$ inclusive.

Item No. 7 Comment on the quantity of Teaching Practice.
Over $50 \%$ of each group indicated that they had in fact had too little teaching practice. Such a finding was In line with the work of Shipman (1965) who, like the present writer found himself in a situation whereby to organise extra periods in school at a time of radical change Uthin the College was impossible. In the present case, the reorganization resulting from D.E.S. Circular 10/65 whereby Comprehensive education received a large impetus also complicated the situation.

In Table 476 on page 799 it will be noted that there were substantial percentages of students in each Group who indicated a sufficiency of teaching practice. The largest (though small in comparison to the other two categories) percentage in the 'Too Much' category was that of the Vocationalist Nen!

Itom No, 3 Coment on tho gunntity of Practical Fork connected with teaching

As in the case of the ladt item (Teaching Practice) the majority of the responses were located in the 'Too little' category. Between $20-40 \%$ of each group had responses in category number two with the largest percentages being in the Academic group.

Item No, 2 Coment on the ouantity of Sociology of Education.
The middle category of the three contained the buik of the percentages for each of the groups. For the Men, the percentages in this category were similar excopt for the lower ones of the Academic Vomen and Nonconformist Men. In these two groups, over $1 / 3 \mathrm{rd}$ of the members indicated that they had received too little Sociology of Education. This finding does not corroborate that of the lower ranking given to this subject by the Academic Women and the Nonconformist INen in Table 478 on page 799 of the Appendix. With the exception of Nonconformists (both Non and Women) each group had approximately similar percentages located in categories one and threc.

Item No. 10 Corment on the emount of Psychology of Education
Category number two (Just Enough) contained approximately $50 \%$ or more of the responses for each group except that of the Academic Men, In this lattor case, $50 \%$ of them concluded that they had not had enough Psychology of Education. This result was not surprising in view of the large component of this aspect of Education which was to bo found in both the Eridging and B.Ed. courses. This tendency was also indicated somewhat by the Academic Women and Vonconformist Men.

It was noted that it was the Vocationalist Men followed by the Collegiate Men who indicated that larger. numbers of them had received too much Psychology of Education. Such students represented nearly $20 \%$ of the sample of Vocationalist Men.

Iten No. 11 Comment on the quantity of Philosophy of
Education.
:Hore responses from seven groups were located in the 'Just enough' category for each group than in either of the two remaining categories. The Academic Men had $47 \%$ of their responses in category three (Too little). Other points of note were that whilst the Vocationalists had marginally more responses in category one (Too Much), a position that was emphasised more clearly by the Collegiates, over $1 / 3$ of the Academics and exactiy $1 / 3$ of the Nonconformists concluded that they had received too littlo Philosophy of Education. Such findings corroborated the findings of the rankings for
this iten. Slightly more Hen than yomen were to be found in category three in cach case.

Item No. 12 Comment on the amount of History of Education,
Less than $20 \%$ of each group indicated that they had received too little History of Education. Approximataly 1/3 of Vocationalists and Academics suggested that they had received too much whilst for tho Colleglates and particularly the Nonconformists the percentages were higher. In each case, in category one ( $\mathbf{T} 00 \mathrm{much}$ ) except the Nonconformists, the Nen had the larger percentages. A small majority of the Vocationalists and Academics indicated that they had recoived Just enough History of Education. The above figures did not corroborate in as clear a fashion as was expected the views expressed by the students in rankins this point of the Iducation courso in 6 th and bottom place.

## SUMMARY

In general, the degrec of corroboration between the responses given above and the ranifines for the six aspects of the Education course was not as much as had been expected. This pas particularly the case of the Academic Women and Nonconformist Men for the Sociology of Education.

## Chapter 5 (L)

## An analysis of Bridging Course and B.Ed degree candidates by Primary Fhilosophical Orientation.

Details concerning the numbers of students in cach primary philosophical orientation who opted to enter the Eridging course and their subsequent progress and performance are given in Table 55 on page 467. Comment is restricted to the major points of interest since much of the table is self-explanatory. Initially 173 of the 455 students opted to begin work on the Bridging Course: Of these, 110 were Men and 63 Women: The number of Men who finally passed the actual B.Ed, degree nearly two years later (1.e, after a fourth year spent in College) was 34 whilst for the Women the figure was 18.

The major points which emerge from Table 55 are that
a) The bulk of the students who opted to enter the Bridging Course came from the Vocationalists and the Academics: The Nonconformist Women were conspicuous by their total absence.
b)

In terms of those students who for one reason or another did not enter for the B.Ed. degree course (oither because of a voluntary cessation of attendance at the Bridging Course lectures or because of failing the various selection procedures) the largest percentage were Vocationalists.

Details of Bridging Course and B.Ed. Degree Candidates based upon membership of the Frimary Philosophical Orientations.

| Category | SATPLES | VOCATION-ALISTS |  |  |  | COLIEGIATES |  |  | NONCONFORMISTS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Men Wa. Hot. |  | Wo. Toto |  | Wo. Tot. |  | Wo. | Toti | Men |  | lot. |
| 1. Number of students who opted to enter the Bridging Course. | $\begin{array}{lll} 50 \% & 27 \% & 38 \% \\ 110 & 63 & 173 \end{array}$ |  | $\begin{aligned} & 41 \% \quad 60 \% \\ & 24 \quad 67 \end{aligned}$ | $\begin{aligned} & 97 \% \\ & 35 \end{aligned}$ | $\begin{gathered} 100 \div 98 \% \\ 26 \quad 61 \end{gathered}$ | $\begin{aligned} & 23 \% \\ & 24 \end{aligned}$ |  | $\begin{aligned} & 16 \% \\ & 37 \end{aligned}$ | $\begin{gathered} 28 \% \\ 8 \end{gathered}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{gathered} 16 \% \\ 8 \end{gathered}$ |
| 2. Mumber of students who dropped out of the Bridging Course before the Final Certificate Examinations. |  |  | $\begin{gathered} 15 \% \\ 9 \quad 24 \% \end{gathered}$ | $3 \%$ | $\begin{array}{ll} 8 \% \\ 2 & 5 \% \\ \hline \end{array}$ | $\begin{aligned} & 12 \% \\ & 12 \end{aligned}$ |  | $\begin{aligned} & 8 \% \\ & 18 \end{aligned}$ | $7 \%$ | 0 0 | $4 \%$ |
| 3. Number of students who falled selection for the Bridging Course. | $79 \%$ $11 \%$ <br> 42 $15 \%$ <br> 63  |  | $24 \% 31 \%$ 14.35 | $14 \%$ 5 | $23 \%$ $618 \%$ | 11\% | $5 \%$ 6 | $17$ | $\begin{gathered} 17 \% \\ 5 \end{gathered}$ | 0 | $\begin{gathered} 10 \% \\ 5 \end{gathered}$ |
| Mumber of students who gained entry to the B.Ed. desree course. | $\begin{array}{lll} 17 \% & 8 \% & 13 \% \\ 33 & 20 & 58 \end{array}$ | $\begin{gathered} 13 \% \\ 7 \end{gathered}$ | $\begin{aligned} & 2 \% \\ & 1 \% \end{aligned}$ | $\begin{aligned} & 81 \% \\ & 29 \end{aligned}$ | $\begin{aligned} & 69 \% 76 \% \\ & 1847 \end{aligned}$ | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ | $1 \%$ | $\frac{1 \%}{2}$ | $\begin{aligned} & 3 \% \\ & 1 \end{aligned}$ | 0 | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ |
| 5. Number of students who were successful on the B.Ed. decree course. | $\begin{array}{lll} 15 \% & 7 \% & 11 \% \\ 34 & 18 & 52 \end{array}$ | $\begin{aligned} & 6 \% \\ & 3 \end{aligned}$ | $\begin{array}{ll} 0 & 3 \% \\ 0 & 3 \end{array}$ | $\begin{aligned} & 81 \% \\ & 29 \end{aligned}$ | $\begin{aligned} & 65 \% \quad 74 \% \\ & 17 \quad 46 \end{aligned}$ | $\frac{1 \%}{1}$ | $\begin{aligned} & 1 \% \\ & 1 \end{aligned}$ | $\frac{1 \%}{2}$ | $\begin{aligned} & 3 \% \\ & 1 \end{aligned}$ | 0 0 | $\begin{aligned} & 2 \% \\ & 1 \end{aligned}$ |

TOTAL - FOCATION- COLLDCTATES NONCON-
SAMPLE ALISTS ACADEMICS COLLEGIATES FORMISTS
Men wo. Tot. Hen wo. Hot Hen wo. Tot. Wen vo. Tot Men wo. Tot.
6. Number of students who failed the B.Ed. degree examinations.
7. Nuiber of eligible students who opted to do their B.Ed. degree course later in
$\begin{array}{lllllllllllllllllll}1 & 0.5 \% & 0.6 \% & 4 \% & 2 \% & 3 \% & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 2 & 1 & 3 & 2 & 1 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0\end{array}$ ( $1 . e$. not concurrent with their 3-Year course).
c)

A majority of the Academics gained entry to the B.Ed. degree course, a feat not matched by any of the three remaining groups.
d) All of the Academic Men who entered for the B.Ed. degree and all but one of the Academic Women were successful in the degree examinations and thus received their degree.
o) Of the Vocationalists, Collegiates and Monconformists who began on the Bridging Course, only a small minority (or in the case of the Vocationalist Women none at all) actually passed the final degree examinations.

1) In each category and at each stage of the selection and rejection proceedings, Men tended to outnumber Homen.

In sumnary, the point of most importance was that the Academics strongly validated their claim to such a primary philosophical orientation by their overwhelming success in terms of success in the B. Dd. degree examinations. In an equally striking vein the Nonconformist Women and to a lesser extent the Nonconformist Men and Collegiates of both sexes also followed their philosophical bias by being under-represented in nearly all
of the categories contained in Table 55. The Vocationalists presented some surprising results in that whilst a majority of the Men and $41 \%$ of the Vomen opted to enter the Bridging Course the numbers who eventually obtained a degres were minimal. Thus, for this latter group, what was not lacking for the Academics (namely proven abilitics of both a practical and a theoretical nature) was not in evidonce for these people whose primary philosophical blas was oriented towards teachins and not the pursuance of academic studies to a high lovel of accomplishment. of noto in this context was the fact that the largest percentage of those who had opted to undertake the Bridefing Course, falled the selection procedures and had not withdrawn voluntarily.

CHAPTER 6

SUMARY AID CONCLUSIONS.

## SUMAARY ATD CONCLUSIONS

## 1. The Sample

This investigation has been concerned with the composition of College-based sub-cultures within a single year-group of College of Education students in one large college aituated in England. The 221 hen end 234 Women were completing the final year of their threeyear courso. They were given a variety of tests and assessments which gave information indicative of what was boing accomplished within the College.

A unique administrative concept named the Modified Three-Term Year', was in operation by which the students in the sample had received a treatment which was different from that given to their predecessors and imediate successors. For this and other reasons (such as the writer no longer being involved with students following the threeyear courso) subjects were restricted to this single yeargroup.

The 'samples' were formed by the students ranking four philosophical orientations in order of importance to themselves. The orientations were adopted from the Clark and Trow (1963) typology. This procedure initially gave four criterion groups which were later sub-divided to give a larger number of sub-samples. The procedure also raised certain problems related to the degree of generalisation permitted in interpreting the results.

To check the representativeness of the total sample compared with other grouns of college students, the following comparisons were made with relevant norms and also work completed by Lomax (1969).
2. Was the sample biased?
a) The A.H. 5 Intelligence Test (Heim 1968)

The figures given below are taken from the liational noms provided by Heim (1968) in the revised edition of the Mamal, Lomax (1969), and the present investigation.

Table 56. A Comparison of Keans and S.D's for the A.H. 5 Intelligence Test between the Presnnt Sample and Other Sources.

|  |  |  |  |
| :--- | :--- | :--- | :--- |
| Descrintion of Source | Mean | $S_{.} D_{0}$ | N. |
| A.H.5 tomual Norms | 34.51 | 7.25 | 779 |
| Lomax (1969) | 35.53 | 7.07 | 63 |
| The present investication | 35.62 | 7.26 | 455 |

In respect of this variable it is concluded that the mean and standard deviation of the present sample do not differ substantially from the others listed above.
b) The Study of Values (Richardson 1963)

Richardson (1968) 1ists scores in the manual
based upon a sample of teachers and education students. They are given below with those obtained by Lomax (1969) and those found in the present investigation.
Table 57. A Comparison of Means for the Study of Values between the Fresent Sample and other Sources.

|  | Theore- tical | Econo- mic | $\begin{aligned} & \text { Aesthe- } \\ & \text { tic } \end{aligned}$ | Socia | $\begin{aligned} & \text { Poll } \\ & \text { tical } \end{aligned}$ | Rell sutaf | $N$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| hamal | 32.0 | 28.3 | 26.0 | 40.1 | 23.9 | 29.5 | 205 |
| $\begin{aligned} & \text { Lomax } \\ & (1969) \end{aligned}$ | 32.4 | 29.6 | 28.7 | 42.6 | 23.7 | 22.7 | 68 |
| Present Investigation. | 33.5 | 31.3 | 28.4 | 42.8 | 23.8 | 20.2 | 455 |

The nean scores found in the present investigation only vary substantially from those of Richardson (1968) as far as the scale of Religious values is concerned. In this and other respects however, the scores of Lomax (1969) and the present investigation are closer than those between Richardson and either of these two investigators.

## c) Scholastio Succoss - Fasses at Advanced' level in

The figures given below for the National
Clearing houso are those presented by Lomax (1969) and have been adjusted by him to remove the influence of nature students ( $Y_{i}^{\prime}$ of the original Clearing Houso total) in order to permit a more meaningful comparison with his own sample which contained very few mature students. Men and Yomen Students are presented in different tables. Table 53. - A Comparison of the Fercentages of Nen passing the ' $A$ ' level of the G.C.E. between the Present Sample and Other Sources.

MEN ONLY

| Variablo | $\begin{gathered} \text { National } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Lomax } \\ (1969) \\ \hline \end{gathered}$ | Fresent Investigation en |
| :---: | :---: | :---: | :---: |
| $\%$ Obtaining 5 'A' levels | - | - | 0.24 |
| $\%$ obtaining 4 'A' levels | 1.96 | - | 0.45 |
| \% Obtaining 3 ' $A^{\prime}$ levols | 12.97 | 31.82 | 14.0 |
| $\because$ Obtaining 2 ' $A$ ' levols | 25.89 | 31.82 | 26.2 |
| $\%$ Obtaining 1 ' $A$ ' level | 27.83 | 9.09 | 32.1 |
| Octaining no 'A' levels | 31.35 | 27.27 | 26.7 |

IV. D. Colly one van in the present investigation obtained 5 ' $A$ ' levels and his score has been included to bring the total percentage nearer to $100 \%$.

The data outlined above indicate that the figures for the present sample were much closer to the National percentages than to thoso obtained by Lomax (1959). The largest differences between the present ifgures and the National ones were located in the top line of the table and the bottom two innes. In the latter tho cases, the differences were of the nagnitude of $5 \%$ or less. ,

The figures for the women are given below and are substantially in agreement with those of the National sample save in the area covered by 2 ' $A$ ' lovel passes. In this case, the present samplo had the larger percentage ( $34.62 \%$ to $26.62 \%$ a difference of $8 \%$ ).
Table 59. A Comparison of the Fercentages of Women passing the ' $A$ ' level of the G.C.E. between tho present sample and other Sources.
Homen ONLY

| Variablo | Rational $\%$ | $\begin{gathered} \text { Lomax } \\ \text { (1969) } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Present } \\ & \text { Investigation } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| \% Obtaining 4 ' $A$ ' lovels | 0.93 | - | 1.28 |
| $\%$ obtaining 3 ' $A$ ' levels | 13.22 | 17.39 | 12.82 |
| \% Obtaining 2 ' $A$ ' levels | 26.62 | 36.96 | 34.62 |
| $\because$ Obtaining 1 ' $A$ ' lovel | 27.62 | 23.91 | 23.93 |
| Chabtaining Ho ' $A$ ' Ievels | 31.55 | 21.74 | 27.35 |

Lomax (1969) p. 66 concluded that the above
measures and others which he used (such as the Eysenck Fersonallty Inventory)
"........ would seem to sugeest that, while broad
generailisations from the results of this rescarch
must be made with great caution, it may be
reasonable to claim that the findinfs merit at
least considaration in a broader context than
the inmited one in which they were obtained.

Thus as far as the A.H.5, the Study of Values and G.C.E. results was concerned, the sample was representative. Many of the other measures were more restricted to the particular College studied and no strong claim is made as to their degree of being representative of college students in general. The unique treatment given to the atudents in the investication made some of the results necessarily specific and lisited in application. Thus there were reasons for regarding the samples used as a population comprising a single year-group of College of Education students. As a result of this, the investigation should perhaps be considered as a survey of a particular group of students at a snecific period of their training. Also, some of the measures taken were undoubtedly limited to this particular College and its policies, programes and persomal. Even with these limitations however, it was felt that many of the findings were of importance to those interested in the education and training of teachers.

Tho bulk of the investigation concerned the dotails contained in the following eight hypotheses which are given together with information and data leading to thair subsequent verification or refutation.

## HYEOTHESTS MOMER 1

That the most important single piece of data that will prodict the sociometric groupings will be the primary philosoningal orientations and further. that the secondary philosorhical orientations will havo a small but gienificant predictable effect on such groupings.

Table 60 below gives the relevant details conceming the verification or otherwise of the hypothesis in respect of the four primary philosophical orientations.

| Table 60 | A Sumary of Hypothesis 1 (Part 1) concoming the verification or otherwise |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Men <br> choosing <br> Hen | Women choosing Women | Hen choosing Vomen | Homon choosing Men |
| ORIEMTATIOH | Eriends. | Friends. | Priends. | Friends. |
| VOCATIONAL | Verified | Verified | Verified | Verified. |
| ACADEIIC | Verified |  | Hot |  |
| COLLPGIATE | Verified | Verified | Verified | Verified. |
|  | Veripied | Verified | Verificd |  |

The hypothesis was verified in three out of the four cases when Hen chose other Men friends, and in 50\% of the cases where Women chose other Vomen. Betweensex comparisons for the Ken choosing Women friends indicated only one verification out of the four analyses whilst for Vomen choosing Men friends the hypothesis was verificd for only the Collegiate and lionconformist samples.

Of particular note was the fact that:
a) the hypothesis concerning the Nonconformists was verified in each of the four separate analyses.
b) the hypothesis concerning the Vocationalists was not verified in each of the four separate analyses.
c) the hypothesis concerning the Acadenics was verified in only ong of the four analyses.
d) tho hypothesis concerning the Collegiates was verified in three out of the four analyses.

Thus, from the point of view of the orientations which exhibited most clearly the tendency to choose friends from thoso of the same primary orientation, the Nonconformists and to a lesser extent the Collegiates displayed such a tendency. The opposite end of the scale indicating a lack of any useful prediction was occupied by the Vocationalists and (in three of the four analyses) by the Academics. However, details given on pages 180 to 183 in which the actual relationships are explored indicate that both of these latter eroups did in fact havo mean scores which were significantly higher than some if not all of tho three remaining philocophical orientations.

THE SECONDARY FHILOSOPHICAL ORIETYATIONS.
The latter part of Hypothesis NO. 1 suggested
that
".:". the secondary philosophical orientations Will have a small but significant predictable efiect on such (sociometric) groupings":

Tho hypothesis mas verified since 27 of the 96 possibly significant relationships were in the hypothesised direction. The analyses which most atrongly eupported the hypothesis were those where Ien were choosing lHen, and Vomen were selecting other Vomen. The two analyses which required Hen to choose Vomen and vicemversa did not support the hypothesis to the same degree. General trends of importance vere absent but points of minor note were that a) there was an indication that the Vocationalist Men had sienificantly more friends of both sexes who choso the Academio as their second-choice of orientation than who bolonged to other second-choice orientations. This inding was not repeated by the Vocationalist Vomen nor by the other primary orientations in such a clear fasion. b) both the Academic and Collegiate Nen had significantly zore Men Iriends who chose the Vocationalist philosophy as their second-choice of orientation than friends wo had different second choices.
c) Ifve out of the total of six t-tests involving the Collegiate Vomen choosing other vomen wero significant and in the hypothesised direction.
d) in gencral, significant relationships involvins the Yonconfomat :ien and demen (lst choice of Orientation) were lacking.

## HYFOTHESIS IUNDER ?

That tertiary oricntations will not be predictable from socionetric choices.

The tertiary orfentations were the fourth or final choice of orientation and as such they ropresented a degree of rejection since they were residual choices. Four samples were too small for t-tests to be computed. Of the remaining 92 t-tests, 22 wore in the hypothesisod direction. Thirteen of then indicated the rejection of the Nonconformist philosophy by membors of the three remaining orientations. Tho fonconformist philosophy was rojected by no fewor than 113 Nen and 153 Homen. A further five sienificant differences indicated the rejection of the icadcuic Philosophy but mainly by Men choosing Yomen.

Tho bulk of tho significant differences concerned Men choosing vomen and Yomen choosing wen. On the basis of the above results it is concluded that the hypothesis was not verified although most of the observed relationships were in the expocted direction.

HYPOTHESIS 3.
That of the four groups formed by the primary rhilosophical orientations, the Academics and the Nonconformists will be more highly rolated in sociometric Groupings than either of tha two remaining rroups,

The resuits of the sociomotric analyses in respect of reciprocated choices were mixed. The hypothesis for the Acadcnics was millified to a large degree. The hypothesis concerning the Nonconformists was verified most strongly in those which involved Men choosing hen and Bomen choosing vomen respectively. This also applied to the Academics for Analysis No. 1, but in a maller cegree. For the analyses involving comparisons between the two sexes, the results for the Academics indicated that the hypothesis had to We rejected. Also, in Analysis No. 3 which concerned Women choosing other Women of the same primary orientation, the percentages of academics in categories 0-8 and 9-17 were in the ratio of $2: 1$. Thus, in this final case the hypothesis was verified to a decree but not nearly so clearly as in the case of the Honconfomists, and the percentages involved for the Acadenics were somewhat overshadowed by those of the Collegiates who occupied each of the five categories of scores (i.e. Ho. of reciprocated choices).

INFOTHESTS 4.
That tho orimary rhilosorhical orientation most closely rolatod to academic success in Colleso is Acadenic.

Details of the relevent sections of the analyses of varianco aro given in Table 61 overleaf. They indicate that in terms of College-based assessments, the Acadenics wero tho superior group. Surprising omissions included the non-sienificant F-ratio of the combined sample of hen and Women for Achievement Motivation; the lack of significant differences for both G.C.E. subject totals, and the Iype(s) of Secondary 3chool(s) attended. The A.H. 5 test of adult intelligence kas only a mareinally successful indicator of the superiority of the Academic Vomen over the Collegiates.

The significantly higher mean grading for Teachins Practice by the combined sample of Nen and romen was probably a direct result of the B. Pd. degree entranco recuirement of a inal mark of $\mathrm{C}+$ or above for practical teaching. The personality traits of anxicty and extraversica have been shown by furmoaur (1957) to be factors in college success. The Academics (Women only) and Yen and Yonen tozether) had significantly lower scores for motionality ( 16 P.F.) than each of the three remainins Eroups of students. The results for Extraversion (16 P.F.) vere much weaker with the Academics being significantly less extraverted than the Collegiates whilst not being significantly different from the two remaining groups. The combined sample of iten and homen Academics had a significantly higher mean for Conscientiousness (16 P.F.) than each of the three remaining groups.

Table 61 - Specific Anslysis of Variance results conceming the Primary Philosophical Orientation of Academic.
a) Details extracted fron the Analyses of Variance

The Sienificant Diliferences between the Acadenics and the three remaining


The percentage of Academics who had opted to study a llain subject at a Subsidiary 1evel was $1.6 \%$ Which was ruch lower than the IIgures for the Vocationalints ( $10 \%$ ), the Collegiates ( $22 \%$ ) and tho Nonconformists ( $10 \%$ ).

Tho relevant Eridging Courso and B.Ed. results are sumarised below.

Ten Women Total.
(1) The peremtare of Academics who entered the Bridging Course

97100 93
(i1) The percentage of Acaderics who gained entry to tha B. Zd. degree course.

81 $69 \quad 76$
(1i1) The percentage of Acadenics who gained a B.Ed. degree.
$81 \quad 65$ 74
(iv) The percentage of Academics who failed the degree examinations. 0042

The above resulta indicate that the Academics in general, and the Nen in particular experienced a very large degree of success in the degree examinations. No fewer than 29 of the 34 hen and 17 of the 18 Vomen who gained a degree were Academics. It is concluded from the above evidence that the hypothesis is verified.

GMFOTLASIS 5.
That the rrimary philosonhical orientation most closely rolated to success in practical teaching is Vocational.

The hypothesis was not verified. The Acedemics (Men + Women and Men only) had the superior grades for teaching practice whilst the differences for the samples of Vomen were non-sicnificant. Only the Nonconformist Men had a neen score for practical teaching which was significantly lower than that of the Vocationalist Men. Tho Vocationalists werc not significantly different from the Collociatos in terms of Teaching Practice grades.

Elchty-one per cent of the Vocationalist Men and 41\% of the Women opted to commence work on the Bridgins Course. Later, $23 \%$ of the Kon and $15 \%$ of tho Nomen dropped out for personal reasons. of the remainder, oniy $6 \%$ of the Nen and $0 \%$ of the Vomen Vocationalists actually gained a desreo. Forty per-cent of the Mon and 24\% of the Yomen falled solection and of these ifgures, one-third of the Nen and approximately one third of the Yomen did not get the recuisite C+ Erading on the final teaching practico.

## HYPOTHESTS 6.

That the students whose nrimary orientation is Nonconformist will hold tho most negative attitudes tovards College and further, that as a groun they will indicate a leck of confidence and will display attributes associated with anxiety and tendernindedness.

Data relating to tha above hypothesis taken from the analyses of variance are given in Table 62 overleaf. In toms of negative attitudes those relating to Collegebased Authority and Discipline were the clearest. Such a finding was not unexpected aince the College was inevitably conservative and supported traditionally held attitudes and beliefs. The negative attitudes of this group wero also in evidence in the context of Main Subject 1 and Eaucation.

Further evidence was available in the many frequency distributions to be found in the body of the thesis. Of particular note were those relating to the length of time they expected to remain in the teaching profession (where the figure for tho Women in terms of brevity of membership was particularly notable), the number who did not see the need for a good academic record and the relatively high percentages who indicated negative viewpoints relating to a variety of practices and methods employed in the College.

Although only one lionconformist lan and nons of the vomen gained a B.Ed. degree, the figuro for this group of Women čniy who were studying a kain subject at a Subsidiary leval was $0 \%$ and was the lowest of the four Eroups. For the Men, the figure of 17\% was equal in

size to that of the Collegiates but was higher than the two remaining groups of Nen.

The len Nonconformists received significantly lower erades for Teaching Practice than each of the three remaining groups of Nen students. Their unconventionality in dress, behaviour, and attitudes was often cause for coment in this context.

As indicated in Table 62, only in the case of the first-order factor of Conseientiousness (16 P.F.) were the lionconformists of both sexes (and as a combined Eroup) significantly lower in mean score than each of the three romaining groups. For Emotionality, the findings included a non-significant F-ratio for the Men and in the case of both the Women only and the combined sample of Nen and Women, significant differences between them and each of the three remaining groups were not in evidence. At most they include only one of two of the groups. Such were the results for Tendermindedness and Radicalism although in this latter case, the combined sample of Men and Homen vas significantly higher than each of the three recaining groups.

From the point of view of the hypothesis therefore, tho conclusions were as follows:
a) In terms of attitudes, the Nonconformists in general and the Honconformist Nomen in particular, tended to hold more negative viewpoints (within the framework of Collegebased norms and expectations) than the throe remaining groups. This was particuiarly clear from the standpoint of negative views of College-based Authority and Discipline, and to a lesser extent towards their Main Subjects and

Education. From this point of view, the hypothesis was verifloc,
b) The hypothesis concerning specified personallty variables was not verified. Only in terms of a lack of Conscientiousness ( 16 P.F.) did the Nonconfornists differ significantly from the three remaining groups of students when regarded as either single-sex samples or as a combined sample. The Homen only and the combined sample were significantly more radical than each of the threo remaining eroups whilst the F-ratio for the analysis involving them was non-significant for this 16 P.F. factor.

HYPOTIESIS NO. 7
That the sroup whose nrimary orientation is Collegiate will havo mediocre but acceptable grades for Collego and school-based assessments and the lovest scores for achievemont motivation.

A criterion problen is posed by what one considers exades to bo which are 'mediocre but acceptablo'. The present investigation suggests that mediocre erades are those which are lower than those recorded by each of the other groups (or at least a majority of the three other groups of students). Using this criterion, the significant anlaysis of variance results are sumarised below.

From Table 63 it can be seen that the Collegiates tended to get significantly lower scores and grades than the Academics for College-based essessments. There was also a tendency for the Collegiato Yen to havo scores that vere significantly lower than the Vocationalists. . This was particularly the case for the Composite Academic Score, Total Marks for IVain Subject 1, Education and Achiovement Hotivation.

In terms of the mumber of students completing one of their two (personally choson) Main' subjects at a 'Subsidiary' level, the Collegiates had the highest percentace of the four groups of Men and Nomen combined (21\%). This finding also hold true for tho vomen ( $25 \%$ ), whilst the Men shared their percentage with the Nonconformist Men (17\%).

Table 63 Specific Analysis of Variance results concerming the Philosophical Orientation of Collegiate.

## Details extracted fron the Analyses of Variance

## Variable

## Pattern of Significant Differences

| Composito Academic Score | $\left.\begin{array}{l}\text { Yen + Yomen } \\ \text { Yen oriy } \\ \text { Wonen only }\end{array}\right\}$ | Colleglates lower than the Acadenics and Vocs. Collegiates lover then the Acaderics. |
| :---: | :---: | :---: |
| Total harks for hain wubject | $\left.\begin{array}{l}\text { Men }+ \text { liomen } \\ \text { Men only }\end{array}\right\}$ | Collegiates lower than the fcademics and Vocationalists. |
|  | Homen only | Collegiates lower than the Acadomics.. |
| Total hariss for hain Gubject 2 | len + women ifen only Homen only | Collegiates lower than the icademics <br> Collerintes hisher than the Nonconformists. |
| Total lariss for acucation | hen + homen Hen only Vomen only | Collegiates lower than the vocationalists and tho Acadenics. |
| Total Grades for Heacning Practice. | hen + nomen <br> Kon only <br> Momen only | Collcgiates Lower than the Academics. I Non-simnificant. |
| Achievement Hotivarion | $\begin{aligned} & \text { Hen + woren } \\ & \text { Yen only } \\ & \text { Homen only } \end{aligned}$ | Elion-sienilicant. <br> Collesiates Iower than the Acads ix Vocs. <br> Collealates lowar than the Academics. |
| Intolligence (A.H.S) | $\qquad$ <br> Hen only <br> Women only | F lron-3ignificant. <br> Colleriates lower than tho Aeaceraics. |
| Social Values (Study of values) |  | collegiaten higher than each of the three remaining groups. |
| Betraversion (16 H.F.) |  | Collegiates higher than the Vocationallsts and the Academics. |

The percentages of Collegiate Men and Women who opted to enter the rigorous Bridging Course were $23 \%$ and $10 \%$ which gave them bottom and third rankings respectively when compabed with the percentages of Men and Women in the other groups. The percentages who voluntarily opted to drop out of the Bridging Course was 12\% for the Men and 8\% for the Homen, percentages which for the Nen was larger than all but the Vocationalists whilst for the Vomen was the smallest (since 0\% of the Henconformists Yomen was on the Bridging Course anyway). Only one Collegiate Kan and Voman was successful in the degree excmination, out of a total of 24 Men and 13 Vomen who began as members of the Bridging Course. The picture is nade less bleak however when it is realised that With the exception of the Academics (who mado a near clean-svecp of the degree table) the mumber of lien and Yomen in any of the remaining groups based on primary philosonhical orientations who gained a degree was three in the larcest case (that of tho Vocational Nen). Thus, in this respect, the Collegiates were typical of all the groups except the Academics.

This group was the largest by far of the four samples procuced by the four primary philosophical orientations. Evidence for this phenomenon of size to be present in other Colleges (in America) is given by Newcomb (2966) and Peterson (1965). Clark (1962) has thrown some light on this facet of the Collegiates and hes stated that ( p .235 )

> TTh impact of performance stondards on student orientations can be quite strikins..... Iow standards of work in a college clear the way for participation in the collegiato iffo".

One could question just how far the College was in fact emphasisine woris of perhaps a lower standard than that capable of being completed by a majority of the students. This point will be further developed when the implications of the findings are considered.

On the above evidence it is concluded that the hypothesis outlined above is verified.

## HYPOTHESIS

That the variables which differentiate simnificantly Getween the four primary orientations will be attitudinal and motivational in nature mother than those related to ability and social class.

In terms of the above hypothesis the following points are made using the total maber of sienificant differcnces between any two samples as tho criterion. (i) If each and every differenco botween the four samples wes 3imnificant this would produce a total of six differences por variable. This is eained as follows: Vocationalists v Academics / Collegiates / Nonconformists. Academics $V$ Collegiates / Nonconformists. Collegiates v IFonconformists. (11) The Iollowing tables indicate the number of significant twtests botween samples when regarded as Ven + Vomen and single-sex samples also. Table 64. The number of Significant Differences between the four Primary Philosophical Orientations for given Attitudinal and Motivational variables.

| Variabla. | $\begin{aligned} & \text { Men }+ \\ & \text { Women } \end{aligned}$ | Hen | W0. |
| :---: | :---: | :---: | :---: |
| Attitude to Collegembased Authority \& Discipline. | 6 | 3 | 4 |
| Attituda to Nain Subject 1 | 3 | 0 | 3 |
| Attitude to Main Subject 2 | 0 | 0 | 0 |
| Attitude to Ecucation | 4 | 3 | 4 |
| Achievenent iotivation | 0 | 5 | 3 |
| TOTALS | 13 | 11 | 14 |

When expressed as percentages of the total possibla mimer of significant differences (i.e. 30 per column) the above 11gures become $43.3 \%, 36.6 \%$ and $46.6 \%$ respectivoly from left to right.

Table $65 \quad$| The number of Significant Difforences |
| :---: |
| bstween tho four Primary Philosophical |
| Orientations for tho given Attainment |

variables and Social Class.

| Variabla | $\begin{aligned} & \text { Wen }+ \\ & \text { Vomen } \end{aligned}$ | Hen | \%०. |
| :---: | :---: | :---: | :---: |
| Type(s) of Secondary School(s) | 0 | 0 | 0 |
| G.C.Z. sumations of 10 ' and 1 A ' levels | 0 | 0 | 0 |
| Total Haris for Main Subject 1 | 4 | 4 | 3 |
| Total Marks for Main Subject 2 | 3 | 3 | 3 |
| Total Marks for Education | 5 | 4 | 3 |
| Composite Academic Score | 4 | 4 | 3 |
| Critical Thinking Ability | 0 | 0 | 0 |
| Intelligence | 0 | 0 | 1 |
| Total Inariss for Teaching Practice | 3 | 5 | 0 |
| Social Class | 0 | 0 | 0 |
| TOTALS | 19 | 20 | 13 |

Again, when expressed as percentages of the total possible number of significant differences (i.e. 60 per column) the above figures become $31.66 \%, 33.33$ and $21.6 \%$ respectively from left to right.

Thus, as can bo seen from the two tables given above the percentages of significant differences between the atilitudinal and motivational variables were in excess of those for the variables listed in Table 65 in spito of the fact that this lattor table contained twice es many variables as its predecessor.

If the values which have been sampled and the personality traits which have been measured are considered, the following data becomos available.

Table 66 The muber of Sienificant Differences between the four Primary Fhilosophical Orientations for the six Study of Values Variables.

| Varlable. |  | $\begin{aligned} & \text { Won }+ \\ & \text { vomen } \end{aligned}$ | Hen | W0. |
| :---: | :---: | :---: | :---: | :---: |
| Theorctical Values |  | 0 | 0 | 0 |
| Econoric Values |  | 0 | 0 | 0 |
| Aesthotic Values |  | 4 | 4 | 2 |
| Social values |  | 3 | 3 | 2 |
| Polltical Values |  | 0 | 0 | 0 |
| Rolligious Values |  | 3 | 0 | 0 |
|  | TOTALS | 10 | 7 | 4 |

Mpressed as percentages of the total posaible number of significant differences (i.e. 36 per column) the above figures become 27.78\%, 19.44; ard 11.11\% respectively from left to right.
Table 67 The number of Sienificant Differences between the four Primary Fhilosophical Orientations for the five Personality Varlables.

| Variable. | Men + Hen | Wo. |  |
| :--- | :---: | :---: | :---: |
| Emotionality | 3 | 0 | 4 |
| Extraversion | 3 | 2 | 2 |
| Tendermindedness | 4 | 2 | 2 |
| Redicalism | 3 | 0 | 3 |
| Conscientioumess | 4 | 3 | 3 |

When the column totals were changed to percentages the following figures resulted, 56.6\%, $23.3 \%$ and $46.6 \%$ respectively from left to right.

From the point of view of the percentage associated with any single table of the above four, the greatest muber of aignificant differences was associated with the personality variables and was followed by the attitudinal and eotivational variables. This particularly being the case with the combined samples of Yen and Vomen.

In addition to the above findings, there was evicence throughout the body of the thesis relating to the Course in Education, Porsonal Welfare, Fersonal Views on Teaching, Expectations and Realisations of College Lifo and comments concerning the Content and cuality of College Courses which strongly supported the hypothesis. It is concluded that the hypothesis is verified.

## MAJOR AND MITVOR DISCRIIINATORS OF GROUP DIFFERENCES

Ividence has been presented in the thesis to indicate that the four primary orientations did in fact differ from each other in various ways and to differing degrees on a variety of instruments and assessments. 'The fragmentary and discrete nature of some of the measures (such as the Biographical Data, with 47 separate items) indicated the need to locate the assessments which were the prime sources of differentiation between the groups and contrast them with measures which added to the analysis in only a minor way.

A detailed appraisal of the results revealed that in only a very few cases didany singla measuring instrument or technique emerge as a major overall indicator of group differences. The analyses of variance of the 27 variables regarded as being of special importance to the study were the best indicators of group differences. Even in this case, however, there were only three variables which indicated that any single orientation was superior or inferior to the three remaining groups and which extended over the samples of Men Only, Vomen Only and Men and Vomen together. They indicated that the Academics had a significantly higher mean score for Total Marks for Main Subject 1 and the Composite Academic Score and that the Nonconformists were less Conscientious (16 P.F.Q.) than the three remaining orientations.

If the samples of Men Onily or Women Only or Men and Women together were looked at singly, a clearer picture emerged. The cases where any single orientation of Men Students Only were significantly higher or lower than the remaining groups of Men Only totalled nine in number, whilst
the numbers of cases for Women Only or Men and Women together were 11 and 13 respectively. Details of these differences are given in Tables 27, 28 and 29 on pages 244, 247 and 250 of Chapter 5, and have also been listed in the verification or refutation of the hypotheses outiined on earlier pages of this mumary.

In general, such findings indicated the academic and professional superiority of the Academics, the negative attitudes and poorer performance of the Nonconformists (and the vomen in particular) whilst outiining to a somewhat smaller degree the love of social intercourse of the Collegiates and the positive view of facets of Collegemased Courses and Authority of the Vocationalists who vere also inclined to bo aesthetes.

Table 63, below sumarises the relative contributions of the various measuring instruments in discriminating batween the four primary orientations. Table 63 A Sumary of the Relativo Contributions or the measuring instruents and Iechnicues In iniscriminating between the Four Frimary Orfentations.
Heasuring Instrumont loo of
of Techinuo. Items 1. The Sociomatric Data.
2. The criteria for the evaluation of College-barsed peer Eroups.
3. Analyses of

27

## The Main Findings

The prediction was confirmed for the Nonconformists and Collegiates in particular in terms of the Primary Fhilosophical orientations. Prediction of tho secondary and Tertiary Orientations was not as cleas.

4 Rosidential groupings and similar social interests vere the main criteria for sociometric groupings.

Vocationalists (Women only) displayed a positive attitude to education.
Vocationalists (Men + Vomen)
hisher on attitude to
Authority and Discipline and lower on Social Values.

Measuring Instrument or Technicus
4. Factor Analyses
5. Tho Stcpwise

Discriminant Aunction
6. Tho Elographical Data.
7. Reaschs for Bnterins Teaching.

No. of Items2727

Measuring Instrument
or Technique.
13. The Content and Guallty of College Courses.
14. The Course in Education.

No. of Items.

45

12
15. B.Ed. Degree results.

The Main Findings.
The only group differences of note indicated the positive attitude of the Academics (and tho Women in particular) which contrasted with the negative attitudes expressed by the Yonconformists (and particularly the Homen).

Grcup differences mere relatively small. The ingtrunent tended to show the relative popularity of curricular 1 tems to the students as a whole. Academics tended to rank higher those items of importance on the B.Ed. degree course whilst the lionconformists were slishtly more in favour of Fhilosophy and Sociology.

Thirty four \%en and 13 Fomen gained the degroe of Lachelor in Education. of these Men, 3 were Vocationalists 29 were Academics whilst both the Collegiates and Nonconformists each had ono success. For the Women, the ifgures were Vocationalist 0, Academics 17, Collegiates 1 and fonconformists 0 . The overwhelming superiority of the Academic orientation in this context is selfevident. Of note was the fact that although 81\% of the Vocationalist Men and $41 \%$ of the homen opted to join the B. Ed. Erideing course their ifinal rate of success was minimal.

Fron the point of view of the analyses, techniques or measuring instruments used, it 13 concluded that the 27 main variables were the best indicators of differences of importance between the four orientations. Such findings did not indicato exceptionally largo differences
between any Primary Orientation and tho other three orientations equaliy.

The two orientations which appeared to be greatiy different from the two remaining eroups were those of the Academics and the Nonconformists. The Acaderics provided ample evidence of their wish to do well academically and to further their persomal and professional attainments: The Nonconformists indicated equally clearly their negative attitudes and relative lack of expertise in practical teaching.

The Vocationalists and the Collegiates formed less clearly defined groups. The Collegiates loved the social life willst the Vocationalists had positive attitudes towards College-based authority and higher scores for aesthetlc values than the remaining groups.

## THPLICATIONS

This analysis has sought to study the attributes of groups of students within a framowork which brought order to readily observable but diverse phenomena. In seeking to sce whether in fact the sub-cultural groupings had any reallty other than similar expressions of attitudes and bellefs (such as the negative views of the Honconformists towards Collego-based Authority and disciplino) tho following facts emerged.

It was demonstrated by the use of near-sociometric techniques that there was a significant tondency for certain sub-cultiral orientations to choose their friends from amons people holding similar attitudes. Thus, the implication was that these attitudes were likely to be strengthoned and confirned by the regular contact and social intercourse which occurs amons friends of the same or the opposite sox. In addition, there was strong supporting evidence in the form of residential groupings and expressed aimilarity of interests which nade this inplication even noro relevant. This latter finding was seen most clearly with the Nonconformists and the Acadenics.

Some of the findings replicated the work of earlier investigators but a muber revealed new information of importance to those engaged in teacher-training. In this area, negative viewpoints of some of the work being cone in the College together with widely differing levels of ttainment vere to the fore.

The basic skills and techniques necossary for entry into the teaching profession are taught and assessed in Collece. Furthernore, a part of professional socialization takes place through this institution.

Shipman (1965 p.281) outlines the role of the college in this process by stating

> "Socinilization into tho role of student is part of the process whereby the rights and oblications of the teacher's role are learnt. The colege must provide an environment in which students uili be' cognitively prepared for their role and in which it can be practiced."

If we accept that socialization is a process by which people selectively acquire the values and attitudes, the interests and outlook - in short, the culture explicit in the group in which they aspire to membership, then tho findings of the present investigation achieve some perspective. Vagenschien (1950) has pointed out that many young teachers experience a shock upon entering schools on a full-time basis when they meot their nore experienced colleagues. As a result, many college-based experiences may be modified or even jettisoned as the new entrants move towards identification with their now colleagues. The findings with regard to the Honconformists with their rolatively poor regard for academic excellence and their negative attitudes are of note here. These attitudes had been developed prior to these students leaving College and contact with practising teachers might well reinforce them with a consequent lessening of the degree of comitment displayed by these individuals. To a lesser extent the lack of an identifiable charactor of the Vocationalists might be affected by such contact which would lead to this latter group adopting a degree of drab uniformity rather than vigorously developing their avowed primary interest in teaching children.

The Collegiates already appeared to be conforming in some mays to the stereotype held by the public of the 'typical' student/teacher. The Academics in their turn had begun tho woris which would enable some of their aspirations (tovards positions of status within and beyond the teaching profession) to be met. From such positions, this group rould be able to influence the idea of what a 'good' teacher should be and do, and so perpetuato the outlook of their tutors who strongly tended to be Academic in orientation.
minist it is not proposed that different programmes and syllabil aro developed to cater for the needs of the individual sub-culture, it is suggested that such obvious differences between the groups be noted and taken into account by both teaching and administrative personnel. Al though the teaching profession allows its members a certain e sree of individual freedom within the classroom, at the same time, a teacher is expected to conform to a certain role-pattern. In their own respective ways, both the Nonconformists and tho Academics were unlike the bulk of the students in the College. However, in the present educational climate, it was the former group who would be regarded as not absorbing the required degree of professional sociallzation.

Further investigation may indeed show that it will be vory difficult to make good teachers of the Nonconformists. To date, nore of them had left their first posts or had left teaching altogether than members of the three remaining orientations, although the numbers were small. Also, of the nine students in the total
year-group who were in the process of comploting extended probation, three were Nonconformists. In total, seven men and four women Nonconformists had either left teaching or were having difficulties in obtaining clearance from probation. If circumstances were to force such people to cither alter their outlook and behaviour or to withdraw from the classroom, the results sould perhaps be unfortunate. Such people may be a necessary (if negative) part of the staffs of our schools although there are other equally subjective viewpoints. As innovations of change and as part of a leavening process thoy may add to the total impact made by the staff. Also, such people often experience a high degree of accoptance from children in school whilst at the zame time carning the disapproval of collengues and superiors.

Hembership of the Academic and Nonconformist subcultures (and to a lesser e:tent, the Collegiate) was predictive of differing degrees of success in terms of examination or course reaults. The overall success of the Acaderics in the B.Ed degree examinations was particularly important. Students recorded that once a person had expressed his or her intention of preparing for entry to the B.Ed degree course, they began to receive 'special' attention from the tutorial staff. Evidence in support of this view was slight but the effect ypon the non-entrants in terms of the quality of their work served to impose a general level of attainment below the capabilities of many of the students. Furthermore, the implication of blas by the
tutorial staff does little to make for closer and more understanding relationships between staff and students.

The findings within the sub-cultural groupings showed that the college was engendering and reinforcing different levols of attainment and a variety of attitudes and values. At the selection interviews the sub-cultural viases were not obvious and as might be expected, the great majority of students expressed interests in accordance with that of the Vocationalist philosophy. Subsequent intercourse at various formal and inforral levels with both peers and College staff resulted in one group being observably different from the othor groups in a muber of ways.

Also, in the context of ' $A$ ' lovel results, an important finding of the investigation was that the Academics did not possess greatly superior qualifications upon entry to the College. They did not havo a significantly higher mean score than any of the three remaining eroups. The sample of Academic then Colly and tho combined sampla of Academic Men and Women had a significantly highor mean for achievement notivation than each of the threc remaining samples. There is a clear indication here of the manner in which the College could attempt to raise the overall standard of attainment and expertise achieved by many more of its students. A greater degreo of identification with the academic alms of the College by many more of the Student body would be of benefit to all parties concerned at a time when criticism conceming the low standards displayed by
students is Growing. Should this bo achioved through a detailed consideration of Collego counses and activities regarded by the student body as being of doubtful value together with the Staff requiring Ereater effort on the part of the Students, considerable mutual benefit would result.

The recently published James Report (1972) has given cleas indications of what order future changes in teacher cducation might be and how they might bo successfully implemented. Within this context the following eeneral recomendations of James are of particular note:
a) "Tho hichest priority should be Eiven to the expansion... of opportunities for the contimed education and training of teachers (1.g.,2.33., 6.5)
b) The preservice higher education and training of all teachers for the schools should extond over four years ( 6.2 )".

Bearing in mind the varying degrees of acceptance and rejection displayed by the students in the present investigation the above recomendations post important questions for those responsible for the education and training of teachers. A lengthening of the present course by ono year without considering what is being accepted or rejected by the student body is likely to exacerbate tho problem. Such a position is important since the demands by both schools and public for better teachers who display expertise and
comilment are growing.
c) "The initial training of teachers in the second cycle should last at least two years (one in a professional institution and one in a school) should be the same for all intending teachers in its organization and length, however much it might vary in content and style, and should lead to the same terminal avrard: a new professional degree of B.A. (Education). (3.12., 3.24., 3.34., 6.2., 6.10., 6.13)"

This latter point is of particular note when one bears in mind the actual numbers of students in the present investigation who gained a degree when compared to the total mumber of students in the four orientations (1.e. 34 Ken and 18 Vomen). Such figures when totalled represent 17.43 of the sample of 455 students.

From this point of view, the James Report appeare to have had the Academic subculture in mind. It had relatively little to say conceming the bulk of students who composed the remaining sub-cultures (since their participation and success in the final examinations for the B.Ed. degree was minimal). This large residue of students (who according to Willey and Maddison (1971) are typical of those found in many other Colleges) will enter the profession as non-graduates at a time when the university degree
is achieving new prominence as the preliminary qualification for many careers with prestige and social acceptance. It should also be noted that the B.Ed. degree which is awarded tends to be a general degree in a climate which is moving strongly towards the provision and recognition of honours degrees.

Some of the students (a number of whom had indicated that teaching was not to be their permanent career) may find in the future that their lack of a degree will prevent them movins out of the profession easily. As a result, they will tend to remain and the profession will be forced to retain members who exhibit minimal motivation. The mmber of Vocationalists in such a group should bo minimal. They were (by definition) motivated to becoming teachers, they identified with their College, and were not as degree oriented os the Academics. Kore Vocationalist Men in particular had indicated their intention to romain in the profession longer than the three remaining $\mathrm{grOL}_{\ddagger} \mathrm{S}$.

Although it is realised that the sub-cultural groupings may not be of much use for the purposes of prediction uniess it can be shown that they re-occur each year, their presence in the present sample was important. They served to indicate the differing ways in which students react to a comon environment. Furthermore, whilst their behaviour is in part governed by the
treatment which they receive in College, they in turn influence the staff of tho College and the philosophies which they hold, the standards which they expect and the type and quantity of work which they place before the students. Results found in the body of the thesis clearly indicated that the tutorial ataff wero oriented towards the Academic Fhilosophy.

A rolevant example here 13 seen in the large size of the Collegiato cubculture. The presence of such a large group may have served to influence the programen offered by the College and the level of attainment expected of the students, by the tutors. The general criticiom of student/teachers at the present time by both practising teachers and nembers of the public may be an indication that the norms of behaviour and attainment imposed by such a group as the Collegiates are no longer acceptable in an academic world where the required mindmum standards of competence are rising. Nevertheless, short of large-scale fallures, the Collegiates (if they are in fact subscribing to the developacnt of attainment patterns which are below their ultimato capabilities) may contime to impose upon the College the level at which the typical or 'average' student is expected to perform.

In more general terms, many of the results sumarised above strongly corroborated the findings of Shipman (1965), Lomax (1969) and Eason and Kroll (1971) winich indicated that there was no room for complacency on the part of College Staffs in view of
their findings. Such findings indicated that in many ways the Colleges are being less than successful in persuading many students to accept their offerings in a variety of situations and subjects and that perhaps such tutors ought to stand back and review what was in fact happening rather than by continuing as before regardiess of the consequences.

Although the Iiterature conceming the training of teachers is both voluminous and extensive there is still great difficulty in identifying key factors as to what makes a 'good' teacher. This is partly duc to teachers, parents and college staff failing to agree on criteria. Furthermore, it is often difficult (and therefore attemptod infrequently) for a college to follow-up its students once their training has been completed. As a result, there is a real need for colleges to validate their selection procedures and training prosrames against the subsequent performance of their students. The short-term follow-up in the form of the probationary report often lacks complete relevance. Collins (1969) among others has shown that the type and extent of help and advice given to probationers varies widely from one L.B.A. to another. since Colleges of Education still produce virtually all of the non-Eraduate entrants to primary and secondary schools the need to examine that is being produced is of importance.

There would appear to be a strong case for an increased avareness on the part of members of the College tutorial staff to the students' recorded perceptions of much of what is being offered. Fertinent
examples include the popularity of teaching practice and other practical work in education as opposed to the universal rejection of the History of Education. There was also evidence that the content of some of the courses beins offered was not in accordance with the pre-conceived notions of some of the students. Also, the quality of the teaching and supervision offered was given less than whole hearted support and approbation by members of the student body. Such findings corroborate those of Shipman (1965) Lomax (1969) and Eason and Kroll (1971). There vere other examples which served to indicate that there was a need for further research to be conducted in the areas where a discrepancy between the intentions and policies of the Tutorial Staff and the actual recorded perception of the students were noted. Two final coments of note in the context of the above discrepancies are given below. Rice (1965) p. 31 has indicated that
"The college years are critical years for
psychic development and for the development
of ego functions. The young person at this
period is looking for, and trying out,
people as models for his own self-centering.
Good nodels strengthen his development; bad
ones, 1 mmature ones, serve only to 'ilix' him:
in his irmaturity. The teacher's contribution
to the campus climate is therefore conditioned
by his wilijngness and ability to be a person
in the learning situation and not merely a
distributor of information".
Start (1966) p. 268 suggests however that
"The reduction of the status of teachers finds
biting realism with Koemer's (1963) view that the
status of the education departrents' staffs is that
of 'a sinccre, humanitarian, well-intentioned, hard-
working, poorly informed, badly educated and inoffectual
group of men and women (p.37)

CONCLUSIONS
The specificity of the College population used, together with the unique treatment which it received as an outcons of the now derunct Modified Three-Term Year' somowat limit the generalisations which we may safely drav. The following are offered in an attempt to justify the efforts of all concerned in modestly furthering rosearch in this area.
a) Membership of the sociometric groups could be predicted from the Primary Fhilosophical Orientations for tho lionconformists and the Colleciates. For the Vocationalista and the Academics such prediction in general (with the exception of Academic Mon choosing other Hen) tas not possible. Frediction of sociometric groupines by both secondary and tertiary orientations was much vealer.
b) The Academics and the Nonconformists had more unique charactcristics than the two remaining orientations and tended to occupy opposite ends of the attainment continum. The Vocationalists and the Collegiates displayed sone unique characteristics, but these did not define them in clear contrast from the remaining orientations.
c) The rain indications of group differences were the 27 variables resarded as boing of special importance to the investigation. In the case of the ncademics there was strone supplementary evidence in the form of
B. Bd degree results which showed that they woro working far harder than was necessary to pass tho three-year course.
d) Ho other single measuring instrument identilied major differences between groups.
e) The findings concerning the apparent accoptance, rejection, or disenchantment with various College courses and procedurss are in accordance with those of Rée (1956) Start (1966), fudd and Hiscman (1962), Cohen (1967), B1bby (1967), Feters (1968), Where Supplement (1965), Shipman (1965), Lomax (1969) and Zason and Kroll (1970) together uith many others reported in the relevant journals. Such findines allow a decree of generalisation to be made in this area of the research and indicate that we ought to exarine the assumptions upon which College educators suild their tcaching programes and how such assumptions aro to be tested.
f) In the present investigation the treatment (with some minor but notable exceptions) was not longitudinal. It suffered from the defects of beins conducted curing one relatively short period of time within a given set of conditions. It is concluded however that it was worthwhile, was certainly interesting and taxing and raised certain problems worthy of further investigation.
E) More specifically, the following points are made.
(i) College Tutors and Adennistrators might taice more account of the differences between students In the form of interests and attitudes when allocating then to particular teaching or lecturing units. Further, the residential groupings and the informal social structure of the students need to be noted bocause of their reinforcing effect upon the dovolopment of attitudes and viempoints of the student body.
(1i) The assumptions of the entering student need to be assessed prior to the conmencement of the course and dotailed advico and explanations given of what will actually take place. For example, Shipman (1965) has indicated that many studonts in his investigation arrived at College expecting some form of apprentice-ilke course. Such a course vould (they hoped) change them from academically qualified but incxperienced student-teachers into very competent and able teachers after passing through a series of situations and experiences devised to produce the 'good' teacher. Fie concluded that such a state of affairs had resulted from faulty advice being given at school.

More importantiy, at the level of verbal intorcourso conducted botween College Tutors and practising teachers tho disagreement as to what students should and need to bo taught is strons. One result of this has been that students at College display public
'on-stago' attitudes and responses designed to satisfy their Tutors and assessors whilst at the samo time holding private and often very difforent 'off stage! viewpoints which in reality coverm much of what they eventually adopt or reject when they finally enter school as fully-qualified practitioners. Further details concerning the above problem are sumarised in Kayifeld (1969) and in the body of this thesis.

The point being stressed is that from the point of viev of sound and harmonious progress of the student, it appears essential to this investigator that the student is left. In no doubt before he applies for entry to a particular College that he knows what will bo expected of hin. The Collego prospectus and associated iiterature is of paramount importance in this context.
(iii) The concept of personal welfare and its validity or otherwise needs examination since the idea of 'in $10 c o$ parentis' has now been removed. Evidence has been presented in the body of the thesis of the indifference with which many of the students treated the services offered by their Fersonal Tutor in time of need. Since such Tutorial help vas envisaged by the College Authorities as being of prime importance and was catered for in terms of time and facilities such as individual tutorial rooms, this indifference indicated a need for an examination of this aspect of College life.

Criteria in need of boing satisfied from the point of viev of the concopt of personal welfare include the following.
(1) A recognised source of help in the form of a member of the College Staff (albeit probably a Counsellor or Advisor in view of the apparent fallure of the Personal Tutor system) to deal with problems leading to stress and strain which appeared in a minority of the students adopted by the present investigation.
(2) The open acknowledgement of confidentiality of any discussion between the Student and Counsollor or Advisor. Students had commented to the writer that it was important to them to be able to talls over thoir problems with an adult who was not an entronched member of the College establishment. Such corments occurred in spite of the fact that the College was praised by former students for the personal involvement of the Principal and many of the Staff in the 'after-hours' problems of the student body. The giving of the vote at 18 years of age, the withdrawal of the requirement that the College was 'in loco parentis', and the vociferous demands. of Students in other areas of higher education in seneral (and some universities in particular) for an cver-increasing degree of self-govemment and autcnomy, in addition to the findincs of the present investigation, all serve to indicate tho
pressing need to re-evaluate the concept of personal welfare in College, he also need to know how best the requirements (whatever they may bo) can be mot either within the established framowork of Tutor-Student relationships or by advocating that this area is of concern to the student only and can best bo not by Student-based orgonisations and facilities possibly aided by the help of scparate adult agencios capable of performing a range of counselling and advisory functions.
3) Finally, and most importantly, mothods and techniques must be found by which the personal stondards of attainment of a large number of the students can bo raised. Many of the students in this investisation showed low achievement motivation. All Kroups, with the exception of the Academics, appeared capablo of a greater level of attainment in their College work.

At precent, the roinforcement students receive from their friends who are members of the same primary orientation as themselves seals them off from influence by the staff. This is particularly so in the case of the Nonconiormists and the Collegiates.

The lonconforaists, for examplo wished to express thoir vicrpoints in College as individuals. They had indicatod that they believed that coment by them individuolly made only a small impact on the College and carried little weight. As a result of this, their


#### Abstract

stance as a group was reinforced and they became insulated more and nore from any attempts by the Colloge to socialize then into their self-chosen professional role. In their case, they icentified themselves with their friends by refusing to conform to many of tho requirements of College and tutors alike.


Although the Academics and the iionconformists were similar to each other in terms of the number of ' $A$ ' levol passes, they were very different from each other in terms of attaiment. Also, they were dissimilar in their attitucics to a rango of Collegebasod practices. This was at the end of their course of trainins and not after they had been in school for a number of years.

In this respect. the coment of Cohen (1963) concerning tho deleterious effects of a threc-year course in a College of Education spring sharply into focus. The College experionce strengthens students in their attitudes whether they are favourable or unfavourablo to both tho College and the teaching profession. If future devolopment takes place along the lines adrocated by James, and thero is a further pursuit of academic ends by College Staff, the abovo problea will bo exacerbated rather than alleviated. The point is atrengthened by tho fact that many Colleges are iinding it increasingly difficult to attract sufficient cendidates of the rieht calicre at a time
when the demands for a completely eraduate profession are erowine. Vocationally oriented students in particular will be further allenatod, whilst the Academics will be satisfied by the course but will subsequently leavo the profession armed with a degree which qualifices them for posts out of the classroom and probably out of the 3 chool.

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4n asterisk preceding a bibliographical entry indicatos that the investigator has not read the particular item in its original form.


[^0]:    b) Homogeneity - Homogeneity of sex, age, social class or religious affiliation contributes to effective peer influence primarily because of the homegeneity of attitudes that tends to go along with such similarities. He indicates that the converse is not equally true, namely, the more readily observable forms of similarity without their attitudinal counterparts will hardly suffice for the formation of effective groups.

[^1]:    Summary.
    This section of the investigation has been primarily concerned with the organisation of the college in relation to its growth and functions. It appeared important to consider course requirements and lecture comintments in this context together with an appraisal of other important aspects of the work and life of the college comminity.

[^2]:    SUMPARY
    The above analysis was conducted in an attempt to verify or refuts the second part of hypothesis No. 1 which stated that

[^3]:    "Estimates are that within five years of graduation from an English teacher training program, seventy-percent of the women ...... will have left teaching".

[^4]:    "This; however does not necessarily hold for the correlation between two sets of discriminant

