

THE INFLUENCE OF AGE, SEX AND SCHOOL ACHIEVEMENT ON THE
WORK VALUES OF INTERMEDIATE AND SECONDARY SCHOOL PUPILS

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PART 1 - BACKGROUND TO THE STUDY

During the present century considerable interest has been shown in matters relating to both individuals and groups about to enter, or already employed in the workforce. Psychologists have been interested in the developmental aspects of career decision-making, and in the influence of personality and other factors on individual choice. Sociologists have been interested in the description and explanation of social structures within the workforce, particularly as they shed some light on the regeneration of values relating to particular communities or classes. Vocational guidance counsellors have been interested in assisting individuals to make a satisfactory occupational commitment, and have therefore been concerned with both individual and social variables. Educationalists, albeit only recently, have come to realize that if education is to fit people for life in society beyond school, some effort must be made to help (rather than hinder) individuals in their personal as well as their academic development, so as to maximise their opportunities for self-actualization in the wider social environment.

Because research relating to the projected, or actual world of work, has been conducted under the auspices of so many different interests, it has been prolific, but somewhat piecemeal. There are many aspects of the subject still to be explored, but there is also a need for the duplication and verification of research to date. It was for these reasons that the present study was proposed. Before outlining the particular research on which this study builds, however, I feel it will be helpful to present a general

overview of the topic.

The growth of research into aspects of employment.

Until the beginning of the 20th century, most people had very little choice about the kind of work they engaged in. This was to a large extent determined by family patterns, class expectations and geographical limitations. Since then, however, society has undergone such dramatic changes that there are increasing possibilities for individuals to take a hand in shaping their own lifestyles as a result of wider employment opportunities. C. Gilbert Wrenn¹ has identified eight areas of change that have helped to widen the choices open to individuals. These are: the breakdown of traditional occupations, the increase in education, the increase in geographical mobility, the increasing availability of vocational training, the increase in social mobility and changing social order, the increasing need for re-training, the new emphasis on work as "vocation", and the increase in life expectancy resulting in an extension of expected working life. Let me illustrate just two of these changes by quoting from statistics referred to by Wolfbein.² In 1900, in the United States, the average work-life expectancy for men was 32.1 years, and for women it was 6.3 years. By 1955, the male work-life expectancy was 42 years; for women, the figure had risen to 18.2 years. There had thus been an increase in the working life of all workers, and also a tremendous increase in the numbers of women in the workforce. By the 1960's, one in every three workers in the United States was a woman.

Three major events occurring this century have helped to

focus researchers' attention on the need to study aspects of career choice. The first was the great depression of the thirties, which brought the phenomenon of mass unemployment to industrial nations. The other two events were the world wars, which when they were over, brought large numbers of ex-servicemen back into the workforce. At the moment, similar upheavals appear imminent as a result of rapid technological change.

The early contribution of psychology.

Between the 1850's and 1900's, there was much emphasis on the measurement of personal attributes with a view to discovering where individuals would best be able to fit into society. The initial emphasis was in the area of intelligence testing and built on the work of Binet in Paris. The Binet-Simon scale, for example, was published in 1905. It was soon discovered that IQ ratings differentiated between certain groups of people. For example, the U.S. Army Alpha Test, compiled by Fryer in 1922, was able to differentiate between officers and enlisted men³. The U.S. Army General Classification Test⁴, used during the second world war, showed that men who enlisted from professional occupations averaged scores over 125, with a general population mean of 100. Groups averaging under 100 were generally from unskilled occupations. Unfortunately, it did not take long for intelligence scores to be used in a predictive sense, particularly in schools, where those found to have high scores became the privileged elites. What was ignored was that in the original research, although there were between-group differences, sometimes the variations within groups were as wide as those in the population at large.

Harrell and Harrell⁴ noted, for example, that lawyers' scores ranged from 96 to 157 although their average was 128, and that teamsters, whose average was 88, had scores ranging from 46 to 145!

In the 1920's and 1930's there was increasing emphasis on aptitude testing (Clark Hull, 1927; Walter Bingham, 1937). Two false assumptions, however, made these tests somewhat unreliable as predictors of occupational success. First, it was assumed that aptitudes were innate abilities which could not be learned. Secondly, it was assumed that those who were identified as likely to learn a particular skill quickly, would be better than others at that skill. In fact, those who learned quickly, often did not continue to improve and were outstripped by others who learned the skill slowly, but continued to improve over time, according to Tyler (1964).⁵

A further area of study was that of individual interests, pioneered in the United States by E.K. Strong, Jr. Strong's Vocational Interest Blank (1927) was used to accumulate records of the wider interests of men in a large number of occupations, and these records were referred to by those engaged in helping young people to find suitable occupations. In 1939, George Kuder developed another type of scale that related to broad interest areas (such as "literary", "computational" and "persuasive"), rather than to specific occupations. This was the Kuder preference Record. Subsequent research in the area was based on one or other of these methods, and according to Tyler,⁶ this research led to three important findings. First, although some people's interests do change, for most people interest patterns once developed are likely to persist. Secondly, interest patterns can be used to predict occupational decisions. Thirdly, interest tests alone may have limited

usefulness, because sometimes people do not answer truthfully because they are concerned about making a good impression.

More recently, psychologists have been concerned with the influence of an individual's personality on occupational choice and preferred way of life. Factor structures have been proposed by Eysenck, Cattell, Guilford and others, but there is by no means a uniformity of agreement about the basic elements of personality. Some studies (for example Siegelman, 1960)⁷ have looked for distinguishing characteristics among occupational groups, but no generally applicable conclusions have been reached. Nevertheless, an attempt was made by Holland (1966)⁸ to classify all occupations into one of six classes: realistic, intellectual, social, conventional, enterprising and artistic. This was done by assessing the personal characteristics of college students intending to follow particular occupations, and then making the assumption that these characteristics were necessary for the occupations. Holland argued that "if we classify together people having similar vocational choices, we are also classifying similar personalities together". This may well be an erroneous assumption which does not take into account the wide variations that may exist in any given occupation. Recent research at Christchurch Teachers College (Murdock, Renwick, Vincent and Roberts, 1980)⁹, does not uphold Holland's classification of "education" as "social", rather than "intellectual", for example. This study found that although trainee primary teachers are socially oriented, most trainee secondary teachers give subject interest as their major reason for entering teaching. Keeling and Tuck (1979)¹⁰, however, have considered the validity of Holland's Occupational Typology with New Zealand school children and have concluded that

it has demonstrable validity in this country, and is a valuable research tool with good predictive power. In a recent study, using the Holland Typology, these researchers have noted that although Secondary teachers (particularly mathematics teachers) indicate a subject preference, they nevertheless rate as "social" on the Holland scale.

Another aspect of occupational choice coming under the category of individual psychology has been explored by Anne Roe (1957)¹¹. Roe's theory of occupational choice looks at the career from the point of view of the individual's needs, and is based on Maslow's hierarchy of basic needs. Roe suggests that there is also a strong link between occupational choice and early experience, thus bridging the gap between individual and developmental psychology.

The contribution of developmental psychology.

Developmental psychology has been concerned with the changes that take place in people's attitudes, interests and social orientation, that are directly related to increasing physical and mental maturity. Developmental studies, building on the work of Freud, Piaget and Erikson, have focused particularly on the resolution of the adolescent identity crisis through commitment to an occupation.

Developmental theories of occupational choice have been proposed by Miller and Form (1951), and by Havighurst (1964). Miller and Form¹² identified three stages in the search for an occupation: exploratory, uncommitted and stable. However, Havighurst¹³ has taken a longer-term view and has tied his career-pattern theory to his theory of life-long developmental

tasks. He identifies six stages in career development: identification as a worker (age 5-10), acquiring basic habits of industry (age 10-15), acquiring identity as a worker in the occupational structure (age 15-25), becoming a productive person (age 25-40), maintaining a productive society (age 40-70), and contemplating a productive and responsible life (age 70 and above).

An important study by Ginsberg et al (1951)¹⁴ has been of practical value to guidance counsellors. This defined three stages leading to commitment to a particular occupation. The first stage is one of "fantasy choice" covering the latency period (ages 6-11), during which children typically state preferences for occupations which appear pleasurable to them, regardless of rational considerations of needed ability, training, entrance requirements and availability of employment opportunities. During the "tentative" period, covering most of the adolescent years, the individual begins a rational consideration of certain aspects which will relate to his final choice, such as his interests (at about age 12), the relevance of his aptitude and education (at ages 13 and 14), and his personal values and goals (at age 16 or 17). At about age 17, a transition stage is gone through before the "realistic" stage is reached. These stages relate to adolescent boys, but Ginsberg claims they should also relate reasonably well to girls, although commitment to marriage rather than to a career may produce complications. The basic premise, however, is that young people move from fantasy-based to reality-based career choices as they advance in age.

Possibly the most valuable contribution to developmental theory in recent years has been made by Donald Super. His

view of vocational development builds on the work of Carter, 1940 (vocational attitudes), Bordin, 1943 (occupational stereotypes and self concept), Lecky , 1945, (self-theory), and Allport, 1943 , (the "rediscovery" of the ego in psychology). Super has defined vocational development as "the process of implementing the self-concept", and has noted five phases in this process.¹⁵ These are the initial stage of "exploration" in early infancy, followed by the stage of "self-differentiation", then "identification" (particularly sex-identification). The fourth stage of "reality testing" occupies a good deal of childhood and early adolescence and in this stage there is important feedback as a result of experience. The final stage in late adolescence or early adulthood, is that of "implementation!" Super notes (with reference to Tyler, 1955) that boys develop attitudes and interests that are closely associated with their abilities, but girls may frequently adopt a role prescribed by society. Crystallization of vocational self-concept occurs when the individual continues to pursue a particular vocational choice, despite setbacks, Super maintains.¹⁶ To support this contention, he refers to the work of Stephenson, 1961, who surveyed 368 pre-medical students who failed to gain entry to medical school. Four to eight years later, thirty per cent of these students had succeeded in gaining entry to the medical profession and 32 per cent were in medically-related occupations. Stephenson hypothesised that those who did not have a crystallized vocational self-concept would have turned to other occupations. Much of Super's recent work has been concerned with the study of young people's values relating to occupational choice and his findings will be discussed under a separate heading since they relate directly to the present study.

Sociology and occupational choice.

Sociology has been concerned with the occupations and careers of individuals only to the extent that society has provided the guidelines and constraints leading to particular kinds of work. According to Gross (1964)¹⁷ "the sociology of occupations is concerned with the occupation as predictor of behaviour, and with the relation of occupational structures to social structure".

Sociologically orientated studies have explored industrial behaviour (Mayo, 1927), occupational mobility (Rogoff, 1953). prestige and job-related status (Rossi, 1966). Such studies also have relevance to research which follows the career patterns of individuals, as well as to that which considers the role of the school as a major socializing agent.

Recent research into the sociological aspects of schooling has examined the role of the school in either overcoming or perpetuating the disadvantages that students may experience as a result of their sex, race, or home background. Rist (1973), for example, in a study of black American children found that schooling tends to reinforce the advantages that children bring from their home background¹⁸. Willis (1979) in England, however, concluded that many working class boys get manual, working-class jobs, as a result of a class sub-culture that is perpetuated through the informal group, despite the efforts of the school to impose middle class attitudes and values on the pupils.¹⁹

Education and vocational development.

One of the aims of education is frequently stated as "helping to fit the individual for a place in society", but there are two possible approaches to this aim. Until quite

recently, students have been graded according to IQ on entry to secondary school, and on the basis of this have been allocated to "streams" or "tracks". Students with high IQ's then followed an academic curriculum which included languages, and those with lower IQ's followed a vocational curriculum with emphasis on practical subjects such as woodwork, metalwork, typing and homecrafts. Since the nature of the curriculum followed limited the future vocational choice of the student, the crucial point for career choice was frequently at entry to secondary school. Many secondary schools today no longer "stream" their pupils on entry and allow an open subject choice in the junior forms. These practices assume that pupils' interests and capabilities are not fixed at the age of 11 (13 in New Zealand), and open up wider possibilities of future career choice for the individual, but also put a greater responsibility on the individual for making important choices at an early age.

The increasing emphasis on the right of individual choice has brought with it an increasing need for schools to offer guidance and advice on an individual basis. Thus, all New Zealand schools have a teacher in charge of "careers", and the number of guidance counsellors is growing rapidly.

Vocational guidance and counselling.

Careers guidance in schools has gained momentum in recent years, but it is by no means new. According to Borow, the rise of guidance was part of social evolution, and he attributes to Frank Parsons in the early 1900's a major role in emphasising the value of guided planning for a career. Recent research has considered the decision-making process in career choice

(Hershenson and Roth, 1966; Morris, 1966), the elements of job satisfaction (Vroom, 1964; Kuhlen, 1963), and the role of values in career choice.

Personal values and career choice.

The German psychologist Spranger was, according to Ginsberg, among the first to explore the influence of values on occupational choice (in 1928).²⁰ Spranger proposed that the lives of all individuals are governed by one of six central values, and tried to categorize people accordingly. An "economic" person was, for example, primarily concerned with increasing his income and wealth. Later, Allport and Vernon studied the values of people in different occupations in an effort to test the validity of Spranger's theory, and developed a values scale of their own.²¹

A number of other values classifications have since been developed. Rosenberg (1957) identified three major orientations: people, extrinsic rewards and self-expression. These are similar to the sources of job satisfaction postulated by Ginsberg et al (1951) as concomitant, extrinsic and intrinsic.²² Gordon (1960), using factor analysis, found six value dimensions in subjects' responses to a questionnaire. These were: support, conformity, recognition,²³ independence, benevolence and leadership. Crites (1961), identified five orthogonal factors which he termed material security v. job freedom, personal status v. social service, social approval, system, and structure.²⁴ Summarizing values research up to 1964, Katzell noted that the three main areas of importance appeared to be those concerned with the work itself, those concerned with personal relationships, and those

concerned with external conditions and things obtained through work (such as pay).

Major research into the links between values and occupational choice has been undertaken by Donald Super. As a result of his work, Super is convinced that factors influencing occupational choice are much more complicated than others (such as Ginsberg) have suggested. Super argues that "each person has potential for success and satisfaction in a number of occupations", and sees the major criterion of job satisfaction as compatibility between the individual's self-concept and his or her perceived occupational role requirements. He cites research supporting this theory by Brophy (1959) on nurses, and Tageson (1960) on seminary students²⁵.

Super notes that adjustment to an occupation is a continuous process, and therefore careers-pattern theory is a key element in vocational guidance. Nevertheless, people have been found to "prefer, enter, remain in, like and succeed most consistently in occupations for which they have appropriate patterns or traits". Identifying the kinds of values that people subscribe to will help the vocational counsellor in his or her work, says Super. It is worth noting, however, that there is some evidence of changes in personal values as a result of experience (Bordin and Wilson, 1953; Super and Crites, 1962).²⁶ This phenomenon is also illustrated by research into cognitive dissonance which shows that values consistent with choice become stronger, while those that are inconsistent become downgraded (Brehm and Cohen, 1962).²⁷ This means, of course, that people's values may well change in favour of those supported by the kind of occupation they engage in.

Super defines work values as "the qualities which people

desire and which they seek in the activities in which they engage²⁸, and he argues that "understanding the value structure in a student or client in educational and vocational counselling, ... is an important aid to clarifying goals and to determining the psychological appropriateness of a given type of training or employment".

Using factor analysis, Super has identified 15 values associated with work, and has used these as a basis for statements used in his Work Values Inventory (1970). The inventory, standardized in the United States, consists of 45 statements (three per value) to which subjects are asked to respond on a 5-point Likert-type scale.

Super's WVI has revealed differences between people in different occupations. Business students have, for example, high scores on management. Peace Corps workers have high scores on altruism, aesthetics, intellectual stimulation and variety. Secretaries have higher scores than other groups on surroundings, and firemen and policemen on prestige. Comparisons of white-collar and blue-collar workers show that the former have higher scores on altruism. Results so far are interesting and suggest that further research is worthwhile.

Super does not discuss male/female differences for adults, but has found some differences between boys and girls in his studies of school pupils. Girls tended to have higher scores on altruism, and boys on independence and intellectual stimulation. Another study by Super found age-related differences between students at 7th grade and 12th grade levels. There were value changes between the two groups for all values except surroundings and economic returns. All of these changes, except for way of life and variety, showed a lowering of value ratings in the 12th grade group.

None of Super's studies considered the possible influence of ability on values formation, and in his comparative study of 7th and 12th grade pupils Super does not mention IQ or ability differences. Other researchers also appear to have neglected a consideration of ability, and have frequently selected only high ability groups (such as college students) for their research.

REFERENCES

1. C. Gilbert Wrenn, in Borow, Man in a World at Work, 1964, Chapter 2, Human Values and Work in American Life.
2. Seymour L. Wolfbein, Chapter 7, Labor Trends, Manpower and Automation, in Borow, op. cit. p. 156.
3. Fryer 1922. See Leona E. Tyler, Chapter 8, Work and Individual Differences, p. 176 in Borow op. cit.
4. Harrell and Harrell, as above p. 176.
5. See Tyler, p. 184, Chapter 8 in Borow, op. cit.
6. As above, p.184.
7. Siegelman, 1960. See chapter by Anne Roe, Personality Structure and Occupational Behaviour, p. 200 in Borow, op. cit.
8. John L. Holland, 1966, A Psychological Classification Scheme for Vocations and Major Fields, in Vocational Behaviour: Readings in Theory and Research, D.G. Zytowski (ed) pp 43-55.
9. See Teacher Education and Perceptions of Teaching (Interim Report), Christchurch Teachers College, 1980.
10. Keeling, B. and Tuck B.F. The Validity of Holland's Occupational Typology with Male and Female New Zealand Secondary School Students, in New Zealand Journal of Educational Studies, Vol. 14, No. 1, May 1979.
11. Anne Roe, Early Determinants of Vocational Choice, pp. 233-239 in Zytowski, op. cit.
12. Miller and Form, 1961. See David B. Hershenson, A Life Stage Vocational Development System, p. 138 in Zytowski op. cit.
13. Robert J. Havighurst, Youth in Exploration and Man Emergent, Chapter 10 in Borow, op. cit. pp. 215-236
14. Ginsberg, E., Ginsburg, S.W., Axelrad, S. & Herma, J.L. Occupational Choice: An Approach to General Theory.
15. Donald E. Super, Vocational Life Stages, pp. 146-146 in Zytowski, op. cit.
16. Donald E. Super, Self Concepts in Vocational Development, pp. 194-207 in Zytowski, op. cit.
17. Edward Gross, The Worker and Society, Chapter 4, in Borow, op. cit., p. 89.
18. Ray C. Rist, The Urban School: A Factory for Failure, 1973.

19. Paul Willis, Learning to Labour: How Working Class Kids Get Working Class Jobs. 1977.
20. Spranger, 1928. See Ginsberg, op. cit. p. 24.
21. Allport and Vernon, as above.
22. Gordon, 1960. See Raymond A. Katzell, Personal Values, Job Satisfaction and Job Behaviour, in Borow, op. cit. p. 347.
23. Crites, 1961, as above.
24. Raymond A. Katzell, as noted by Rosenberg, 1957 in Occupations and Values, Free Press, Glencoe, Illinois.
25. Donald E. Super, Self Concepts in Vocational Development, Zytowski, op. cit. 198.
26. Katzell, Chapter 15, Borow, op. cit., p. 358.
27. Katzell, as above, p. 359.
28. Donald E. Super, Work Values Inventory, 1970, p. 4.

PART 2

The Research Study:

The Influence of Age, Sex and School Achievement on the
Work Values of Intermediate and Secondary School Pupils.

THE INFLUENCE OF AGE, SEX AND SCHOOL ACHIEVEMENT ON THE
WORK VALUES OF INTERMEDIATE AND SECONDARY SCHOOL PUPILS.

Previous Research Findings.

A number of researchers have adopted a developmental view of the establishment of the attitudes of young people towards a future career, and particularly of the formation of work values (Ginsberg et al, 1951; Super, 1951). Donald Super has found differences between the values held by 7th and 12th grade pupils in the United States.¹ These differences included a decline, with age, of emphasis on all but two of the 15 values Super has identified. The two exceptions were surroundings and economic return. John Crites, in considering the measurement of vocational maturity in adolescence, has also noted that "responses to certain verbal statements of vocational attitudes and concepts which are theoretically related to the choice of an occupation are monotonically related to age during the adolescent years".²

Crites also hypothesised that as males and females differ on most non-intellective measures, they would also differ in responses to an attitude test. However, he found male-female differences on only four items concerned with career decision-making. In his values studies, Super found male-female differences on values such as altruism, which girls rated higher than boys, and on independence and economic return, which boys rated higher than girls.

Previous research has neglected a consideration of the possible influence of the subject's intellectual ability on the formation of work values. However, if there is a maturational factor in values formation, this must surely be linked to intellectual maturity as well as to chronological

age.

The intention of the present research was to examine the developmental process of values formation (if any), to consider possible sex differences in the values held by young people, and to compare the values of low, average and high ability youngsters to see if any significant differences emerged.

The aim of the study.

It was hoped, by means of a questionnaire based on the 15 values identified by Donald Super, to examine the work values of New Zealand school pupils and to consider the differences associated with age, sex and ability. Subjects of the study were to be 3rd and 5th formers at a city Secondary school, and form 1 pupils attending its contributing Intermediate.

It was hypothesised that there would be significant differences between the work values of younger and older pupils, between those of boys and girls, and between those of pupils rated high and those rated low on school achievement.

The values identified by Super are as follows:

- ALTRUISM - present in work which enables one to contribute to the welfare of others.
- CREATIVITY - associated with work which permits one to invent new things, design new products or develop new ideas.
- MANAGEMENT - associated with work which permits one to plan and lay out work for others to do.
- ACHIEVEMENT - associated with work that gives one a feeling of accomplishment in doing a job well.
- MONEY (ECONOMIC RETURN) - associated with work that pays well and allows one to have the things one wants.
- SECURITY - associated with work which provides one with the security of having a job even in hard times.
- INDEPENDENCE - associated with work which allows one to work in one's own way, as fast or slowly as one wishes.

VARIETY - associated with work which provides an opportunity for one to do different jobs.

PRESTIGE - associated with work that gives one standing in the eyes of others and evokes respect.

WAY OF LIFE - associated with work which permits one to live the kind of life one chooses, and to be the kind of person one wishes to be.

SURROUNDINGS - associated with work which is carried out under a supervisor who is fair, and with whom one can get along.

ASSOCIATES - characterized by work which brings one into contact with fellow workers whom one likes.

INTELLECTUAL STIMULATION - associated with work which provides opportunity for independent thinking and for learning how and why things work.

AESTHETIC - inherent in work which permits one to make beautiful things and contribute beauty to the world.

The questionnaire.

The questionnaire used in the present study differed from Super's Work Values Inventory in that the statements included in it were based on profiles describing the two ends of each value scale. (See appendix A.) Two statements relating to positions on the positive side of each value, and two on the negative side were then written. The positive statements followed very closely on those formulated by Super.

Statements relating to the negative side of each value were included for two reasons. First, since it is known that people tend to agree with positive statements, it was assumed that this tendency could be countered by including positive statements geared to the opposites of Super's values. Secondly, it has been noted that sometimes people are motivated to make a good impression, rather than to give a genuine response.³ It was thought, therefore, that the inclusion of statements relating to the two ends of each value would prevent subjects from readily identifying values

felt to be socially approved.

Once the four statements relating to each value were written, they were rearranged in random order and offered to a number of adults and children for comment. In the light of these comments some of the statements were modified to make them more appropriate to the value being examined, and in some cases the wording was revised to make the meaning clearer. The revised questionnaire was then trialled with a number of boys and girls whose ages ranged from 10 to 16 years. Subjects responded to the statements on a Likert-type scale similar to that used by Super, but with a more clearly defined neutral category.

As a result of the trials an error was corrected (one statement appeared twice and another had been omitted), and the response pattern was changed from one of ticking boxes to one of circling numbers (1 to 5) identifying the intensity of response toward each value statement. This was done to minimise the need for subjects to refer to the response key. The final version of the questionnaire was then produced. (See appendix B.)

The subjects.

The principals of the two schools were contacted and the researcher was offered a number of classes (two at the Intermediate school and six at the Secondary school) for periods of half an hour each, during which to administer the questionnaire. Thus in each case the researcher was able to supervise the responses to the questionnaire and to answer any questions concerning it.

Since all of the classes were unstreamed, the grading of the subjects as low, average or high in school achievement

was done with the aid of the class teachers, and at the Secondary school also with the aid of the guidance counsellor, who had access to school reports and other personal data.

A total of 211 pupils responded to the questionnaire at the end of August, 1980, and the composition of the sample was as follows:

	FORM 1		FORM 3		FORM 5	
Achievement:	M	F	M	F	M	F
LOW	9	8	13	7	12	6
AVERAGE	14	11	15	16	16	16
HIGH	10	11	11	14	9	13

(Note: The average age of pupils in form 1 was 11 years and 7 months; in form 3, 13 years and 11 months; in form 5, 16 years and 1 month.

Analysis of the data.

Subjects responded on a 1-5 scale to all the statements on the questionnaire. It was therefore necessary to convert the response scores to value scores. This was done by reversing the scores for statements on the positive side of each value ("strongly agree" gives a score of 5), so that a high score would then relate to a high value rating. The scores for the four statements relating to each of the 15 values were then combined to give value ratings for each subject.

Data sheets were then prepared. These identified subjects

by form, sex and ability (as indicated by school achievement), and gave their value ratings with a lowest possible rating of 4, and a highest possible of 20 for any one value. Cards were punched and the information was then fed into the computer.

A three-way (form by sex by ability) multivariate analysis of variance was conducted on the 15 dependent variables (values ratings). The test adopted was the Wilks Lambda criterion (likelihood ratio test) using Rao's approximate F distribution (Bock, 1975).⁴ The computer programme used was a revision of the MANOVA programme developed at the University of North Carolina by Bock.

Results and discussion.

The multivariate analysis of variance (MANOVA) showed no significant three-way interaction. There was no significant two-way interaction for form by sex, or sex by ability. However, a significant two-way interaction (p. less than .05) was evident for form (age) by ability (school achievement). The main effects were all significant: form, at the p. less than .001 level; sex, at the p. less than .001 level; and ability, at the p. less than .001 level.

The interaction between form (age) and ability.

The overall F ratio for the form by ability interaction was significant at the p. less than .05 level. The univariate F tests (df 4, 193) showed significant interaction effects for the dependent variables money (p. less than .05), security (p. less than .05) and supervisory relations (p. less than .01). (See table 1:1 below.)

TABLE 1:1 TEST OF FORM/ABILITY

TESTS OF SIGNIFICANCE USING WILKS LAMBDA CRITERION
AND CANONICAL CORRELATIONS

TEST OF ROOTS	F	DFHYP	DFERR	P.LESS THAN	R
1 through 4	1.397	60.000	700.954	0.029	0.414
2 through 4	1.129	42.000	534.044	0.271	0.319
3 through 4	1.045	26.000	360.000	0.406	0.312
4 through 4	0.664	12.000	180.500	0.785	0.206

VARIABLE	UNIVARIATE F TESTS			STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS	
	F(4, 193)	MEAN SQ	P.LESS THAN	1.	
ALTRUISM	1.306	6.894	0.269	0.577	(NOTE: * P.less than .05
CREATIVE	0.326	3.470	0.860	0.101	
MANAGE	0.747	5.509	0.561	-0.363	
ACHIEVE	1.127	5.646	0.345	0.101	
MONEY *	2.679	19.867	0.033	0.617	
SECURITY *	2.806	15.370	0.027	-0.181	** P.less than .01)
INDEPEND	0.612	3.862	0.655	-0.171	
VARIETY	1.435	10.253	0.224	-0.092	
PRESTIGE	0.304	1.935	0.875	0.050	
WAYLIFE	0.760	3.227	0.552	0.015	
SURROUND	1.477	12.422	0.211	0.205	
SUPERVISE **	3.851	25.885	0.005	-0.704	
ASSOCIATE	0.647	2.733	0.630	0.030	
INTELLECT	1.294	8.577	0.274	0.070	
AESTHETIC	1.393	10.825	0.238	0.180	

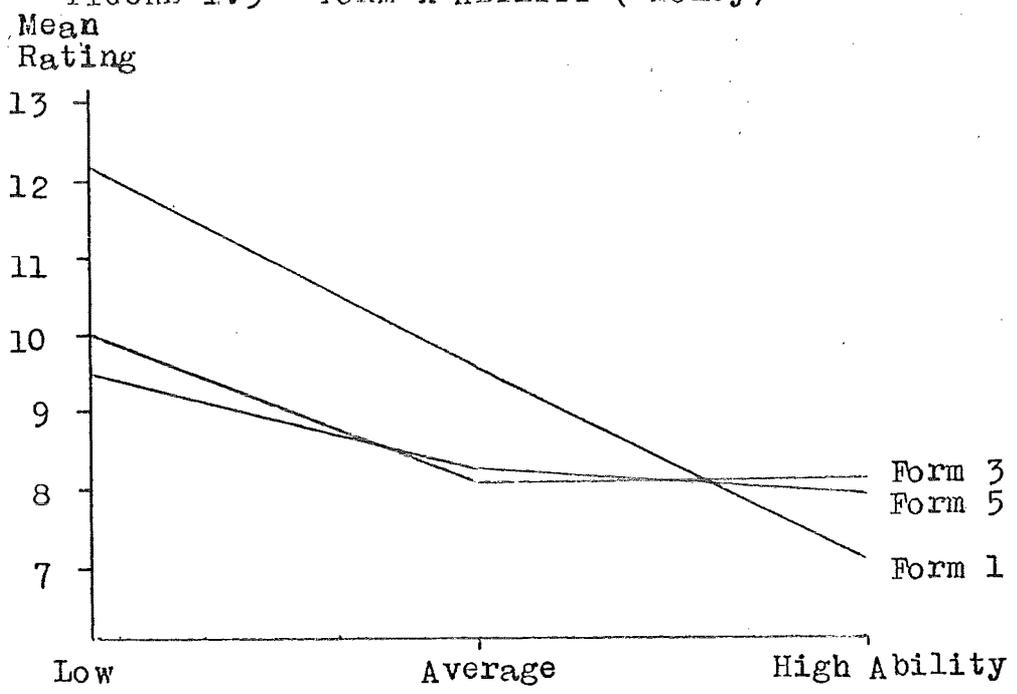
Money.

Table 1:2 below gives the mean scores (form by ability) for the dependent variable money (economic reward), and figure 1:3 presents the same data in graphical form.

TABLE 1:2 MONEY (Economic Reward) TABLE OF MEANS

ABILITY:	LOW	AVERAGE	HIGH
FORM 1	12.059	9.520	7.190
FORM 3	10.500	8.129	8.160
FORM 5	9.055	8.157	8.000

FIGURE 1:3 FORM x ABILITY (Money)



In order to determine whether there were any significant differences among the means represented in the univariate analysis for money, a procedure described by Winer (1972, pp 445-9) for testing simple effects was followed. Results are shown in table 1:4 below.

TABLE 1:4 TABLE OF SIMPLE EFFECTS FOR MONEY UNIVARIATE

SIMPLE EFFECTS	F ratio (df 4,193)	Significance Level
Ability v. Form 1	17.95	Less than .01
Ability v. Form 3	5.6	Less than .01
Ability v. Form 5	.819	Not Significant
Form v. Low Ability	6.831	Less than .01
Form v. Ave. Ability	1.914	Not Significant
Form v. High Ability	1.637	Not Significant

The table of means for the univariate money (1:2) and graph (1:3) show a decline in the value ratings for money in all forms between the pupils of low and average ability. In forms 3 and 5 there is little difference between the money values of average and high ability pupils, but for form 1 pupils there is a continued decline in the money value rating between average and high ability pupils. The interaction of ability with age on this variable shows that younger (form 1) pupils of low ability rate money higher than do low ability pupils in the more senior forms. However, younger high ability pupils (in form 1) rate money lower than do high ability pupils in forms 3 and 5.

The table of simple effects (1:4) shows that the significant differences occur at form 1 and 3 levels and between low ability pupils and others. The interaction effect also masks a significant main effect on this variable for ability. (See the discussion of main effects following.) It is clear from table 1:4 that higher ability pupils show less concern with money as a future work value than do those of lower ability. It is possible that these findings indicate the importance of a maturational influence on values formation (as suggested by Ginsberg et al., 1951)⁵, form 1 and low ability pupils being, presumably, less intellectually mature than pupils in higher forms and of average and high ability.

Security.

Table 1:5 below gives the mean scores (form by ability) for the dependent variable security, and figure 1:6 presents the same data in graphical form. Table 1:7 shows the results of the analysis of simple effects.

TABLE 1:5 SECURITY - TABLE OF MEANS

	ABILITY		
	LOW	AVERAGE	HIGH
FORM 1	11.706	14.600	14.667
FORM 3	14.700	15.194	15.280
FORM 5	15.055	14.876	15.909

FIGURE 1:6 FORM x ABILITY (Security)

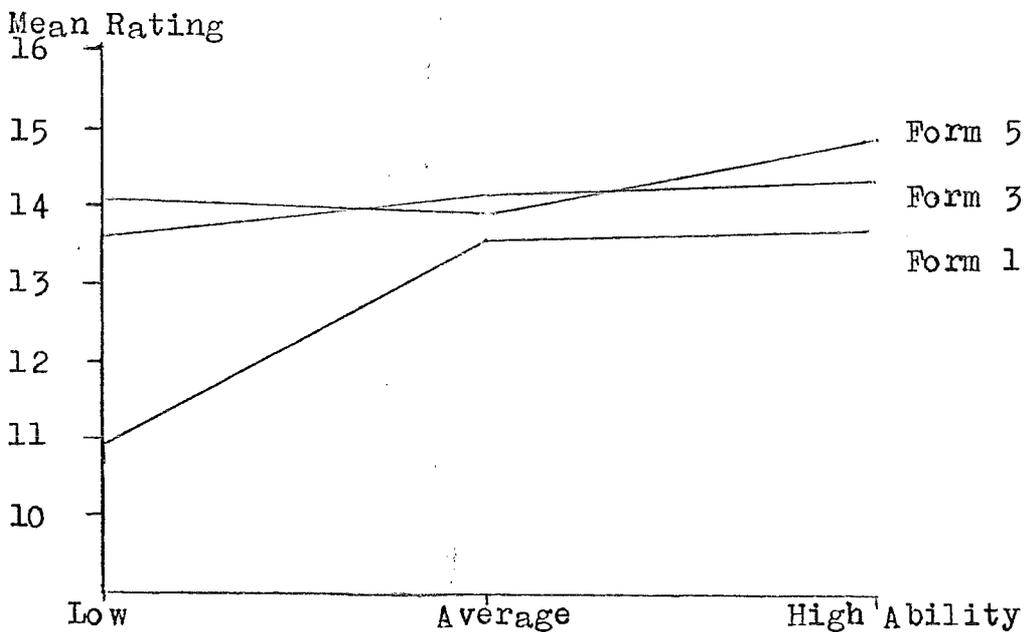


TABLE 1:7 TABLE OF SIMPLE EFFECTS FOR SECURITY UNIVARIATE

SIMPLE EFFECTS	F ratio (df 4,193)	Significance Level
Ability v. Form 1	11.715	Less than .01
Ability v. Form 3	.402	Not Significant
Ability v. Form 5	1.226	Not Significant
Form v. Low Ability	13.624	Less than .01
Form v. Ave. Ability	.356	Not Significant
Form v. High Ability	1.552	Not Significant

The table of means for security (table 1:5) and the graph (figure 1:7) show a gradual rise in the value placed on security between low and high ability pupils in forms 3 and 5. However, average ability pupils in form 3 rate the value higher than do average ability pupils in form 5. On this value at form 1 level there is a sharp rise in the rating between low and average ability pupils, but there is little difference between the ratings of security between average and high ability form 1 pupils.

There are significant main effects on the security variable for both form and ability (see later discussion), and the mean values show a general tendency for older pupils to be more concerned about security than the younger ones, and for higher ability pupils to be similarly more concerned than the lower ability pupils.

The table of simple effects (table 1:7) shows the significance of ability in form 1 and also the significance form by low ability (both at the p . less than .01 level).

Statistics again appear to show evidence of a maturational effect which is linked to age and ability. On average, job security is ranked relatively highly as a value by all but the low ability form 1 pupils. This may be because most pupils have some awareness of the effect of the present economic climate on the job market and the resultant increase in unemployment. One might expect low ability pupils to be more concerned with job security, but the fact that they are less concerned than other pupils may well be a reflection of their lower level of intellectual maturity.

Ginsberg has suggested that children of 11 years are still operating at the "fantasy" stage of career choice,

during which their ideas of future occupation are related to what appears to be pleasurable, rather than based on such rational considerations as the availability of the occupation and required qualifications. The average age of the pupils in the form 1 classes surveyed has been noted as 11 years, 7 months, but the lower ability pupils would be functioning at a much lower intellectual level than the average for their chronological age. It therefore seems possible that the significant age/ability related differences on the security variable are related to the "fantasy" stage.

Low ability form 5 pupils, who are no doubt due to enter the job market in the near future, place a slightly higher rating on security than do average and high ability pupils. This may be a reflection of the fact that it may be harder for them to find employment, but the table of simple effects suggests that this is not significant.

Surprisingly, high ability pupils rate job security higher than others. It is difficult to suggest a reason for their concern with security since they probably belong to the most employable group. However, these students would be well aware of the fact that the numbers of acceptances may be limited in the specific occupations of their choice. (Note the recent closures of a teachers' college and two schools of dental nursing.) Thus, although the more able pupils may not fear unemployment, they may well be concerned about their prospects for a specific career choice.

Supervisory relationships.

The table of means (table 1:8) and the graph (figure 1:9) below show the value ratings at each ability level in each form for supervisory relationships. These were significant

overall at the p. less than .01 level. Table 1:10 below shows the simple effects of form and ability on this value.

TABLE 1:8 SUPERVISORY RELATIONSHIPS - TABLE OF MEANS

	ABILITY		
	LOW	AVERAGE	HIGH
FORM 1	13.353	15.800	17.095
FORM 3	14.750	15.162	15.520
FORM 5	16.500	16.782	15.818

FIGURE 1:9 FORM x ABILITY (Supervisory Relationships)

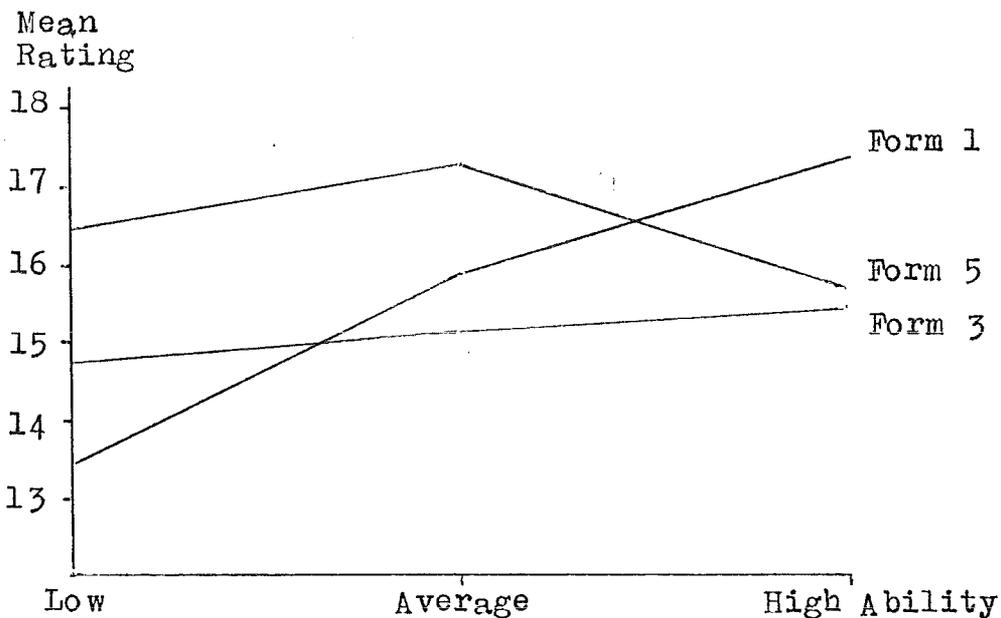


TABLE 1:10 TABLE OF SIMPLE EFFECTS - SUPERVISORY RELATIONSHIPS

SIMPLE EFFECTS	F ratio (df 4,193)	Significance Level
Ability v. Form 1	12.060	Less than .01
Ability v. Form 3	.496	Not Significant
Ability v. Form 5	.821	Not Significant
Form v. Low Ability	8.303	Less than .01
Form v. Ave. Ability	2.224	Not Significant
Form v. High Ability	2.337	Not Significant

The table of means (table 1:8) and the graph (figure 1:9) show a rise in the value placed on supervisory relationships between low and average pupils at all form levels, but with the steepest rise in form 1. The rise in value continues between average and high ability pupils in forms 1 and 3 (although the total rise in form 3 is very small). However, at form 5 level, high ability pupils place a lower value on supervisory relationships than do other 5th formers.

The table of simple effects (table 1:10) shows the significant effect of ability in form 1 on this univariate (at the p . less than .01), and a significant effect of form by low ability (at the p . less than .01 level).

It should be noted here, also, that significant main effects at the p . less than .05 level were evident for both form and ability on the supervisory relationships value.

The figures show that, in form 1, able pupils are most concerned and less able pupils are least concerned with good supervisory relationships as a future job value. Perhaps this can be explained by the fact that high achievers have already discovered (through their school success) the value of good relations with a superior (teacher). Low ability pupils may have established satisfactions in their schooling that are not directly related to achievement and pleasing the teacher (such as friendships with peers).

Although not apparently significant on the simple effects table, the decline in the supervisory relationships value among high achievers in form 5 is an interesting feature. It is possible that these pupils place a greater emphasis on their own individuality, being both older and more able than other groups, but there is no proof of this. It can be seen from the means, however, that able pupils deviate

from their group means slightly more than pupils in other groups on this variable, and on other values such as creativity and intellectual stimulation. On supervisory relationships the mean deviation for low ability is 2.7398, for average ability 2.5900, and for high ability 3.0181.

THE MAIN EFFECTS

Form (age)

There was a significant main effect for form (age) at the p. less than .001 level. The univariate F tests (df 2,193) showed significant effects for the following dependent variables: management (p. less than .01), security (p. less than .001), variety (p. less than .01), surroundings (p. less than .01), supervisory relationships (p. less than .05), and associates (p. less than .05). It was noted that two of the dependent variables, security and supervisory relationships, also appeared significantly in the two-way interaction (form by ability). The results of the tests of significance for form are given in table 2:1 below.

Table 2:2 below lists the means and standard deviations at each form level for the six dependent variables noted as being significant. Figures 2:3 and 2:4 below show the form related values graphically.

TABLE 2:1 TEST OF FORM

TESTS OF SIGNIFICANCE USING WILKS LAMBDA CRITERION
AND CANONICAL CORRELATIONS

<u>TEST OF ROOTS</u>	<u>F</u>	<u>DFHYP</u>	<u>DFERR</u>	<u>P.LESS THAN</u>	<u>R</u>
1 through 2	2.898	30.000	358.000	0.001	0.479
2 through 2	2.440	14.000	179.500	0.004	0.400

(Table 2:1 continued - Test of Form.)

VARIABLE	UNIVARIATE F TESTS			STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS	
	F(2,193)	MEAN SQ	P.LESS THAN	1.	2.
ALTRUISM	2.230	11.772	0.110	0.434	0.527
CREATIVE	0.704	7.482	0.496	0.083	-0.001
MANAGE**	5.213	38.447	0.006	-0.491	0.054
ACHIEVE	2.829	14.174	0.062	0.031	0.612
MONEY	2.866	21.254	0.059	0.477	0.033
SECURITY***	7.108	38.933	0.001	-0.344	0.431
INDEPEND	1.282	8.095	0.280	-0.155	-0.201
VARIETY**	6.118	43.716	0.003	-0.396	0.031
PRESTIGE	1.633	10.378	0.198	-0.092	0.296
WAYLIFE	0.409	1.737	0.665	-0.031	0.188
SURROUND**	6.671	56.119	0.002	-0.119	-0.405
SUPERVISE*	4.407	29.617	0.013	0.117	-0.649
ASSOCIATES*	4.231	17.871	0.016	0.395	-0.221
INTELLECT	1.609	10.666	0.203	0.190	-0.546
AESTHETIC	1.784	13.864	0.171	-0.406	-0.109

(Note: * p. less than .05, ** p. less than .01 ***p. less than .001)

TABLE 2:2 MEANS AND STANDARD DEVIATIONS BY FORM FOR SIX SIGNIFICANT VALUES

	FORM 1		FORM 3		FORM 5	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
MANAGE	11.460	3.126	12.224	2.641	12.972	2.722
SECURITY	13.841	2.731	15.092	1.933	15.236	2.592
VARIETY	14.349	3.070	14.868	2.363	15.916	2.832
SURROUND	13.460	3.321	13.210	2.650	14.847	2.920
SUPERVISE	15.571	2.838	15.171	2.730	16.417	2.741
ASSOCIATES	13.779	2.459	13.158	2.148	12.750	1.536

FIGURE 2:3 VALUES SIGNIFICANT BY FORM (1)

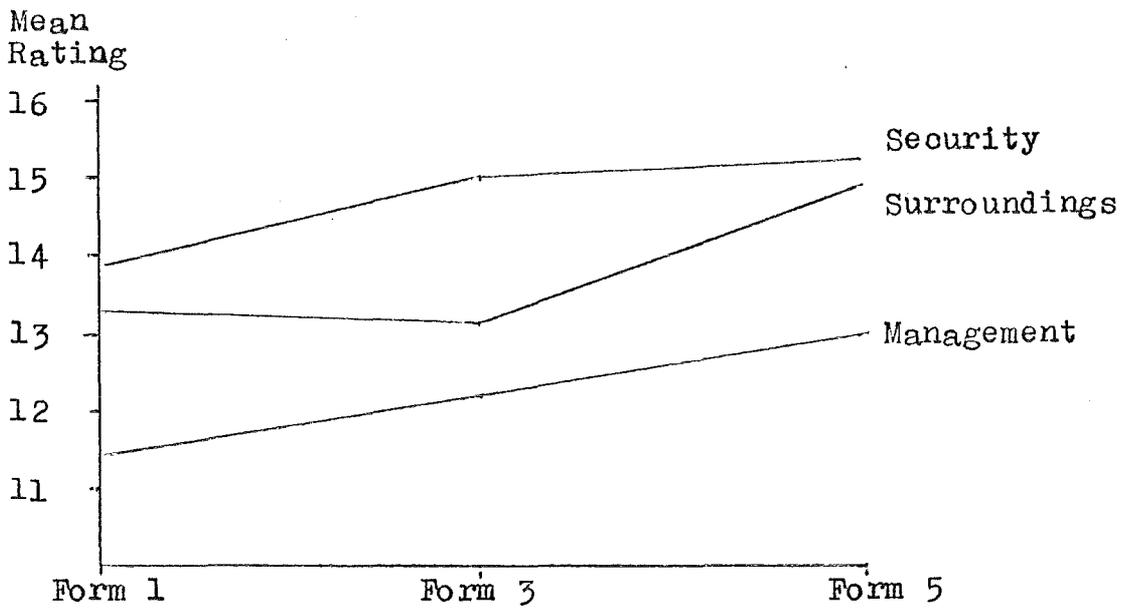
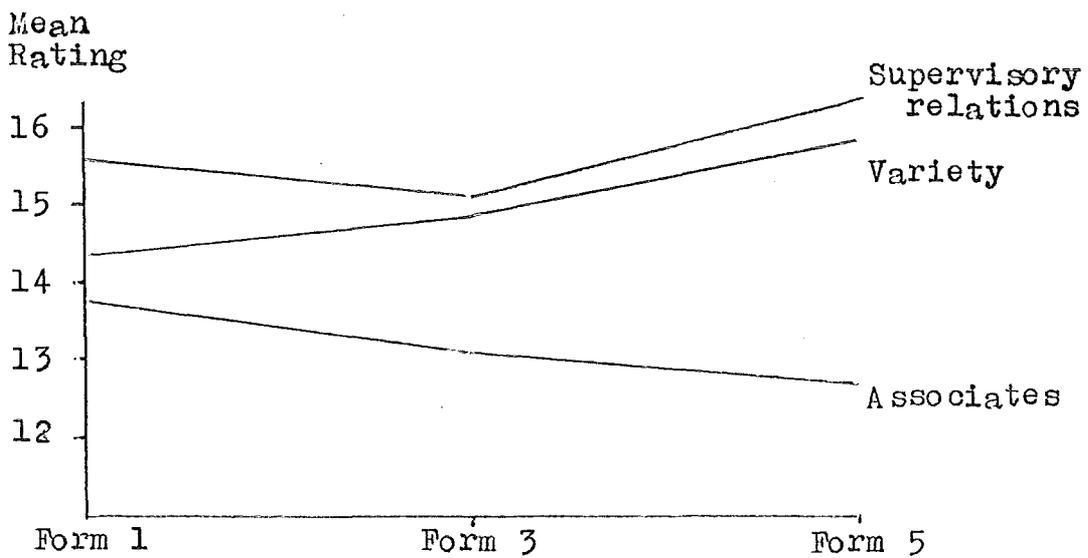


FIGURE 2:4 VALUES SIGNIFICANT BY FORM (2)



It must be noted here that although the six dependent variables were shown as significant on the univariate F tests form, additional tests of multiple means could have pinpointed the areas of significance. Although such tests were not conducted it is presumed (from tests conducted on the simple effects of form by ability) that the most significant effects of form (age) would be found in form 1.

Table 2:2 and figures 2:3 and 2:4 show that mean value ratings for the dependent variables management, security, variety, surroundings and supervisory relationships rise with the age (form level) of the pupils, although on surroundings and supervisory relationships, form 3 pupils show a slightly lower mean than pupils in form 1. There is a small, but continuing, decline in the value placed on associates from form 1 to form 5.

Ginsberg (1951) has suggested that, by the age of 15, young people have begun to consider the values they hold to be important in relation to a future occupation. The six variables significant by form would appear to reflect this process of gradual commitment to specific values. Five of the values are rated more highly by fifth formers than by third formers. The sixth value, associates, seems to become less important to young people as they mature. This is possibly because maturity brings an increasing readiness to become committed to individually held values and a decline in orientation towards the peer group.

Sex (Main Effect).

There was a significant main effect for sex at the p. less than .001 level. The univariate F tests (df 1,193) showed significant figures for six of the fifteen dependent variables:

altruism (p. less than .001), money (p. less than .001), variety (p. less than .05), way of life (p. less than .05), associates (p. less than .05), and aesthetics (p. less than .05). (See table 3:1 below)

Table 3:2 below shows the means and standard deviations for boys and girls on the six dependent variables showing significant differences.

TABLE 3:1 TEST OF SEX

TESTS OF SIGNIFICANCE USING WILKS LAMBDA CRITERION AND CANONICAL CORRELATIONS

<u>TEST OF ROOTS</u>	<u>F</u>	<u>DFHYP</u>	<u>DFERR</u>	<u>P.LESS THAN</u>	<u>R</u>
1 through 1	4.364	15.000	179.000	0.001	0.517

UNIVARIATE F TESTS STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS

<u>VARIABLE</u>	<u>F(1,193)</u>	<u>MEAN SQ</u>	<u>P.LESS THAN</u>	<u>1</u>
ALTRUISM ***	16.621	87.751	0.001	-0.524
CREATIVE	1.204	12.804	0.274	0.279
MANAGE	2.823	20.818	0.095	0.145
ACHIEVE	0.706	3.535	0.402	-0.035
MONEY ***	18.588	137.871	0.001	0.404
SECURITY	0.879	4.816	0.350	0.170
INDEPEND	0.171	1.081	0.679	-0.051
VARIETY *	4.684	33.469	0.032	-0.472
PRESTIGE	0.919	5.845	0.339	0.038
WAYLIFE *	3.911	16.595	0.049	0.214
SURROUND	0.199	1.670	0.656	-0.334
SUPERVISE	0.000	0.001	0.991	0.197
ASSOCIATES *	4.424	18.688	0.037	0.248
INTELLECT	2.875	19.060	0.092	0.626
AESTHETIC *	5.313	41.287	0.022	-0.268

(Note: * p. less than .05, ** p. less than .01, *** p. less than .001)

TABLE 3:2 MEANS AND STANDARD DEVIATIONS BY SEX FOR SIX SIGNIFICANT VALUES

<u>VARIABLE</u>	<u>BOYS</u>		<u>GIRLS</u>	
	<u>MEAN</u>	<u>S.D.</u>	<u>MEAN</u>	<u>S.D.</u>
ALTRUISM	13.448	2.535	14.763	2.159
MONEY	9.500	3.075	7.907	2.851
VARIETY	14.728	2.972	15.474	2.566
WAYLIFE	11.570	2.238	11.000	1.915
ASSOCIATES	13.465	2.219	12.897	1.912
AESTHETICS	13.395	3.062	14.258	2.446

On the whole, the significant differences between boys and girls reflect the findings of previous research into sex differences. Girls score higher than boys on altruism (girls' mean 14.763, boys' mean 13.448), and this is consistent with Super's findings and with the findings of research reviewed by Wright (1973),⁶ who notes that girls tend to be more socially responsible than boys. Girls also show a higher mean score on aesthetics (girls' mean 14.258, boys' mean 13.395). This too, is consistent with Super's findings and supports a popular belief that girls are concerned with appearances, while boys tend to be more practical.

Although money (economic reward) is not rated highly by boys (mean, 9.500), they do give it a higher rating than girls (mean, 7.907). For many girls, an occupation may not be a lifelong commitment, but merely a prelude to marriage. This may explain why girls value their future financial remuneration less, on average, than do boys. Boys rate way of life more highly than girls (boys' mean, 11.570; girls'

mean, 11.000). The difference is not great, but it can be explained by the fact that for boys, occupation has a major influence on way of life (Marcia, 1964)⁷, but for girls, the occupation of a future husband may be more relevant to this value.

The rating for associates is higher for boys than it is on average for girls (boys' mean, 13.465; girls' mean, 12.897). This is not consistent with the "expressive" female value system documented by Talcott Parsons, but it is consistent with the male peer-group orientation identified by Coleman (1971)⁸, and the emphasis on the peer group among working-class boys studied by Willis in the U.K. (1977)⁹.

It is not clear why girls give a higher rating to variety (girls' mean, 15.474; boys' mean, 14.728). Girls at school have the reputation of being passive and conforming (Ponzo and Strowig, 1973)¹⁰, and this might suggest that they would be more content than boys with repetitious jobs. Perhaps the fact that many girls actually take boring, repetitious jobs is not a reflection of their wants, but merely a result of the low status accorded to many women in the job market, regardless of their capabilities.

Ability (Main Effect).

There was a significant main effect for ability (as indicated by school achievement) at the p. less than .001 level. The univariate F tests (df 2,193) showed that the following eight dependent variables were significant: creativity (p. less than .05), management (p. less than .001), achievement (p. less than .001), money (p. less than .001), security (p. less than .05), variety (p. less than .01),

supervisory relationships (p. less than .05), and intellectual stimulation (p. less than .001) (See table 4:1 below.) It was noted that money, security and supervisory relations also figured significantly in the form by ability interaction.

Table 4:2 below lists the means and standard deviations at each ability level for the eight dependent variables noted as being significant. Figures 4:3 and 4:4 below present the means of the significant dependent variables in graphical form.

TABLE 4:1 TEST OF ABILITY

TESTS OF SIGNIFICANCE USING WILKS LAMBDA CRITERION AND CANONICAL CORRELATIONS					
<u>TEST OF ROOTS</u>	<u>F</u>	<u>DFHY</u>	<u>DFERR</u>	<u>P.LESS THAN</u>	<u>R</u>
1 through 2	2.607	30.000	358.000	0.001	0.533
2 through 2	0.810	14.000	179.500	0.658	0.244

<u>VARIABLE</u>	<u>F(2, 193)</u>	<u>MEAN SQ</u>	<u>STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS</u>	
			<u>P. LESS THAN</u>	<u>1.</u>
ALTRUISM	0.465	2.457	0.629	-0.289
CREATIVE *	3.568	37.939	0.030	0.183
MANAGE ***	6.884	50.775	0.001	0.447
ACHIEVE ***	10.939	54.806	0.001	0.283
MONEY ***	15.121	112.153	0.001	-0.690
SECURITY **	5.989	32.805	0.003	0.311
INDEPEND	0.526	3.320	0.592	0.149
VARIETY **	4.952	35.379	0.008	0.078
PRESTIGE	2.789	17.731	0.064	0.153
WAYLIFE	0.487	2.068	0.615	0.075
SURROUND	0.695	5.844	0.500	-0.166
SUPERVISE *	3.807	25.589	0.024	0.030
ASSOCIATES	0.610	2.579	0.544	0.027
INTELLECT ***	7.046	46.716	0.001	0.049
AESTHETIC	0.197	1.533	0.821	-0.215

(Note: * p. less than .05, ** p. less than .01, *** p. less than .001)

TABLE 4:2 MEANS AND STANDARD DEVIATIONS BY ABILITY FOR EIGHT SIGNIFICANT VARIABLES

VARIABLE	ABILITY					
	LOW		AVERAGE		HIGH	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
CREATIVITY	12.746	2.540	13.318	3.254	14.235	3.710
MANAGE	11.236	2.822	12.318	2.366	12.985	3.280
ACHIEVE	15.436	2.025	16.987	1.991	17.221	2.870
MONEY	10.509	3.388	8.534	2.828	7.662	2.477
SECURITY	13.891	2.615	14.909	2.242	15.294	2.528
VARIETY	14.018	2.851	15.443	2.304	15.441	3.178
SUPERVISE	14.891	2.740	15.932	2.590	16.103	3.018
INTELLECT	13.382	2.438	14.625	2.484	15.000	2.839

FIGURE 4:3 VALUES SIGNIFICANTLY RELATED TO ABILITY (1)

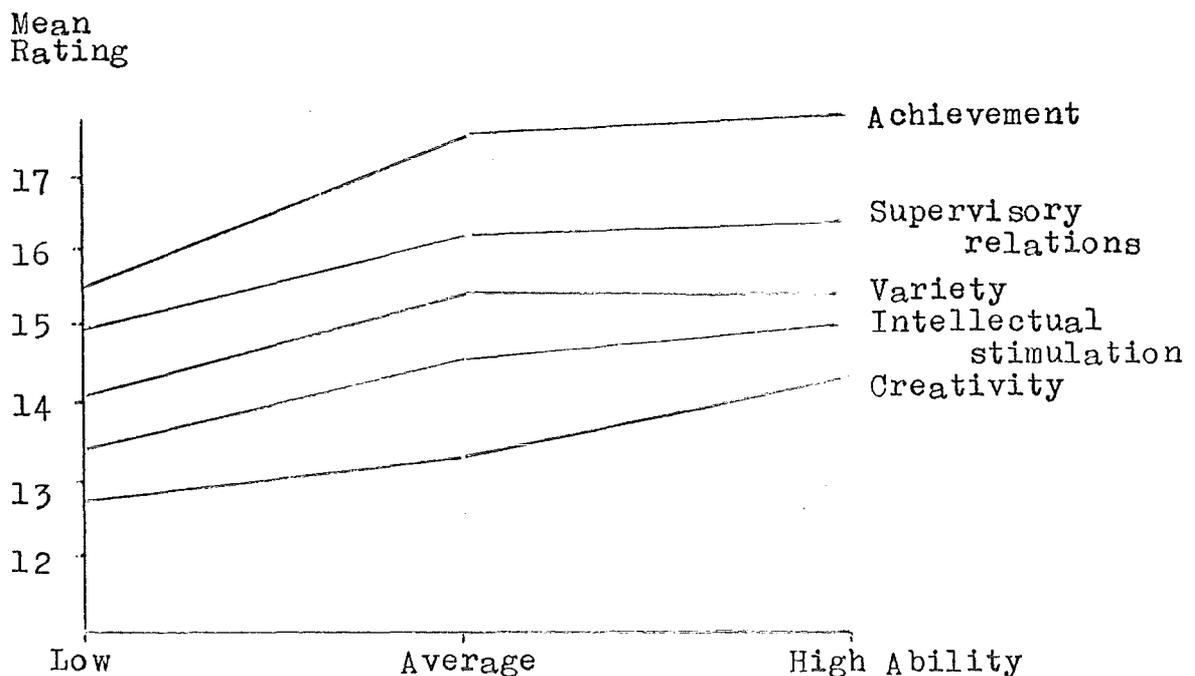


FIGURE 4:4 VALUES SIGNIFICANTLY RELATED TO ABILITY (2)

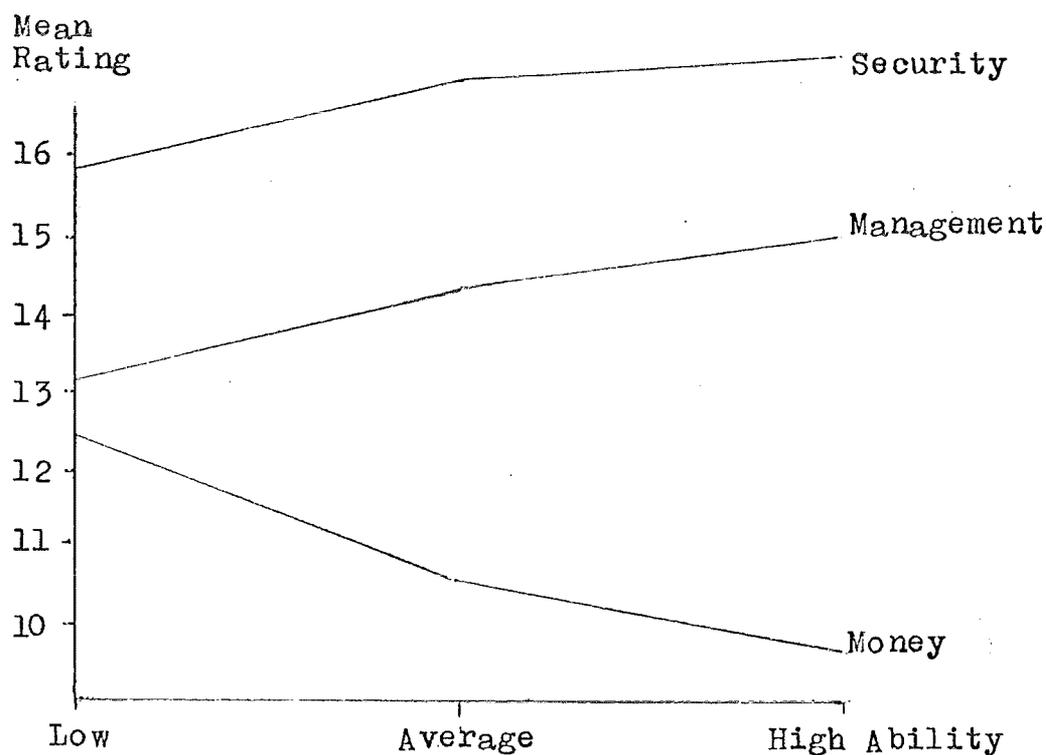


Table 4:2 and figures 4:3 and 4:4 show similar trends for achievement, supervisory relations, intellectual stimulation, security, management and creativity. These variables all show a rise in their value ratings between low and average ability pupils, and a further (but smaller) rise in value ratings between average and high ability pupils, except in the case of creativity where the rise in rating between average and high ability is slightly greater than that between low and average ability.

Although overall significance has been established on these variables in relation to pupils' ability, statistical tests of multiple comparison of means would be able to indicate the most significant levels of ability. Nevertheless despite the absence of this data, the descriptive study proves

interesting.

There is a relatively high value rating on achievement for all pupils, but especially for those of average and high ability. In the academically orientated and competitive environment of school this does not seem surprising, but it would be interesting to be able to compare these ratings with ratings made by young people already in the workforce. It must be remembered, however, that "achievement" may mean very different things to different people as Super points out.

After achievement, the highest rated values significant by ability are security (also significant in the form by ability interaction) and supervisory relationships. It seems quite surprising that these values are rated higher than variety, intellectual stimulation and creativity for even the high ability pupils. The figures suggest that concern about getting and keeping a job and establishing satisfactory working relationships influences pupils' value decisions rather more than considerations of interest and stimulation in the actual work.

In all but one of the values, there are quite large differences between low ability pupils and the others. This seems to point again to the probability that ability to make a firm commitment to values is a function of general intellectual ability. Thus in the matter of values formation there are greater differences between people of low intellectual ability than between those of average ability and above. The exception appears to be creativity, which according to Guilford, though not synonymous with intellectual ability, is strongly associated with it. In this study, the value placed on creativity continued to rise with the ability of the subjects.

Mean ratings for the dependent variable money show that, in general, higher ability pupils show less concern with money as a value than do those of lower ability. This finding must be qualified, however, by the interaction of ability with age on this variable. Especially at form 1 level, and to a lesser extent at form 3, there is a marked decline in work values concerned with money rewards as ability level increases.

Although, on average, money is rated by all the ability groups lower than all other dependent variables significant by ability, it is most strongly rejected as a value by the high ability group. It is possible, however, that despite this apparent rejection of money, the high ability subjects will aim for occupations that offer opportunities for achievement, but are also well paid. In such cases, money might be an integral part of the job, but not the major consideration. It is difficult to imagine that prospective job-seekers would not be concerned with their earning power in the present times of economic difficulty.

Summary and Conclusions.

The responses of 211 Intermediate and Secondary school pupils to items based on Donald Super's 15 work values revealed certain values that distinguish between groups of young people identified by age (form), sex and ability (as indicated by school achievement).

The values of 11-12 year old pupils in form 1 were, on average, less pronounced than those of pupils in forms 3 and 5. There were significant age differences for security, surroundings, management, supervisory relationships and

variety, which were rated highest by the 16-17 year olds in form 5, and for associates, which was rated lowest by the 5th formers.

Sex differences appeared in eight of the values. As expected, girls rated altruistic and aesthetic values more highly than did boys, but surprisingly, girls gave a higher rating than boys to variety. Boys, not unexpectedly, rated money (economic return), way of life and associates more highly than did girls.

Previous studies have given little consideration to value differences attributable to ability. The most important results of this study were therefore the identification of eight values significantly related to ability, and the discovery of a significant form (age) by ability interaction.

Achievement, supervisory relationships, variety, security, intellectual stimulation and creativity were all values held most strongly by high ability pupils. Money (economic return) was noted as being least important to high ability pupils. Supervisory relationships, money and security also figured in the significant form by ability interaction. Form 1 pupils held lower values for supervisory relationships and a significantly higher value for money than did pupils in the other forms.

The results of the present study appear to confirm Ginsberg's findings that the establishment of work values is a developmental process associated with age and maturity. It was found that although values continue to strengthen between form 3 (average age 13 years 11 months) and form 5 (average age 16 years 1 month), values of the younger pupils in form 1 (average age 11 years 7 months) were significantly different from those of pupils in the higher forms. The study did not find a decline on most value ratings (with age) as did Super.

Ability appears to be a significant influence on values which has not been adequately explored in previous research. Age and ability together are related to intellectual maturity, thus older, more able subjects may be better able to identify values that are important to them. The research suggests that teachers and counsellors should pay especial attention to a consideration of ways in which less able pupils can be helped to clarify their values.

The study also confirms the existence of some sex differences, and it is possible that some of these differences are due to a tendency of individuals to conform to social stereotypes. Kuhlen (1963)¹¹ has suggested that job satisfaction makes a major contribution to positive personal development. It is therefore important for teachers and counsellors to stress the need for individuals to consider their own preferences without reference to the possible expectations of others.

Present findings suggest two major possibilities for future research. Since it was not possible to examine the influence of ability at 6th or 7th form levels (because low ability students leave school before reaching these forms), a values study of senior school pupils compared with their peers who have left school could yield interesting information. In addition, a follow-up study after two or three years of the subjects at present under discussion could provide information on value changes. Such a study could also relate previously expressed values of the older subjects to the kinds of values that would appear important in the occupation they eventually engage in.

REFERENCES

1. Donald E. Super, Work Values Inventory, 1970, p. 41.
2. John O. Crites, Measurement of Vocational Maturity in Adolescence, In D.G. Zytowski (Ed.) Vocational Behaviour: Readings in Theory and Research, p.155.
3. Leona Tyler, Chapter 8 in H. Borow (Ed.) Man in a World at Work, 1964.
4. R.D. Bock, Multivariate Statistical Methods in Behavioural Research, 1975.
5. Ginsberg, E., Ginsburg, S.W., Axelrad, S. & Herma, J.L., Occupational Choice: An Approach to General Theory, 1951.
6. Derek Wright, The Psychology of Moral Behaviour, 1971, p.145.
7. James Marcia, 1964. See Rolf E. Muuss, Theories of Adolescence, 1962.
8. J.S. Coleman, The Adolescent Society, 1961.
9. Paul Willis, Learning to Labour, 1977.
10. Z. Ponzo and R.W. Strowig, Relations among sex-role identity and selected intellectual and non-intellectual factors for high school freshmen and seniors. In the Journal of Educational Research, vol. 67, no. 3, 1973.
11. Kuhlen, 1963. Needs, Perceived Need Satisfaction Opportunities and Satisfaction with Occupation, p. 403, in Zytowski, op. cit.

BIBLIOGRAPHY

1. Bock, R.D. Multivariate Statistical Methods in Behavioural Research. McGraw-Hill, New York, 1975.
2. Borow, Henry. Career development in adolescence, pp421-425, in Understanding Adolescence, (Ed.) J.F. Adams. Allyn & Bacon, Boston, 2nd Edn 1973.
3. Borow, Henry (Ed.) Man in a World at Work. Houghton Mifflin Co., Boston, 1964.
4. Ginsberg, E., Ginsburg, S.W., Axelrad, S. & Herma, J.L. Occupational Choice: An Approach to General Theory. Columbia University Press, New York, 1951.
5. Keeling, B. & Tuck, B.F. The validity of Holland's occupational typology with male and female New Zealand secondary school students. New Zealand Journal of Educational Studies, pp50-57, vol. 14, 1, May 1979.
6. Powell, Marvin, & Bloom, Viola. Development of and the reasons for vocational choices of adolescents through high school years. Journal of Educational Research, vol. 56, 3, Nov. 1962. pp126-133.
7. Stefflre, Buford. Concurrent validity of the vocational values inventory. Journal of Educational Research, vol. 52, 9, May, 1959, pp339-341.
8. Super, Donald E, & Overstreet, Phoebe. The Vocational Maturity of Ninth-grade Boys. Teachers College, Columbia University, New York, 1960.
9. Super, Donald E. Work Values Inventory. Houghton Mifflin, New York, 1970.
10. Winer, B.J. Statistical Principles in Experimental Design, 2nd Edn., McGraw-Hill, New York, 1971.
11. Zytowski, D.G. Vocational Behaviour: Readings in Theory and Research. Holt, Rinehart & Winston, Inc. 1969.

VALUES PROFILES

(APPENDIX A)

(Comment on the left describes a person with a strong commitment to the value; comment on the right describes a person with no commitment to the value.)

ALTRUISM

Has a strong sense of wanting to help other people and to improve their lives in some way.

Is concerned with promoting own interests and has no commitment to helping others.

CREATIVITY

Wants to contribute personally to the fund of ideas, products and inventions in the world.

Prefers to reproduce the products, ideas and inventions of others, following directions.

MANAGEMENT

Is prepared to take charge and to direct others. Actively seeks the opportunity to do so.

Prefers not to direct others. Does not want to take the responsibility of supervising others.

ACHIEVEMENT

Seeks a feeling of satisfaction and achievement from the job itself.

Is prepared to gain peripheral satisfaction from pay, leisure time, congenial workmates, etc.

REMUNERATION

Thinks that money is the key to a good life and is prepared to take the job that pays most, despite other shortcomings.

Puts remuneration low on list of job priorities. Seeks other satisfactions on the job or in leisure time.

SECURITY

Seeks long-term job security and prefers a "safe" job to one that is more interesting or financially rewarding.

Puts interest, status, money, etc., in the immediate future, before long-term security.

INDEPENDENCE

Prefers to work independently of others as much as possible.

Prefers to work as a member of a team. Finds security in mutual support.

VARIETY

Seeks stimulation and challenge from a variety of activities in the job.

Prefers a job that is predictable and repetitive, that can be learned easily.

PRESTIGE

Sees the job as a reflection of own importance in the eyes of self and others. Wants to get as far up the "ladder" as possible.

Is not concerned with job status as a reflection of own value. Looks for other satisfactions either in or out of the work situation.

WAY OF LIFE

Sees work as a means of providing the opportunity to live in a chosen way, by providing money, status, adequate leisure time, etc.

Chooses work for its intrinsic value, rather than for the opportunity it affords to live a particular way of life.

SURROUNDINGS

Highly values the amenities provided in the work environment, such as lounge, toilet and recreation facilities.

Is not at all concerned by a lack of amenities in the immediate work environment.

SUPERVISORY RELATIONS

Highly rates the presence of a sympathetic and fair supervisor, with whom one can "get along".

Is unconcerned about the personal characteristics of the immediate supervisor.

ASSOCIATES

Looks forward to sharing the job situation with friends, and sees this as a major and positive aspect of work.

Is prepared to follow personal interests and priorities; is not influenced by the need to be with friends on the job.

INTELLECTUAL STIMULATION

Actively seeks the intellectual stimulation of problem-solving and decision-making.

Does not wish to be intellectually challenged; feels unhappy about having to make decisions on the job.

AESTHETICS

Has a strong desire to contribute towards the sum total of beauty in the world.

Tends towards the practical; has no interest in beauty for its own sake.

APPENDIX B

THE STATEMENTS (Those in the left column relate to the positive side of each value; those in the right column relate to the negative side. Numbers refer to positions on the final questionnaire.)

ALTRUISM

- 41. I want a job where I can help other people.
- 25. I want to help make the world a better place.
- 34. I would not put up with low pay and poor conditions just to help other people.
- 60. I don't want to have to sort out other people's problems in my job.

CREATIVITY

- 4. I want to design new things or develop new ideas.
- 18. I want a job that allows me to use my imagination and be creative.
- 35. I want the kind of job where I don't have to invent new ways of doing things.
- 31. I am not interested in inventing new things, or trying to come up with new ideas.

MANAGEMENT

- 13. I want to be in charge of other people where I work.
- 40. I want to be able to use my leadership ability.
- 43. I would rather be told what to do than give orders to someone else.
- 58. I don't want to be in charge of other people.

ACHIEVEMENT

- 23. I want a job that I can do well.
- 44. I want a job that I feel is worth doing.
- 1. It doesn't matter if I'm not good at my job as long as I don't get the sack.
- 28. I don't mind what sort of job I do, as long as the pay and conditions are right.

REMUNERATION

- 15. I want a job that pays me well, even if the work is boring.
- 2. The most important thing about my job is how much pay I get.
- 5. I would rather have a job I like than a boring one that pays well.
- 30. I would never take a job just because it was well paid.

SECURITY

- 29. I want to work where I can always be sure of another job if my first job ends.
- 56. I want a job that gives me a skill I can always use to get work.
- 11. I won't be worried if my job ends, I'll just look round for another.
- 24. I don't want to stay in the same job all my working life.

INDEPENDENCE

- 10. I want to work on my own as much as possible.
- 8. I would like to be left to get on with my work on my own.
- 46. I want to work as part of a team in my job.
- 55. I want to work alongside other people who can help me in my job.

VARIETY

- 49. I want to be able to look forward to doing different things in my job.
- 38. I want a job that has plenty of variety in it.
- 26. I want a job that stays the same so that I will always know how to do it.
- 6. I want a job where I don't have to do lots of different things.

PRESTIGE

- 32. I want a job where I can feel important.
- 3. I want to get to one of the top positions in my job.
- 52. I'll take any job I like, even if other people think it's not good enough for me.
- 53. I'm not interested in getting an important position in my work.

WAY OF LIFE

- 59. I want a job that lets me lead the kind of life I enjoy.
- 19. What I do in my leisure time will be more important to me than my job.
- 37. I expect my job to be more important to me than my leisure time.
- 54. I expect to get a good deal of satisfaction in life out of my job.

SURROUNDINGS

- 47. I want to be sure there are comfortable surroundings where I work.
- 12. I will make sure there are good lounge, toilet, and other facilities where I work.
- 20. I don't think it's important to have comfortable surroundings where I work.
- 45. I don't think it is important that I should have good lounge, toilet, and other facilities where I work.

SUPERVISORY RELATIONS

- 16. I want to work where I get on well with my boss.
- 48. I want a boss who is fair and kind.
- 22. I don't mind what sort of boss I have.
- 27. I don't think it is important that I should like my boss.

ASSOCIATES.

- 21. I want a job where I can be with my friends.
- 51. I want to be able to make friends with my work-mates.
- 36. I want a job that suits me, even if it means doing something different from my friends.
- 9. I won't be worried if I don't have any special friends where I work.

INTELLECTUAL STIMULATION

- 7. I want a job where I have to make lots of interesting decisions.
- 50. I want a job where I can use my ability to solve problems.
- 17. I want a job that I don't have to think about too much.
- 39. I want a job where I'm not expected to make decisions.

AESTHETICS

- 57. I want a job where I can help to produce beautiful things.
- 33. I want a job where I can help to add beauty to the world.
- 42. I think it is a waste of time producing things just because they are beautiful.
- 14. I don't think there's much point in working to make the world more beautiful.

THE JOB I WOULD LIKE

Over the page there are a number of things that you might say about your future job. Read each statement carefully and decide how much you agree or disagree with it.

- 1 = Strongly agree
- 2 = Agree
- 3 = Uncertain
- 4 = Disagree
- 5 = Strongly disagree.

For each statement circle the number that matches your feeling about the statement.

e.g.

I like bananas (1) 2 3 4 5

(This person likes bananas very much indeed.)

WHEN YOU HAVE FINISHED, PLEASE CHECK THAT YOU HAVE CIRCLED ONE OF THE NUMBERS FOR EVERY STATEMENT.

(If you make a mistake, just cross out your mistake and circle another number.)

- 1 = Strongly agree
 2 = Agree
 3 = Uncertain
 4 = Disagree
 5 = Strongly disagree

Name

Age years months

Form M / F

- | | | | | | |
|---|---|---|---|---|---|
| 1) It doesn't matter if I'm not good at my job, | 1 | 2 | 3 | 4 | 5 |
| 2) The most important thing about my job is how much pay I get. | 1 | 2 | 3 | 4 | 5 |
| 3) I want to get to one of the top positions in my job. | 1 | 2 | 3 | 4 | 5 |
| 4) I want to design new things or think up new ideas. | 1 | 2 | 3 | 4 | 5 |
| 5) I would rather have a job I like, than a boring one that pays well. | 1 | 2 | 3 | 4 | 5 |
| 6) I want a job where I don't have to do lots of different things. | 1 | 2 | 3 | 4 | 5 |
| 7) I want a job where I have to make lots of interesting decisions. | 1 | 2 | 3 | 4 | 5 |
| 8) I would like to be left to get on with my work on my own. | 1 | 2 | 3 | 4 | 5 |
| 9) I won't be worried if I don't have any special friends where I work. | 1 | 2 | 3 | 4 | 5 |
| 10) I want to work on my own as much as possible. | 1 | 2 | 3 | 4 | 5 |
| 11) I won't be worried if my job ends, I'll just look round for another job. | 1 | 2 | 3 | 4 | 5 |
| 12) I will make sure that there are good lounge, toilet, and other facilities where I work. | 1 | 2 | 3 | 4 | 5 |
| 13) I want to be in charge of other people where I work. | 1 | 2 | 3 | 4 | 5 |
| 14) I don't think there is much point in working to make the world more beautiful. | 1 | 2 | 3 | 4 | 5 |
| 15) I want a job that pays me well, even if the work is boring. | 1 | 2 | 3 | 4 | 5 |
| 16) I want a job where I get on well with my boss. | 1 | 2 | 3 | 4 | 5 |
| 17) I want a job that I don't have to think about too much. | 1 | 2 | 3 | 4 | 5 |
| 18) I want a job that allows me to use my imagination and be creative. | 1 | 2 | 3 | 4 | 5 |

- | | | | | | | |
|-----|---|---|---|---|---|---|
| 19) | What I do in my leisure time will be more important to me than my job. | 1 | 2 | 3 | 4 | 5 |
| 20) | I don't think it is important to have comfortable surroundings where I work. | 1 | 2 | 3 | 4 | 5 |
| 21) | I want a job where I can be with my friends. | 1 | 2 | 3 | 4 | 5 |
| 22) | I don't mind what sort of a boss I have. | 1 | 2 | 3 | 4 | 5 |
| 23) | I want a job that I can do well. | 1 | 2 | 3 | 4 | 5 |
| 24) | I don't want to stay in the same job all my working life. | 1 | 2 | 3 | 4 | 5 |
| 25) | I want to help make the world a better place. | 1 | 2 | 3 | 4 | 5 |
| 26) | I want a job that stays the same so that I will always know how to do it. | 1 | 2 | 3 | 4 | 5 |
| 27) | I don't think it is important that I should like my boss. | 1 | 2 | 3 | 4 | 5 |
| 28) | I don't mind what sort of job I do, as long as the pay and conditions are right. | 1 | 2 | 3 | 4 | 5 |
| 29) | I want to work where I can always be sure of another job if my first job ends. | 1 | 2 | 3 | 4 | 5 |
| 30) | I would never take a job just because it was well paid. | 1 | 2 | 3 | 4 | 5 |
| 31) | I am not interested in inventing new things or trying to come up with new ideas. | 1 | 2 | 3 | 4 | 5 |
| 32) | I want a job where I can feel important. | 1 | 2 | 3 | 4 | 5 |
| 33) | I want a job where I can help to add beauty to the world. | 1 | 2 | 3 | 4 | 5 |
| 34) | I would not put up with low pay and poor conditions just to help other people. | 1 | 2 | 3 | 4 | 5 |
| 35) | I want the kind of job where I don't have to invent new ways of doing things. | 1 | 2 | 3 | 4 | 5 |
| 36) | I want a job that suits me, even if it means doing something different from my friends. | 1 | 2 | 3 | 4 | 5 |
| 37) | I expect my job to be more important to me than my leisure time. | 1 | 2 | 3 | 4 | 5 |
| 38) | I want a job that has plenty of variety. | 1 | 2 | 3 | 4 | 5 |
| 39) | I want a job where I'm not expected to make decisions. | 1 | 2 | 3 | 4 | 5 |
| 40) | I want to be able to use my leadership ability. | 1 | 2 | 3 | 4 | 5 |

- | | | | | | | |
|-----|--|---|---|---|---|---|
| 41) | I want a job where I can help other people. | 1 | 2 | 3 | 4 | 5 |
| 42) | I think it is a waste of time producing things just because they are beautiful. | 1 | 2 | 3 | 4 | 5 |
| 43) | I would rather be told what to do, than give orders to somebody else. | 1 | 2 | 3 | 4 | 5 |
| 44) | I want to do a job that I feel is worth doing. | 1 | 2 | 3 | 4 | 5 |
| 45) | I don't think it is important that I should have good lounge, toilet, and other facilities where I work. | 1 | 2 | 3 | 4 | 5 |
| 46) | I want to work as part of a team in my job. | 1 | 2 | 3 | 4 | 5 |
| 47) | I want to be sure that there are comfortable surroundings where I work. | 1 | 2 | 3 | 4 | 5 |
| 48) | I want a boss who is fair and kind. | 1 | 2 | 3 | 4 | 5 |
| 49) | I want to be able to look forward to doing different things in my job. | 1 | 2 | 3 | 4 | 5 |
| 50) | I want a job where I can use my ability to solve problems. | 1 | 2 | 3 | 4 | 5 |
| 51) | I want to be able to make friends with my work mates. | 1 | 2 | 3 | 4 | 5 |
| 52) | I'll take any job I like, even if other people think it's not good enough for me. | 1 | 2 | 3 | 4 | 5 |
| 53) | I am not interested in getting to an important position in my work. | 1 | 2 | 3 | 4 | 5 |
| 54) | I expect to get a good deal of satisfaction in life out of my work. | 1 | 2 | 3 | 4 | 5 |
| 55) | I want to work alongside other people who can help me in my job. | 1 | 2 | 3 | 4 | 5 |
| 56) | I want a job that gives me a skill that I can always use to get work. | 1 | 2 | 3 | 4 | 5 |
| 57) | I want a job where I can help to produce beautiful things. | 1 | 2 | 3 | 4 | 5 |
| 58) | I don't want to be in charge of other people in my work. | 1 | 2 | 3 | 4 | 5 |
| 59) | I want a job that lets me lead the kind of life that I enjoy. | 1 | 2 | 3 | 4 | 5 |
| 60) | I don't want to have to sort out other people's problems in my job. | 1 | 2 | 3 | 4 | 5 |

NOW read each of the pairs of statements below. Decide which statement you agree with, and put a tick in the box closest to that statement. Use the middle box ONLY if you really cannot decide.

A.

I intend to stay
in my home area
even if I find it
difficult to get
a job.

I am prepared to
shift away from
my home area to
get the job I
want.

B.

I want to get a job
as soon as I leave
school.

After I leave school,
I am prepared to
spend a year (or more)
training or studying
for the job I want.

C.

I am worried that
I may not get a
suitable job.

I am not worried
about whether I get
a job or not.

ADDENDUM

OTHER FINDINGS

Besides responding to the sixty value statements, the 211 subjects of this study were asked to indicate whether they intended to stay in their home area even if they found difficulty in getting a job, or if they would be prepared to move away from their home area; whether they intended to work as soon as they left school, or were willing to train for a year or more first; and whether they were worried about finding a suitable job, or not. In each case an "undecided" response was allowable. Findings are noted in the following pages, but it is important to note that figures have not been tested for significance.

Mobility.

Of the total sample (97 girls and 114 boys) 70 per cent of the girls and 64 per cent of the boys indicated that they would be willing to move away from their home area (Christchurch) in search of a job. The percentage of those willing to move away rose with form (to 81.9 per cent of form 5), and with ability (79.4 per cent of the high ability pupils). (See table 4:1 below.) The largest groups of undecided pupils were boys (18.5 per cent), average ability (18.2 per cent), and form 3 (19.8 per cent).

A further breakdown of the responses shows that there are some differences between boys' and girls' responses at each form level. (See table 4:2 below) Except at form 3 level, girls were more willing than boys to move away from home in search of a job (90.3 per cent of form 5 girls, 75.6 per cent

of form 5 boys). These figures are very interesting in the light of traditional beliefs that girls are more home-loving and less career-oriented than boys. It must be remembered however, that a greater percentage of boys were undecided on this point, and also that faced with an actual decision, the subjects' responses might be quite different. As might be expected, most of the low ability girls intended to stay in their home area (47.6 per cent; 9.5 per cent undecided). A slightly greater percentage of high ability boys than high ability girls showed willingness to leave home in search of a suitable job (80 per cent high ability boys; 78.8 per cent high ability girls).

TABLE 4:1 Future mobility - looking for a job (a)

Category	Not willing to move away from home area	Uncertain	Willing to move away from home area
Girls (97)	19.6 per cent	10.4 per cent	70 per cent
Boys (114)	17.5 " "	18.5 " "	64 " "
Total (211)	18.5 " "	17.7 " "	68.8 " "
Ability:			
Low (55)	32.7 " "	14.6 " "	52.7 " "
Ave. (88)	15.9 " "	18.2 " "	65.9 " "
High (68)	10.3 " "	10.3 " "	79.4 " "
Form 1 (63)	27 " "	17.4 " "	55.6 " "
Form 3 (76)	18.4 " "	19.8 " "	61.8 " "
Form 5 (72)	11.1 " "	7 " "	81.9 " "

TABLE 4:2 Future mobility - looking for a job (b).

Category	Not willing to move away from home area		Uncertain		Willing to move away from home area	
F1 Girls (30)	30	per cent	6.7	per cent	63.3	per cent
F3 Girls (36)	19.4	" "	22.3	" "	58.3	" "
F5 Girls (31)	9.7	" "	-		90.3	" "
F1 Boys (33)	24.2	" "	27.3	" "	48.5	" "
F3 Boys (40)	17.5	" "	17.5	" "	65	" "
F5 Boys (41)	12.2	" "	12.2	" "	75.6	" "
Ability:						
Low Girls (21)	47.6	" "	9.5	" "	42.9	" "
Ave. Girls (43)	11.6	" "	11.7	" "	76.7	" "
High Girls (33)	12.1	" "	9.1	" "	78.8	" "
Low Boys (34)	23.5	" "	17.7	" "	58.8	" "
Ave. Boys (45)	20	" "	24.4	" "	55.6	" "
High Boys (35)	8.6	" "	11.4	" "	80	" "
Ability:						
Low F1 (17)	41.2	" "	5.9	" "	52.9	" "
Ave. F1 (25)	28	" "	28	" "	44	" "
High F1 (21)	14.3	" "	14.3	" "	71.4	" "
Low F3 (20)	30	" "	35	" "	35	" "
Ave. F3 (31)	16.1	" "	19.4	" "	64.5	" "
High F3 (25)	12	" "	8	" "	80	" "
Low F5 (18)	27.8	" "	-		72.2	" "
Ave. F5 (32)	6.3	" "	9.3	" "	84.4	" "
High F5 (22)	4.5	" "	9.1	" "	86.4	" "

Willingness to leave home increased with ability and also increased from form 3 to form 5. At form 1 level, however, 52.9 per cent of the low ability pupils expressed a willingness to leave the home area. Only 35 per cent of low ability pupils in form 3 were willing to leave the home area, but the percentage rose to 72.2 for low ability 5th formers. (See table 4:2 above.) It is not surprising that higher ability pupils are more prepared to leave home. Often the kinds of occupations demanding high academic ability require a high degree of geographical mobility, and pupils seeking these jobs must be prepared to move away from their home area. The 5th form pupils are closer to making a career decision and are no doubt aware of the high unemployment rates in their own city. These facts probably explain their greater readiness to leave their home area in search of a suitable job. It is not easy to explain the discrepancy in form 1. However, it can be seen that although low ability pupils were apparently more willing than average ability pupils to leave home, in fact many more average ability pupils in form 1 remained undecided on this point (35 per cent average ability, but only 5.9 per cent low ability). (See table 4:2 above).

Training.

A total percentage of 82.9 subjects indicated a willingness to spend a year or more in training before getting a job. (79.1 per cent girls and 86 per cent boys). There was little difference between the percentages in forms 1 and 5 willing to train (81 and 80.6 respectively). However, more 3rd formers wanted to find a job as soon as they left school. (See table 5:1 below.) 73.7 per cent of the form 3 pupils said that they would be willing to train (67.3 per cent low ability,

72.7 per cent average ability, and 94.1 per cent high ability). Academic achievement is said to require an acceptance of delayed gratification and if this is true then it could be a reason for the more able students being more willing to train for a suitable occupation.

TABLE 5:1 Training (a)

Category	Intending to get a job on leaving school	Uncertain	Willing to study or train for a year or more.
Girls (97)	12.4 per cent	8.5 per cent	79.1 per cent
Boys (114)	12.3 " "	1.7 " "	86 " "
Total (211)	12.3 " "	4.8 " "	82.9 " "
Ability:			
Low (55)	20 " "	12.7 " "	67.3 " "
Ave. (88)	15.9 " "	11.4 " "	72.7 " "
High (68)	1.5 " "	4.4 " "	94.1 " "
Form 1 (63)	9.5 " "	9.5 " "	81 " "
Form 3 (76)	17.1 " "	9.2 " "	73.7 " "
Form 5 (72)	9.7 " "	9.7 " "	80.6 " "

A breakdown of figures for form showed no substantial differences between boys and girls, taking into account the numbers who were uncertain about training. However, older girls were more willing to consider training (83.9 per cent in form 5) than older boys (78 per cent in form 5). 14.7 per cent of the form 5 boys (but only 3.2 per cent of form 5 girls) were still uncertain on this point. 8.6 per cent of the high ability boys were undecided. (See table 5:2 below.)

TABLE 5:2 Training (b)

Category	Intending to get a job on leaving school		Uncertain	Willing to study or train for a year or more	
F1 Girls (30)	6.7 per cent		16.6 per cent	76.7 per cent	
F3 Girls (36)	16.7	" "	5.5 " "	77.8	" "
F5 Girls (31)	12.9	" "	3.2 " "	83.9	" "
F1 Boys (33)	12.1	" "	17.9 " "	84.8	" "
F3 Boys (40)	17.5	" "	12.5 " "	70	" "
F5 Boys (41)	7.3	" "	14.7 " "	78	" "
Ability:					
Low Girls (21)	19	" "	23.9 " "	57.1	" "
Ave. Girls (43)	16.3	" "	7 " "	76.7	" "
High Girls (33)	3	" "	-	97	" "
Low Boys (34)	20.5	" "	6 " "	73.5	" "
Ave. Boys (45)	15.6	" "	15.5 " "	68.9	" "
High Boys (35)	-		8.6 " "	91.4	" "
Low F1 (17)	17.6	" "	17.7 " "	64.7	" "
Ave F1 (25)	8	" "	12 " "	80	" "
High F1 (21)	4.8	" "	-	95.2	" "
Low F3 (20)	25	" "	20 " "	55	" "
Ave. F3 (31)	25.8	" "	6.5 " "	67.7	" "
High F3 (25)	-		4 " "	96	" "
Low F5 (18)	16.7	" "	-	83.3	" "
Ave. F5 (32)	12.5	" "	15.6 " "	71.9	" "
High F5 (22)	-		9.1 " "	90.9	" "

It is interesting to note that most girls in all groups have positive attitudes towards training for a future occupation. This suggests that girls are becoming more aware of occupation as an important aspect of their lives before, and even during, marriage.

Figures for ability by form showed that more high ability pupils in each form were willing to train for a job (form 1, 95.2 per cent; form 3, 96 per cent; form 5, 90.9 per cent), though a number of pupils were still uncertain about training. (See table 5:2 above.)

Job Anxiety.

The following table (6:1) gives percentage responses of subjects (in the various categories) to the statements " I am worried that I may not get a suitable job" and "I am not worried whether I get a job or not". Of the total sample (211 subjects), 71.6 per cent identified with the statement of worry, 15.2 per cent were not worried at all, and 13.2 per cent were uncertain in their response. Interestingly, the most worried groups were form 3 and form 5 boys (82.5 per cent and 80.5 per cent respectively), and average and high ability boys (84.4 per cent and 80 per cent respectively), low and average ability 3rd formers (80 per cent and 80.6 per cent respectively), and average and high ability 5th formers (87.5 per cent and 81.8 per cent respectively). It would appear that boys, particularly those of average and high ability, are most concerned about finding a suitable job. Considering ability alone, the most worried were pupils of average ability (80.7 per cent).

Of those who were not worried about job prospects, there

Table 6:1 Job Anxiety.

Category	Expressed worry about getting a suitable job	Uncertain	Not worried about getting a job
Girls (97)	79.1 per cent	3.8 per cent	24.7 per cent
Boys (114)	86 " "	6.8 " "	7.2 " "
Total (211)	71.6 " "	13.2 " "	15.2 " "
Ability:			
Low (55)	69.1 " "	10.9 " "	20 " "
Ave. (88)	80.7 " "	12.5 " "	6.8 " "
High (68)	61.8 " "	16.1 " "	22.1 " "
Form 1 (63)	68.3 " "	12.7 " "	19 " "
Form 3 (76)	67.1 " "	13.2 " "	19.7 " "
Form 5 (72)	79.2 " "	13.9 " "	6.9 " "
F1 Girls (30)	63.3 " "	10 " "	26.7 " "
F3 Girls (36)	50 " "	11.1 " "	38.9 " "
F5 Girls (31)	77.4 " "	16.1 " "	6.5 " "
F1 Boys (33)	72.7 " "	15.2 " "	12.1 " "
F3 Boys (40)	82.5 " "	15.5 " "	2.5 " "
F5 Boys (41)	80.5 " "	12.2 " "	7.3 " "
Ability:			
Low Girls (21)	66.7 " "	9.5 " "	23.8 " "
Ave. Girls (43)	76.7 " "	11.7 " "	11.6 " "
High Girls (33)	42.4 " "	15.2 " "	42.4 " "
Low Boys (34)	70.6 " "	11.8 " "	17.6 " "
Ave Boys (45)	84.4 " "	13.4 " "	2.2 " "
High Boys (35)	80 " "	17.1 " "	2.9 " "

Continued over page.

(Table 6:1 continued)

Category	Expressed worry about getting a suitable job	Uncertain	Not worried about getting a job
Ability:			
Low F1 (17)	64.7 per cent	-	35.3 per cent
Ave, F1 (25)	72 " "	12 per cent	6 " "
High F1 (21)	66.7 " "	23.8 " "	9.5 " "
Low F3 (20)	80 " "	15 " "	5 " "
Ave. F3 (31)	80.6 " "	12.9 " "	6.5 " "
High F3 (25)	40 " "	12 " "	48 " "
Low F5 (18)	61.1 " "	16.7 " "	22.2 " "
Ave F5 (32)	87.5 " "	12.5 " "	-
High F5 (22)	81.8 " "	13.7 " "	4.5 " "

was a greater percentage of girls (24.7 per cent, as opposed to 7.2 per cent of the boys). The least worried groups were in forms 1 and 3 (19 per cent and 19.1 per cent respectively), especially form 1 and form 3 girls (26.7 per cent and 38.9 per cent respectively), high ability girls (42.4 per cent), and high ability 3rd formers (48 per cent).

The overall findings of this section of the research were that most pupils were concerned about getting a suitable job in the future, were willing to train for a year or more after leaving school, and were also prepared to leave their home area in search of suitable employment. Girls appeared to be as prepared as boys to train for a job and to move away from home, but were, on the whole, less worried than boys about finding a job.