

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

STATED FUTURE VOCATIONS: AN INVESTIGATION
CONCERNING THEIR NATURE, BASIS IN REALITY
AND RELATED THEORETICAL ISSUES.

A thesis presented in partial
fulfilment of the requirements for the degree
of Master of Arts
in Psychology at
Massey University.

PHILIP PATRICK HOULT.

1975.

ABSTRACT.

Traditional theories of vocational choice, such as Ginzberg et al., Super, Roe, and Holland, assume or imply that vocational choice is a process continuing for a number of years, in which the number of choices made becomes less with increasing age, and these choices become more realistic. Also the outcome of this process is of vital importance to the life and well-being of the individual. A number of problems are inherent in such assumptions.

Because most of the research in this area has failed to adequately define what is meant by vocational choice, or to make distinctions between the kinds of jobs an individual would like, and actually expects to end up doing, then the discussions about the number and basis in reality of stated vocational choices are pointless. It has been found that one author's definition of vocational choice has been quite different from another's and yet their discussions would suggest they were the same.

Theories which assume that a vocational choice, and indeed work itself, is important in the lives of individuals need to be carefully re-examined. A growing body of evidence suggests that with such factors as automation and increasing leisure time many people are turning to non-work aspects of their lives for fulfillment.

The present study reviews the literature concerning these aspects and investigates the vocational choices of a sample of 646 males and females aged 11 to 17 years.

A distinction was made between vocational attainment, vocational choice, vocational preference and vocational aspiration. Vocational attainment was the job actually entered. Vocational choice was the job that was expected to be entered. Vocational preference was a job liked, but for some reason or reasons, was not expected to be entered. Vocational aspiration was the job liked, assuming there were no obstacles to its entry.

The number and kinds of choices, preferences and aspirations were studied, as well as the number and kinds of reasons given. Differences in results between males and females were sought.

Results suggest that young people can distinguish between vocational choices, vocational preferences and vocational aspirations as early as age 11. The number of selections in each age/sex group was few, but there were many and varied kinds selected. There were few reasons given, but a variety of kinds of reasons. Significant differences were found between the results of males and females, particularly in the kinds of jobs selected as choices and the kinds of reasons given for these.

It was concluded that the data indicated that choices are realistic from an early age, and therefore there is not a gradual reduction in the number of choices made with increasing age. Also, since the choice is made quite early, it does not have a great significance in the lives of many adolescents. Considering that work appears to be going to have less importance in people's lives in the future, perhaps vocational counsellors need to be concerned more with counselling on styles of life, rather than simply on eventual job attainment. Implications for vocational theories are discussed.

ACKNOWLEDGEMENTS.

I wish to express grateful thanks to the staff and pupils of St. Peter's College, Palmerston North, for acting as assistants and subjects. Also to those staff and pupils at Monrad Intermediate School, Palmerston North, who acted as assistants and subjects, I extend my thanks. Their co-operation in the administering and answering of the questionnaire was given with enthusiasm and interest, making the task considerably easier.

I wish to thank Professor G. Shouksmith for his assistance in the initial stages. I would particularly like to thank my supervisor, Michael Smith, for the considerate help he has given in planning, implementing and writing up the study.

A very special thanks is extended to my wife, Marion, not only for her clerical assistance, but for bearing with me at all stages of this thesis.

TABLE OF CONTENTS.

	<u>Page</u>
ABSTRACT	ii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	vii
LIST OF TABLES	viii
INTRODUCTION	1
PART ONE: STATED FUTURE VOCATIONS: A REVIEW OF RELEVANT FINDINGS IN THE LITERATURE	 3
Chapter 1. Theories of Vocational Choice	 4
Chapter 2. The Importance of Vocational Choices	 9
Chapter 3. Defining Vocational Choice	 16
Chapter 4. The Reality Basis of Vocational Choices	 24
Chapter 5. The Number of Choices Selected	 34
Chapter 6. The Kinds of Choices Selected	 38
Chapter 7. The Number and Kinds of Reasons Given for the Choices	 45
Chapter 8. The Differences Between the Choices of Males and Females	 53
Chapter 9. Summary	 57
PART TWO: A STUDY OF THE NATURE AND BASIS IN REALITY OF THE STATED FUTURE VOCATIONS OF MALES AND FEMALES AGED ELEVEN TO SEVENTEEN YEARS.	 60
OBJECTIVES OF THE RESEARCH	62
METHOD. Subjects	63
Questionnaire	65
Procedure	66

	<u>Page</u>
RESULTS. A. Questionnaire 	66
B. Reliability Study 	85
DISCUSSION. A. Reliability Study 	91
B. The Present Study 	93
CONCLUSIONS. 	104
IMPLICATIONS FOR VOCATIONAL CHOICE AND SUGGESTIONS FOR FURTHER RESEARCH 	107
APPENDIX. The Questionnaire 	109
REFERENCES 	111

LIST OF FIGURES.

<u>Figure</u>	<u>Title</u>	<u>Page</u>
A.	The extent to which vocational selections are based on reality	22
1.	The average number of selections of choices, preferences and aspirations at each age level, and the average combined total number of choices, preferences and aspirations... ..	71
2.	The number of different kinds of first choices selected in each age/sex group, as a percentage of the number of subjects in that group	82
3.	The number of different kinds of first preferences selected in each age/sex group, as a percentage of the number of subjects in that group	82
4.	The number of different kinds of first aspirations selected in each age/sex group, as a percentage of the number of subjects in that group	82
5.	The number of different kinds of reasons given for the first choice, by each age/sex group, as a percentage of the number of subjects in that group ...	84
6.	The number of different kinds of reasons given for not expecting the first preference, by each age/sex group, as a percentage of the number of subjects in that group	84
7.	The number of different kinds of reasons given for the first aspiration, by each age/sex group, as a percentage of the number of subjects in that group ...	84

LIST OF TABLES

<u>Table</u>	<u>Title</u>	<u>Page</u>
A.	The terminology used, and the meanings applied by different authors, for vocational choice 	17
B.	The tradition-directed, inner-directed and other-directed determinants of the job choices of boys and girls, in approximately descending order of popularity. Based on Veness (1962), Tables 45 and 46, pp. 180-181 	50
1.	The distribution of subjects across age, school form and sex 	64
2.	The percentage of subjects in each age/sex group whose first choice is the same as or similar to the first preference or aspiration, or whose first preference is the same as or similar to the first aspiration 	68
3.	The average number of choices, preferences and aspirations made by males and females, and the overall total of subjects, at each age level.. 	69
4.	The frequency distribution of the number of choices in all age/sex groups 	70
5.	The number of different kinds of jobs selected by subjects as their first choice, preference and aspiration, at each age/sex group. 	73
6.	The jobs that were selected by equal to or greater than 10% of the subjects in any age/sex group, as their first choice, preference or aspiration, (in percentages). 	74

<u>Table</u>	<u>Title</u>	<u>Page</u>
7.	The average number of reasons given for first choices and aspirations, and for not expecting first preferences, by males and females, and the overall total of subjects, at each age level..	75
8.	The number of different kinds of reasons given by subjects for their first choice, and aspiration, and for not expecting their first preference, in each age/sex group... ..	77
9.	The reasons selected for their first choice and aspiration, by equal to or greater than 10% of the subjects in each age/sex group, and the overall total at each age level	78
10.	The reasons selected for not expecting their first preference, by equal to or greater than 10% of the subjects in each age/sex group, and the overall total at each age level	79
11.	t test comparisons between males and females of the average number of choices preferences and aspirations made at each age level	81
12.	Correlations using the Pearson Product Moment r, between the number of choices, preferences and aspirations made by subjects in the reliability test group, on the two administerings of the questionnaire, one month apart.. ...	86
13.	Comparisons of the first choices, preferences and aspirations, of the subjects in the reliability test group, on the two administerings of the questionnaire, one month apart.. ...	87

<u>Table</u>	<u>Title</u>	<u>Page</u>
14.	Correlations using the Pearson Product Moment r between the number of reasons given for the first choice and aspiration, and for not expecting the first preference, by the subjects in the reliability test group, on the two administerings of the questionnaire, one month apart.. ...	88
15.	Comparisons of the reasons given for the first choice and aspiration, and for not expecting the first preference, by the subjects in the reliability test group, on the two administerings of the questionnaire, one month apart.. ...	89
16.	The average number of choices, preferences and aspirations, for all age/sex groups, of the subjects in the reliability test group, on the two administerings of the questionnaire, one month apart.. ...	92

INTRODUCTION.

Currently, theories of vocational choice are at a turning point. The flurry of activity in this area, following in the wake of the pronouncements of Ginzberg et al., nearly 25 years ago, has resulted in a great diversity of theorizing. However, there is considerable evidence to suggest that these theories are not adequate to meet present needs, and will certainly not meet those of the future.

There are three main areas of concern. The first is the emphasis which the theories place on the importance, in the lives of children, of making a vocational choice. The second is the extent to which these choices are considered to be based on reality. And thirdly, there is the considerable confusion about what a vocational choice is.

In a changing world situation, where there is a growing trend towards more leisure and less work, it was felt that there would be an increased interest in leisure activities, and a reduction in the importance of work in the lives of children. The latter would be reflected in an early realistic decision about a vocation, because a child learns from his own world, at a young age, those factors which are most determinative in attaining a job. Since attaining is different from choosing, preferring and aspiring, distinctions between these kinds of vocational selections were deemed necessary.

The ability of individuals to function in the future societies envisioned by such writers as Warnath (1975), depends on the kinds of life styles developed today. These will include vocations, but it is felt that vocational choice theories need to seek new directions, not based almost solely on work as in the past, but on the whole life of the individual.

It was in this context that the present literature review and survey of these areas of concern was conducted. It was felt they would give some evidence to indicate

which way vocational choice theories should turn, to meet future needs.

PART ONE.

STATED FUTURE VOCATIONS: A REVIEW
OF RELEVANT FINDINGS IN THE
LITERATURE.

Chapter 1.

Theories of Vocational Choice.

Crites (1969) in his survey of vocational psychology, classifies the major theories of vocational choice under three general headings. These are non-psychological, psychological and general. The non-psychological theories are the accident, economic and sociological theories. These imply that an individual enters a vocation solely because of environmental factors which are in operation. They deal respectively with chance or contingency factors, the laws of supply and demand, and the folkways and institutions of society.

The psychological theories of vocational choice place emphasis on the individual as a vital variable in the process of making a vocational choice. These theories assume the individual does have some freedom of choice. Crites lists four major types of psychological theories. These are trait and factor, psychodynamic, developmental, and decision making. According to Crites, each of these emphasizes a different aspect of the behaviour of the individual as the basic factor in choice.

General theories of vocational choice are, according to Crites, those which recognize that many factors may affect choice, and which attempt to outline the interaction of these factors in determining the individual's preferences for occupations and how they impinge upon the occupation's selection of individuals. These theories are the interdisciplinary conceptions of vocational choice as outlined by Blau et al. (1956), a general developmental interpretation of vocational choice such as that of Super (1957), and a typological theory of vocational choice as outlined by Holland (1973).

Crites feels that the most predominant and influential theories have been the psychological, particularly the self theory (psychodynamic) and developmental theories or a combination of them. The theories which appear to have had the most influence in

psychology seem to fall into these categories. They are the theories of Ginzberg et al. (1951), Super (1953), Roe (1956) and Holland (1973).

Ginzberg et al. (1951) pointed out that vocational counsellors were attempting to counsel without any theory as to how vocational choices were made. Crites (1969) cites the work of Carter in the forties as evidence that this was not quite so, but concedes that the work of Ginzberg et al. was the first real attempt to make an explicit theory. Ginzberg et al. stated that the basic elements in their theory of occupational choice were that it is a process, the process is largely irreversible, and that compromise is an essential aspect of every choice. They believed that,

"occupational choice is a process that takes place over a minimum of six or seven years, and more typically, over ten years or more. Second, since each decision during adolescence is related to one's experience up to that point, and in turn has an influence on the future, the process of decision-making is basically irreversible. Finally, since occupational choice involves the balancing of a series of subjective elements with the opportunities and limitations of reality, the crystallization of occupational choice inevitably has the quality of a compromise." (p.198).

The underlying belief of their approach was the premise that occupational choice was a developmental process involving decision-making. This could be divided into three periods - fantasy, tentative and realistic choices. These periods were approximately from ages 2-10, 10-17 and 17-21 respectively. In each period there was an increased tendency to make realistic choices.

The theory has been criticized for being inadequate by Super (1953), in terms of research design, numbers in the basic study, definition of choice, and because it does not adequately build on previous work or describe the compromise process. However, its significance lies in the fact that it was the first real attempt at a cohesive theory.

Super and his associates, (1953, 1957, 1961a, 1961b,

1962, 1970), have made use of the work of Ginzberg et al. (1951), as well as others, and present vocational development as an ongoing, continuous and generally irreversible process. For Super the career process is a compromise within which is operating his main construct, the development and implementation of the self-concept. Super & Bohn (1970) write of the 'choosing person' as

"one whose self-concept and whose understanding of the world around him guide his decisions as he seeks self-actualization... Self-concepts are formed in early experiences with other people and with life situations; they are translated into occupational preferences through identification, experience, and observation. They are implemented in educational and occupational choices and modified by the resulting experiences. Situational determinants particularly relevant to the self are the role expectations of others, which are incorporated into the self-concept after modification by the individual's perception of them." (p.152).

However, this self-actualization process does not appear to be necessarily a satisfying, fulfilling one, supportive of one's self-concept.

Super introduced the concept of vocational maturity which suggests that as the individual matures vocationally, he passes through a series of life stages, and each one of these corresponds to some phase in the development of the individual's self-concept, Super (1957). He has attempted to integrate research and theoretical considerations, but his emphasis has been on the way in which the social environment can be manipulated and used by the individual, rather than a concern with the way in which the social environment structures and influences the situations open to the individual.

Roe and her associates, (1956, 1957, 1966), see the individual as an integrated and organized whole, who should be classified according to his goals or needs, whether they are conscious or not. She traces the individual's early psychosexual experiences, particularly those in the family and traces their effects on the

formation of needs and the patterning of psychic energy. She sees an occupation as a primary source of need satisfaction and arranges these goals or needs in a hierarchy of prepotency as defined by Maslow (1954). Since, for many people in most Western countries, the majority of low level needs, such as physiological and safety needs are satisfied, according to Roe, it is the higher level needs, such as the needs for esteem and self-actualization which are most important in motivating vocational behaviour, particularly self-actualization.

From her rather unsystematic approach she selects representatives from various vocational fields and differentiates their personality characteristics and needs. However, Roe does not relate specific needs to specific occupations. Instead she notes that any occupation may serve to satisfy needs at a given level.

Another theorist who has had considerable influence is Holland. Holland (1959, 1973) presents a theory which assumes that at the time a person chooses his vocation he is a product of his heredity and his environment. Holland (1973) summarizes his theory as follows.

1. In our culture, most persons can be categorized as one of six types: realistic, investigative, artistic, social, enterprising, or conventional.
2. There are six kinds of environments: realistic, investigative, artistic, social, enterprising, and conventional.
3. People search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles.
4. A person's behaviour is determined by an interaction between his personality and the characteristics of his environment." (pp. 2-4).

Thus, the choice of an occupation is an expressive act reflecting the individual's motivations, knowledge of the occupation in question, his insight and understanding of himself, his personality and his abilities. The theory has its shortcomings, such as the fact that his subjects are mainly a very homogeneous group of college students, none of his work carries

over to people actually on the job, and it has little support. Holland (1973, p.viii) notes this when he states "we may be wrong, but we are clear!"

All these theories seem to make either or both of the following assumptions about vocations. Firstly, vocational choice, as part of overall development and vocational development, is a process continuing for a number of years. Secondly, this process of vocational choice, and particularly its eventual outcome is some vitally important aspect of the individual's life, and essential for his well-being. Such assumptions are not necessarily so, and for many people a vocational choice and its eventual attainment, may not be such an important factor in their lives.

Chapter 2.

The Importance of Vocational Choices.

It has been noted by Crites (1969) that the "selection of an occupation can be conceptualized as a process made up of a series of 'choice acts' which takes place over a considerable period of time, usually during the 10 years from the end of childhood to the beginning of youth, and which largely terminates when the individual enters an occupation." (p.155).

Such a view is counter to that which holds that choices are just suddenly made.

Ausubel (1954), writes of developmental changes in vocational choice. Gesell et al. (1956), include vocation and career as part of the "growing self". Timperley (1974), having reviewed the general theoretical approaches to occupational choice, considers that rather than "occupational choice", the term "occupational choice process" is more meaningful, reflecting the fact that it covers the whole process of movement of individuals through the educational system and then

"into and through the employment system, and allows for analysis of the factors which influence the rate and direction of this movement. Thus the concept of occupational choice is not restricted... it refers to career decisions and patterns throughout the life cycle." (pp. 95-96).

Suffice to say that this is a widely held assumption as these few examples suggest.

Many people such as Layton et al. (1971) suggest that the end result of this vocational choice process is a vital and integral part of an individual's life. It is true that throughout adolescence young people are subjected to pressures from parents, teachers, peers and guidance counsellors, as well as others, to decide what to do when they leave school. Release of such pressure would be a pleasant experience. It may seem, as Muller (1969) would have it that "the start of professional life is the crowning point of adolescence." (p.234).

Other people express this view. Kiell (1964), writes

that in all cultures, the primary status of the individual is achieved through his occupational role. He notes

"not until the adolescent assumes a productive occupational role is he generally considered to be an adult." (p.656).

Thus, for an adolescent, the question, 'What shall I be?' really means 'With whom shall I identify?' This is because central to the problem of vocational choice is the problem of identification, since in any culture, the basis of identity formation is work mastery. A similar viewpoint is taken by Deutscher (1968), who feels that

"the psychological consequence of involvement with meaningful work, in concert with loving relationships at all developmental levels is the agent of transformation from immaturity to maturity, of the organization of intelligence into reason, and the basis of the capacity for converting immediate experience to understanding. Involvement with meaningful work helps to establish and maintain adult life in adult form." (p.883).

On a more pragmatic level, Best (1973), feels that

"the importance of work is, and has been most pervasive; it determines what we produce, what we consume, how we live, and what type of society we create and perpetuate." (p.1).

He feels that even in the future the effects of work activities on our lives will be just as important as they are today. Levenstein (1975) believes work is meaningful, serves human needs and adds dignity and value to human existence. Rogers (1972a), feels that an individual's occupation can modify his whole way of life, even down to the way he speaks and dresses. Peters and Hansen (1971), note that work is a,

"central activity of human existence and continues to be so despite threats of automation, overpopulation, underemployment, affluent lethargy, and confusion over appropriate and inappropriate welfare approaches." (p.1).

For Smart & Smart (1973) the choosing of and getting established in a vocation is a major concern of adolescents.

However, there is a growing body of support, which suggests that the two assumptions outlined above, are no longer applicable. This evidence proposes that work

is no longer such an important factor in the lives of a growing number of people, and if this is so, then the importance of vocational choice as a process will be greatly diminished.

Even Best (1973) concedes that as society becomes more affluent,

"we can expect not only a widespread tendency to give up additional material goals in favour of non-material goals, but also a desire to integrate and balance our lives." (p.3).

This increasing desire to satisfy higher needs will, he feels, change the products and conditions of work. He expects that there will be strong efforts to make the activity of work itself a valued part of human experience.

Yet, such a view is ignoring the possibility that work could conceivably be of little significance for people. It is an example of the lingering Puritan tradition of work, Wright Mills (1973), as a moral as well as a productive force. This is expressed in all the fears people have of the increased leisure expected as automation expands. Parker (1971), acknowledges that the quantity of leisure time is increasing for many people, and working time is getting less. He adds, however, that not everyone is participating in this leisure boom because some people are finding work as demanding as ever. This may be so, but perhaps the reason is not so much a love of work as a fear of leisure. Certainly more people need to be educated about leisure time and what to do with it.

With the gradual reduction of working hours and the rising standard of living, people do have more free time, Kreps & Spengler (1973), and greater resources to use it. As a result of this, work has become a less important aspect of life, as fun and leisure are losing their traditional stigma and becoming increasingly more respectable. Rogers (1972a) cites a number of studies which support this view. Adults are more playful and children are enjoyed more for their own sakes than as

potential workers. This general attitude of parents has had an effect on children, who, as they grow older express an increased dislike for work. Many young people reflect this trend, preferring to enjoy a happy family life at the expense of pursuing work as a core value in their lives. This represents more or less a complete reversal from traditional Western attitudes towards work, Rogers (1972b). Roberts (1970), goes so far^{as}/to suggest that rather than work influencing how people use their leisure, it is possible "that styles of life, attitudes and interests that are based upon leisure may be exercising an influence upon industry itself." (p.35). He cites evidence that as people grow into adulthood they take on increasing involvements and commitments in society outside the work-place. This would explain the increased desire for security and stability of employment with age. Roberts also cites a study which found that how satisfied workers were with their jobs was almost unrelated to how interesting they found the work itself.

"The sort of work they had chosen to do, and the way in which they reacted to it, were only comprehensible in terms of aspirations acquired outside the work-place, based upon a desire to be able to spend free time and money in particular ways." (p.38).

Certainly the relationship between work and leisure is complex, but it is evident that as the amount of leisure increases, so must the amount of time spent on educating people to use it.

Perhaps the most startling views are those of Childs (1965) and Warnath (1975). Childs feels that we are moving into a situation where increased automation is going to result in large numbers of people who are willing to work, not being able to work, because there are no jobs available. He feels such a problem can only be resolved by education. As far as he is concerned,

"preparation for freedom from toil in an economy of abundance where job opportunities are limited is just as reasonable an educational goal as

preparation for toil in an economy of scarcity where the need exists for everyone to work. It's just that the idea takes some getting used to." (p.374).

As machines take over the servile work, mankind will have to learn to live differently.

Whereas Childs sees a great change occurring because of an increased use of automation, Warnath (1975), reiterates this problem and makes a scathing attack on vocational psychologists and theories for propogating a false conception of the world of work.

"One basic assumption underlying the current vocational theories is populist in nature: that each individual, with adequate motivation, information, and guidance, can move through the educational process to satisfying job goals that allow him or her to express personality characteristics or implement self-concept. This assumption cannot be made unless one holds a prior assumption that every job is capable of engaging the human qualities of an individual and that, in the Protestant tradition, each job has the potential of being a "calling." The vocational theorists have reinforced the concept that the job is the primary focus of a person's life. This may have been true during the years of the small farmer and the independent entrepreneur; but under present conditions, where almost all people work for organizations whose survival is dependent of generating profit and operating efficiently, the needs of the individual are subordinated to the goals of the organization." (p.422).

In the light of such a situation Warnath feels that we need to consider a theoretical model or framework which is broader than the vocational choice or vocational development models. Such a model would need to be based on general human effectiveness, and it need not require a fulfilling job as its core concept. He feels that the link between work and one's fulfillment as a human being no longer applies for the majority of the population. Such a view as Warnath's may appear radical, even frightening, to some people, but a close examination of his case, that of Morris (1971), and a look at the situation in most Western countries, makes it difficult to dismiss this view outright.

So far the discussion has involved looking at some theories of vocational choice, which are meant to be attempts to help people in their vocational choices. It has become evident that these theories are not necessarily effective and may even be developing in the wrong direction. Borow (1961) feels vocational theories are not sufficiently faithful to the logic of scientific inquiry. Carkhuff (1969), when discussing theories of vocational choice finds that none are adequate and that many appear

"academic, almost operating independently of the practice of counseling that led to (their) emphasis in the first place." (p.206).

Carkhuff finds the theories lacking, and like Warnath moving in the wrong direction, but does not dismiss the need for an effective theory of vocational choice.

Faced with an obvious dichotomy as discussed above, a number of alternatives are available. It is possible to take one or other of the opposing views, make a compromise between them, develop something completely different, or it is possible to do nothing. The present study, apart from being an investigation into what and why children choose, would give an indication, it was hoped, as to which alternative is the most promising.

While the need for making a vocational choice appears to be diminishing as an important aspect of many people's lives, even in the societies envisioned by Childs (1965) and Warnath (1975), some people are going to have to do some work, so some kind of vocational choice theory would appear to be necessary, even if it is only to sort out those most suited, in the fullest sense of suited, to the various vocations.

According to Crites (1969), the key aspects of the vocational choice process are its continuity, its irreversibility, its exclusive nature, its dimensions and its variations and deviations. The present emphasis will be on the continuity and exclusive nature, since they have particular relevance to the present study.

The works of Ginzberg et al. (1951) and Gesell et al. (1956), have been cited by Crites (1969) as demonstrating the continuity of the vocational choice process in that generally, there is a gradual reduction in the number of choices made with increasing age. Also, according to Crites, the exclusive nature of the vocational choice process has largely been determined by demonstrating that allied to the gradual exclusion of alternative choices (reduction in number of choices), there is a gradual increase in the extent to which these choices are based on reality.

If it could be shown that at any age there is a small number of choices made, and also that these choices are realistic, then this would tend to cast doubt on continuity and exclusiveness of nature as feasible aspects of the vocational choice process. It would also lend credence to the viewpoint of Warnath (1975), who feels that while the vocational psychologist is concerning himself with interest and aptitudes, the individual has already learned from his world that socioeconomic status, racial origin and power are more determinative when it comes to occupations. That is, the individual has made a realistic choice from an early age based on criteria quite different from what many theories suggest. But in order to determine whether or not vocational choices are realistic, we need to know what vocational choices are.

Chapter 3.Defining Vocational Choice

There is considerable variation when it comes to defining vocational choice. The word vocational is often replaced by job, career or occupational. The word choice is substituted frequently for such words as aspiration, preference, expectation or attainment. The meanings given to these terms vary partly as a function of the differences in the wording of the terms, and partly as a function of the apparent lack of concern for adequate definition.

TABLE A. presents a summary of the terminology used and the meanings applied by a number of authors for vocational choice. There are a number of themes evident in these definitions.

Vocational choice is often seen as a process which involves a compromise and which gradually narrows down the number of possible alternatives, until a job is actually entered. The process continues on after that, with changes being made throughout adulthood, Ginzberg et al. (1951), Blau et al. (1956), Super (1957), Tiedeman (1961), Berger (1967), and Timperley (1974). Apart from Super, such conceptualizations never clearly define vocational choice. Ziller (1957) sees vocational choice as a decision making situation which is essentially risky.

Implicit in, or evident from the writings of some authors is that vocational choice is the job expected or the job liked. Terms such as preference, aspiration and expectation are used and not defined adequately, McQueen et al. (1941), Gesell et al. (1956), Hill (1965) and Whitney (1969).

The first job a person plans for and ends up doing appears to be what is meant by a number of authors when discussing vocational choice, Veness (1962), Dauw (1966), Werts (1968) and Baldock (1971). Because of the variety of terms used, it would appear that some kinds of

TABLE A. The terminology used, and the meanings applied by different authors, for vocational choice.

AUTHOR	TERMINOLOGY	MEANING
McQueen et.al. (1941)	Occupational Choice.	Probable work.
Ginzberg et. al.(1951)	Occupational Choice.	Process involving compromise.
Blau et.al. (1956)	Occupational Choice.	Compromise process between preferences and expectations.
Gesell et.al. (1956)	Vocational Choice.	Job liked.
Super (1957)	Vocational Choice.	Process rather than event.
Ziller (1957)	Vocational Choice.	Decision making process.
Tiedeman(1961)	Vocational Choice.	A goal orientation.
Powell & Bloom (1962)	Preferred Vocations.	Jobs given freedom of choice of selection
	Expected Occupation.	Job individual plans to enter.
Veness (1962)	Chosen Job.	First full-time job.
Garrison(1965)	Vocational Choice, Preference and Aspiration.	No clear meaning. Terms used inter- changeably.
Hill (1965)	Career Choice.	Job expected.
Dauw (1966)	Career or Occupational Choice.	Career or occupation planning to enter.
Berger (1967)	Vocational Choices.	Tentative-to be tested.
Kuvlesky & Bealer (1967)	Occupational Aspirations. Occupational Expectations.	Orientation toward a goal. Indication of anti- cipated attainment.
Werts (1968)	Career Choice.	Probable future occupation.
Hayes (1969)	Occupational Choice.	No clear meaning.
Whitney(1969)	Vocational Choice.	Job planned or wanted.
Pallone et.al. (1970)	Occupational Preference. Occupational Expectation.	Jobs aspired to in Adulthood. Jobs expected in Adulthood.
Baldock(1971)	Vocational Choices.	Aspirations.
Timperley (1974)	Occupational Choice.	Process of changing preferences.

distinctions need to be made. A few writers use several different terms, but fail to adequately distinguish between them or define them, and appear to use them more or less interchangeably, Garrison (1965), Hayes (1969).

Several authors have attempted to clarify the confusion by making attempts to distinguish between a number of terms, with varying degrees of clarity, Wilson (1953), Ausubel (1954), Super (1957), Powell & Bloom (1962), Kuvlesky & Bealer (1967), and Pallone et al. (1970). The most detailed and carefully considered definitions made are those of Wilson.

Wilson (1953) makes particularly clear definitions and distinctions. According to her,

"the term choice can best apply to the statement of one or two occupations which the subject seriously considers entering upon; vocational preference involves comparison of the relative attractiveness to the subject of several occupations apart from the one which he intends to follow; vocational interest is a more general term which is, however increasingly being reserved for objectively measured interests; phantasy refers to the completely free expression of a wish, without any consideration of expediency." (p.102).

Many of the studies in this area are obviously in conflict. It is not unreasonable to suppose that the results of such studies conflict because of the differences in definition of the experimenters. The discussion of differing results by experimenters in the literature seems largely to have overlooked this point.

A clear definition of the main terms to be used in any study in vocational psychology is essential for adequate communication. Generally, there appears to be agreement on the meanings of the terms occupation, vocation and career, the former being a single job, the latter referring to the work (one or more jobs) done throughout a lifetime, or some similar definition. The words choice, preference, aspiration, expectation and attainment, however, are used by different authors

more or less interchangeably. This is confusing, but particularly so with reference to the extent to which vocational choices are realistic. Since this was an objective of the present study, a definition of choice which stated clearly that it was realistic was essential. At least two authors have made definitions of this kind already, Wilson (1953) and Crites (1969). The definitions given below are based largely on their work.

A vocational choice is defined as the job or jobs that a person expects he will probably end up doing i.e. a response to the question, 'What are the jobs you are most likely to do?'. A vocational preference is defined as the job or jobs that a person likes and could possibly do, but for some reason or reasons does not expect to end up doing i.e. a response to the question, 'What are the jobs you like and could possibly do, but don't expect to do?'. A vocational aspiration is defined as a fantasy or dream job or jobs with regard only to whether or not the person likes the job, i.e. a response to the question, 'What are the jobs you would do if by some magic you could do any job you wanted?'. The attainment of a job or jobs, vocation or career, referred to those which were actually entered. Thus, choice excluded all reference to aspiration, preference and attainment. From the above definitions it becomes clear that attainment is based totally on reality, in that in so far as a person is actually engaged in a job then that person is really doing it. A choice is based largely, if not completely, on reality in that once a person has considered all factors, that person may choose to do a particular job and, barring unforeseen circumstances, will actually attain that job. A preference is based to some extent on reality, in that the individual may perceive some obstacles which could prevent them actually attaining the job, and while these obstacles may be overcome, it is not likely that they will be. Certainly the individual would like

the job. An aspiration is based solely, or to a considerable degree at least, on fantasy. These are jobs or 'ways of life' which the individual would like and perhaps has dreams about. They are most unlikely ever to be attained, but of course for some people, even their wildest dreams come true.

In making definitions there are a considerable number of difficulties, not the least of which is that of a tendency to reflect a particular discipline's orientation. In the area of vocational choices the psychological, sociological, educational and economical orientations are the most relevant. The educationist assists in the training and preparing for a job which is dependent on social variables such as the class the individual belongs to, economic factors such as availability of the job, and the psychological factors such as intellectual and emotional adequacy.

Timperly (1974), notes that,

"the psychologist emphasizes the motivational elements of the actual choice, and the aspirations and the goal seeking behaviour of individuals. The sociologists are concerned with the influences upon the perceptions and aspirations of individuals, and the way in which such structural influences shape expectations. Economists, on the other hand tend to emphasize the utility of certain economic concepts such as cost or price, as determinants of choice." (p.58).

The above definitions and distinctions, would be applicable to all relevant disciplines, as outlined by Timperley, because reality implies taking everything into account. They also provide a useful framework within which to make comparisons between the great variety of factors impinging upon these different selections.

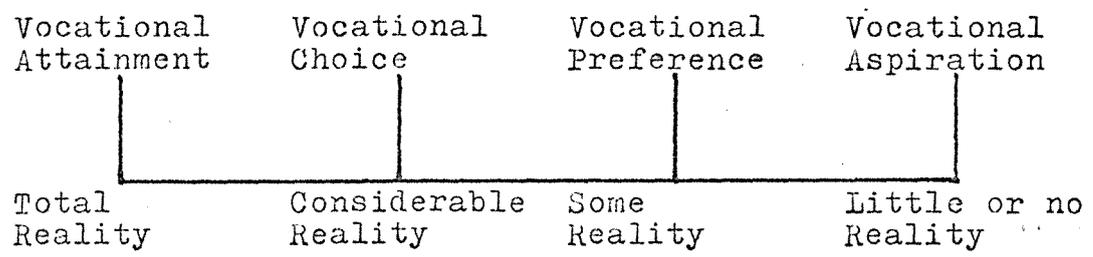
Implicit in these definitions of vocational choice, vocational preference, vocational aspiration and vocational attainment is that they are all part of an ongoing process of vocational development, and are therefore subject to change. However, for vocational

choices, there are not likely to be any changes, and if there are they are not likely to be very great. Thus, while the actual job selected by an eleven year old as his first choice may not eventually be attained, the job attained will be similar to this choice in terms of required abilities, prestige and rewards. To this extent, the vocational choices will be realistic from an early age.

The work of Wilson (1953) seems to suggest that the argument that an eleven year old will be unable to make realistic choices, no matter how they are defined, is not tenable. There will be individual differences in the extent to which vocational choices are realistic, but where the distinctions are made, it would seem most unlikely that these choices would be not at all realistic, and are more likely to have considerable basis in reality.

If vocational attainment, choice, preference and aspiration are seen as being on a reality continuum, from totally realistic to having little or no basis in reality, as in FIGURE A., the main difference between the present conceptualization and earlier ones e.g. Ginzberg et al. (1951) and Gesell et al. (1956), becomes clearer. The former sees the individual, at any age, being able to make vocational aspirations, vocational preferences and vocational choices, but vocational attainment can be made only from the age of fifteen in this country. The latter see the individual as making vocational aspirations while young, then, with increasing age, making vocational preferences, then vocational choices and finally vocational attainment when a job is actually entered. Since the distinctions between vocational attainment, choice, preference and aspiration were not made at each age level, at earlier ages it is quite likely that the responses obtained were aspirations. This does not mean however, that the younger children are incapable of making vocational

FIGURE A. The positions of vocational attainment, choice, preference and aspiration on the reality continuum.



choices or aspirations as defined in the present study. Other studies which have used similar distinctions, Wilson (1953), have obtained much greater realism in vocational choices from an early age.

Chapter 4.

The Reality Basis of Vocational Choices.

Traditionally, realism as an element in vocational choice has been seen as increasing with age. Thus the theories as outlined^{by}/Ginzberg et al. (1951) and Super (1953), have realism as an important factor in choice from the ages of about 17 and 18, respectively. In New Zealand many children have left school at fifteen and since most of these begin work then, the job they choose and attain then must be realistic. Therefore, many children in New Zealand are making realistic choices as early as age fifteen, and it appears that the choices are realistic as early as age eleven.

In New Zealand, it has been implied by McQueen (1940), that choices become more realistic with age, although he appears to feel some reservations about generalizing. Borow (1968) also reflects both sides of the realistic-unrealistic argument. He sees that there are three criteria which will determine whether or not a choice is realistic. These are the extent to which the adolescent has sufficient information about the job, and has related this with his personal characteristics; the availability of the job in the job market; and the adequacy of the educational plan the individual has to enable him to enter his choice. He cites evidence to suggest that on all three counts, many adolescents do not make very realistic choices. However, he notes that if we distinguish between what adolescents prefer and what they expect, and considering the reasonably good job opportunities, and the expanding educational opportunities, it is not unrealistic to have high ambitions. He concludes by noting that reality seems to increase with age, and therefore an early choice should not be forced upon adolescents. Moore (1975) reflects Borow's concern about the adolescent's lack of knowledge and understanding of careers, and has devised a test of these, which it is supposed would be able to determine the extent of

reality in a choice.

A number of studies have indicated that vocational choices, preferences and aspirations are not realistic. Taft (1975) reports that the educational and occupational aspirations of secondary school children of immigrant families in Victoria show upward mobility. He feels that while some will be successful in making the transition from the working class to middle class, many will not be, and are therefore unrealistic in their aspirations. Since he does not adequately define aspiration, it is difficult to assess his data, in terms of realism. Gupta (1974) reports that for Indian children, there is an increase in the degree of reality of preferences from age 11. The subjects in this study had to list "ten vocations in their proper order of preference he/she would like to join." (p.444), from a list of 200 important, suitable vocations. Gupta compared these preferences with the status or prestige value he had assigned to the vocation. It is implied that a preference for a high prestige vocation was unrealistic. However, he too fails to define preferences clearly. Therefore, it is quite likely that the responses he obtained were unrealistic, because they were preferences or aspirations as defined by the present study.

Powell & Bloom (1962) report a significant difference between planned and preferred vocations, and report this as being evidence for realism, because individuals plan to enter the occupation they prefer. However, they cite as evidence for lack of realism, that a smaller percentage of individuals plan to enter skilled, semi-skilled and unskilled vocations, than the percentage of their parents who are similarly employed. It would seem, by examining their data that the difference between preferred and planned occupations, do tend to suggest a tendency towards realism. If it may be assumed that adolescents tend to prefer more

prestigious or better paying jobs, than they are likely to end up doing, or that they plan to do, Powell & Bloom's data supports this. The low percentage (20) of individuals who plan to enter the skilled, semi-skilled or unskilled vocations, as compared with the percentage of their parents (63), who had high school education or less, could be explained by the fact that with automation there is a reducing need for such vocations. This alone could account for such a difference, but there is also a greater number of students acquiring higher levels of education today, than there would have been at the time the parents of these subjects were at school.

Super (1961), measures the consistency and wisdom of preferences and finds them lacking on both accounts. He concludes that this shows a lack of realism. Super has made the debatable assumption here that consistency has something to do with realism. Also he has defined preferences as responses to the question

"... about your plans for the future. What would you like to be by the time you are thirty?" (p.36).

There is bound to be inconsistency in responses to such a question, because realistic and unrealistic responses could have been elicited by the wording of it. Such a vague concept of realism is found in Gesell et al. (1956), who propose, when discussing vocation and career, that realism increases with age.

"The 15-year-old is definitely more mature than the 10-year-old in his outlooks on a career. This is reflected not only in more discriminating knowledge but in the serious manner in which he (or she) interprets the demands of a chosen vocation." (pp.359-360).

Yet they do not make it clear what choice is, or what is meant by 'discriminating knowledge' and 'serious manner' of interpreting demands. Gesell et al. do however, include females in their sample. This is something which many other authors have failed to do, and as a result greatly reduce the usefulness of their

data. With the greatly expanding participation and opportunities for women in work, it seems the trend for increased representation of women in vocational research, noted by Oliver (1975), is an important development.

Karmel (1975) has examined the employment expectations of both males and females and found, among other things, that 9th graders generally have higher expectations than 11th graders. She notes that while this may be a function of lack of realism, it could perhaps be because today's 9th graders are more optimistic. Although Karmel found some significant differences due to sex, Douvan & Adelson (1966) have found considerable differences between boys and girls with respect to their reality and fantasy conceptions of future time. They report, that

"girls' reality plans for the future slight and disguise the feminine goals which are crucial to them, and they fail to integrate present and future time... The boys' future conceptions are more likely to be all of one piece and heavily infused with the rhetoric of reality. He plans for a vocation; his fantasy conception of himself and of future time feed into and support his plans. He may use reality planning to escape the dangers of fantasy... But he does not, as the girl does, invest directly in fantasy and cover the investment by a detached second bet, a conventional gesture. He either avoids fantasy through concentration on reality or recognizes fantasy in the terms of his real plans." (p.178).

This would suggest that girls are more likely than boys to be able to distinguish between choices and aspirations as defined in the present study. But this does not suggest that boys are incapable of realistic choices. The report does not clearly define ages nor does it specifically discuss choices or define them. Such a distinction is interesting. However, it assumes that boys and girls have identity problems to resolve. The nature of his occupations plays a crucial defining role in the male's identity. The girl depends on marriage for her critical defining element.

Ausubel (1954) evaluates vocational choices of adolescents in terms of the availability of job opportunities. He found that all studies report that what adolescents choose, is out of line with what is needed. Too few adolescents want to enter low level occupations and too many want to prepare for and enter professional and technical fields. He does, however, point out that the objections to such data are founded on the definitions of choice, preference and aspiration outlined above. Although adolescents' preferences may be ambitious, their actual expectations of entering the occupations they prefer, are not greatly out of line with reality. To counter this argument, Ausubel states that while this may be so, it is towards the preference that the individual strives, not the expectation. Thus, it is preference, or

"the individuals' expressed statement of choice, not his prediction of ultimate outcome, that constitutes his functional level of aspiration and determines whether or not he will experience feelings of success or failure, of adequacy or inadequacy in actual vocational achievement,"
(p.454).

Ausubel also makes a distinction of aspiration. Thus he has three kinds of selections differentiated with respect to basis in reality. These are expectation, preference and aspiration, which correspond closely to choice, preference and aspiration, used in this study. Whether or not it is towards the 'preference' as opposed to the 'expectation' as defined by Ausubel that the individual strives, is a debatable point. What has also been brought into doubt is whether or not the individual does any striving, be it for choice, preference or aspiration. Ausubel feels he does and concludes that although this striving is perfectly understandable because of prevailing notions of social mobility, the expectations, preferences and aspirations of adolescents are unrealistic. However, expectations are more realistic than preferences, which are more

realistic than aspirations.

Douvan & Adelson (1966) report a study in which males and females aged from 14 to 21 wrote essays on the topic 'From Now to 2000 A.D.' While the criteria of assessment are not known, it is reported that there was a gradual increase in interest concerning the future with age. However, what is most interesting in this study is that it reports that adolescents never lost sight of reality, regardless of how lofty their plans and illusions may have been. What is also interesting is that a substantial number of males had failed to define their respective future vocations. While exact criteria and definitions are unknown, it is felt that if these conclusions are sound, they would indicate that not only are adolescents realistic in their future plans, but that these, in many cases do not include an actual vocation.

In a comprehensive study by McQueen et al. (1941), they investigated the kind of work New Zealand children would like to take up if it were possible, and the kind of work they will probably take up. They found that children had definite choices from as early as age eleven, but they felt that their choices were unrealistic, because they assumed the children had not as full a knowledge as possible of all the relevant information. However, examination of their data, reveals that over a one year period, the percentage of subjects who chose each of the occupations he listed, remains very similar. This apparent reliability could suggest some degree of reality, because if the choices were random, they are not likely to be so consistent. McQueen et al. also seem concerned, that at this level (form 2) many children had not replied to the questions regarding possible and probable work. Although the late thirties and early forties was a period when children were more likely to leave school early, this does not necessarily need to cause concern.

For many people, even in those days the importance of a job may not have had as much significance as it did for the vocational counsellor. Another similar finding for New Zealand is reported by Ausubel (1960). He found a surprisingly large minority of boys who persistently refused to look ahead, and make any definite plans for a career. However, Ausubel cites economic factors such as low wage differentials as the reason for this lack of concern for a career.

Baldock (1971) reports a study by Keeling, which Baldock states,

"tested Ginzberg's theory with a sample of New Zealand adolescents and found that New Zealand children passed quicker through the three development stages than the American children tested by Ginzberg. According to Keeling, New Zealand school children reach the realistic stage of vocational choice at the approximate age of fourteen. He found also that boys with low scholastic ability had a greater vocational maturity than boys with high scholastic ability. Keeling's data suggest that the realistic stage is related to demands made by the educational structure. In New Zealand a large proportion of children leave school at the age of fifteen, when they reach the official minimum school leaving age. It is, therefore, likely, that young people feel the need for a realistic appraisal of their vocational opportunities and aspirations at about that time." (p.18).

Here is a finding, which supports an earlier realistic choice for reasons little different from those proposed. Pressures are brought to bear on an individual, and from quite an early age, it appears that many children have a realistic appraisal, perhaps not of the exact job, but certainly of the general kind of job they will be employed in. Even with the development of higher education, many young people choose to leave school early, and for some, they may eventually gain tertiary education 'on the job', or part-time at a number of different institutions which are available.

Muus (1975) in outlining the general theories of adolescence, points out that a number of theories, e.g.

Spranger, Lewin and Piaget, suggest that a characteristic of the adolescent is that he has learned to distinguish between reality and irreality. Such views in terms of general theories, would not necessarily cast doubt on specific theories of vocational development, but they would suggest that there was room for doubt.

Wilson (1953) who used distinctions between vocational choice, preference and aspiration, in terms similar to those in the present study, came to the following conclusion, among others.

"The study of vocational choice... has shown the children to be ambitious, but not excessively so. Less than 5 per cent. chose occupations unsuited to their educational standing... Further evidence of appropriateness of choice is provided by the tendency of the more intelligent pupils to choose occupations making greater demands on intelligence... When the choices were compared with the industrial needs of the district, the agreement in the case of boys was remarkably high... however... the occupations which were disproportionately popular... are not in themselves unsuitable to the children. The lack of accordance between choice and opportunity indicates that some of the children will have to readjust their ideas, but not that these ideas were unsound... The vocational preferences of the children revealed by the method of paired comparisons bears less marked relation to the abilities of the children than the vocational choice." (pp.111-112).

Such findings were from children near school leaving age, and reflect most of the main trends proposed in this discussion. Certainly it provides evidence to suggest that quite early, children can reliably state their vocational choices.

Further evidence of adolescents' ability to accurately assess factors likely to influence their choice of vocation is reported in works presented by Veness (1962), Gooch & Kellmer Pringle (1966), Swift (1973) and Liversidge (1974). Noeth et al. (1975) report that while career guidance experts agree that students should keep their career options open as long as possible, there are many students who feel the need

to make an early choice in their life career, and who feel the earlier one chooses his or her life work, the better.

Veness (1962) also reports from her study of children about to leave school, that 32% of boys and 55% of girls, had entered the actual trades and training courses that had been named two years earlier. She notes that a much greater proportion had entered jobs of a broadly similar nature. She feels that this reflects how seriously the young people took the enquiry and their future careers. Thompson (1966) also suggests that vocational choices may be well established on entering high school and may not change readily.

A review by Brown (1970) cites evidence to suggest that as early as the age of twelve children can in many instances make vocational choices which must be classified at a realistic level. He draws a number of tentative conclusions, one of which is that for some people it is possible that they may make one choice early in their lives, and stick to it throughout their lives. McDaniels (1968) asks whether or not youth are too young to choose, and then proceeds to point out that they are not, particularly if they are trained to choose. By youth he means those aged roughly 14-18 years.

Several of the above studies suffer from the lack of adequate definition of terms prevalent in the literature discussed earlier. There is nevertheless, considerable evidence to suggest that realistic vocational choices can be made at an early age.

Timperley (1974) believes that if we accept that individuals are being increasingly channelled towards occupational areas at an earlier age,

"it is perhaps more relevant to talk specifically of individual freedom of action in terms of job choice and change, and organizational choice and change once an individual has actually entered the employment system." (p.97).

Such a view, while emphasising the early choice of vocation, does appear to propose a developmental theory which is eclectic enough to encompass the diversity of disciplines focussed on in this area of development. It certainly appears to be a realistic approach in terms of what is going on in the world.

From this view it has become apparent that the exclusive nature of the vocational choice process as outlined by Crites (1969), is not tenable. He sees choice, as being at all ages based on reality, but at an increasing degree of reality. Thus, he sees the exclusion process operating over time from about age ten to about age twenty-one. The evidence so far presented, would suggest that for a large and increasing number of people, this exclusion process has ended as early as about eleven, with the first job already having been selected for a wide variety of reasons, which impinge upon the individual and force a selection.

Chapter 5.

The Number of Choices Selected.

There is very little evidence to support the view taken by Crites (1969) on the number of choices made. The evidence he suggests supports a steadily increasing number of choices, from many choices at about age ten through to few choices at age sixteen. However, as Crites points out there are certain deviations from the traditional view of a steady, uninterrupted decrease in the number of choices made with increasing age. Gesell et al. (1956), report a reduction from many to few in the number of choices from ages ten to thirteen, then an increase at age fourteen, followed by a further reduction to age sixteen. However, this evidence proposed to support this aspect of continuity, does not make it clear exactly what is meant by 'many', 'several', and 'few' choices.

The terminology could mean, say, 'many' is from five to infinity, 'several' from three to fifty, and 'few' from two to twenty, depending on the circumstances and the variables involved. Since the overlap involved could be considerable, and considering the range in the present case is unlikely to be great, it would be far more meaningful to use actual numbers of choices, rather than vague terminology.

Little work has been done on the continuity of the vocational choice process. The work of Ginzberg et al. (1951), only implies that this process is continuous. They note that,

"occupational choice is a developmental process: it is not a single decision, but a series of decisions made over a period of years. Each step in the process has a meaningful relation to those which precede and follow it... The individual can shift even after he has tentatively committed himself to a particular choice. But the entire process of decision-making cannot be repeated and later decisions are limited by previous decisions." (p.185).

Thus, the actual number of choices, as defined by

Ginzberg et al. is not made clear. However, it does seem apparent, that the number, whatever it is, diminishes with time. Although he is far from explicit here, it would also seem reasonable to imply that the process is uninterrupted.

Super (1953) states quite clearly that

"choice is a continuous process going on over a period of time, a process rather far removed from reality in early youth but involving reality in increasing degrees with increasing age." (p.186).

Thus, Super feels this process is continuous. His reference to the increasing degree of reality could be interpreted to mean a gradual reduction in the number of choices made at each stage, but there is no mention of a possible number of choices at any stage.

Both Tiedeman (1961) and Blau et al. (1956) point out that occupational choice is a developmental process. Blau et al. note that it extends over many years and that for young people,

"there are many crossroads at which their lives take decisive turns which narrow the range of future alternatives and thus influence the ultimate choice of an occupation." (p.533).

This would suggest a continuous narrowing down of choices over time, from many to few, but numbers are not discussed.

Gesell et al. (1956) in a longitudinal study, have shed some light on the matter. They traced the vocational choice development process and report that

"plans for their future are rather indefinite among our tens... Many Tens give several choices, often quite unrelated... More Elevens than Tens have a definite choice of career, and only a very few have no idea of what they want to do. More now can make a single choice, and, as choices become more realistic, the variety of occupations chosen becomes smaller... (Twelves) The trend toward a single, definite choice of future career continues. Many fewer now make several choices or express indecision. Boys are now more definite in choice, and more likely to give only one choice than are girls... Thirteen marks the peak for single, definite choices about future work. Earlier ages sometimes made multiple choices rather capriciously;

later ages, with greater realism, recognize the difficulty of making a single certain choice... Fourteens show less certainty in their choice of career. More individuals make multiple choices, and the group as a whole makes a greater variety of choices than at thirteen or fifteen... Many Fifteens are quite indefinite about their choice of future career - more so than at any age since eleven. Though the group as a whole names many fewer possible careers than earlier, individuals find it difficult to decide on a single choice within this range... Somewhat more decisiveness appears among Sixteens in their choice of careers than among Fifteens, though a few girls are undecided. A considerable variety of choices is mentioned. (pp.376-382).

Although Gesell et al. show that choice involves increasing realism with age, they do not define choice. Also they do not refer to specific numbers of choices in their study and as a result, they are only really clear when they refer to single choices. Thus, the interpretations of 'many' and 'several' by Crites (1969) in his representation could be seen to be too generous.

What does emerge from the work of Gesell et al., is that the vocational choice process is not necessarily continuous, and the actual number of 'choices' at any age level is probably not very large. Thus, the literature pertaining to the actual number of choices, however defined, at each age level, is very scarce. It has been thought that generally the number of choices made decreases with age from about age 10 to age 16, with a reduction from many to few. The work of Gesell et al. has tended not to support this, indicating instead that apart from being a discontinuous process, at any age level the numbers are quite small.

Problems arise here not only in definitions of terms. Many studies seeking occupational, vocational or career choices, preferences or aspirations, frequently ask for or imply one response only. Others leave the question open-ended, and others specify that there be a certain number given. Some studies offer no cues, others provide job lists from which subjects may select a specified

number, or no set number.

Hackman (1968) suggests that the adolescent's range of choice is very narrow and does not include many which ought to be considered. Thus, lack of knowledge may cause few choices. There are implications here for education.

It would seem then, that the literature tends to suggest that the continuity and exclusive nature, as key aspects of the vocational choice process, are not tenable. This would appear to cast doubt on traditional theories of the vocational choice process. It also tends to support the suggestion by Warnath (1975), that the individual has learned from his world, that it is factors like socioeconomic status, racial origin and power which really determine the occupation he ends up doing, rather than his own interest, aptitudes and abilities. The present study investigates this tentative conclusion in greater detail.

Chapter 6.

The Kinds of Choices Selected.

There has been a great deal of research on the kinds of jobs selected by adolescents, particularly with reference to classifying jobs into social class, comparing jobs for occupational status, the influence of parental pressures, job mobility and interest inventories, to name a few.

According to Hurlock (1968), boys typically want jobs that have glamour and excitement and they seem unconcerned with availability of such jobs, or the ability required for them. They also want jobs with high prestige, even to the extent of accepting lower pay than low prestige jobs. Many boys from low status families, seek higher social status through high status jobs. Girls on the other hand show a preference for occupations with greater security and which place less of a demand on their time. In their vocational choices, girls tend to express a preference for service to others, such as nursing and teaching.

Gesell et al. (1956) have reported extensively on the most popular kinds of jobs selected at each age level. At ten they report that girls' main choices are,

"teacher, veterinarian, skater, actress, writer, nurse. Boys' main choices are: doctor, scientist, athlete... (At eleven) girls choose most frequently: veterinarian, teacher, actress, dancer, farmer. Boys choose: doctor, lawyer, engineer, architect. More boys than at any other ages (about one in five) want to follow their fathers' careers... (At twelve) girls main choices are now: teacher, singer, dancer, nurse, secretary, scientist, writer. Boys choose: doctor, scientist, aviator, lawyer, engineer, architect... (At thirteen) girls want to be a teacher, singer, scientist, or lawyer. Boys most often choose to be a doctor, scientist, architect, veterinarian, teacher, farmer, engineer... (At fourteen) new kinds of careers are now mentioned: by girls, psychiatrist, social worker, diplomat; by boys, historian, mathematician, reporter, sports announcer. Leading choices for girls are: teacher, nurse, musician, scientist, social worker. Boys choose: doctor, radio or T.V. engineer, aviator, lawyer, architect, engineer. Few boys now choose

their father's profession... (At fifteen) girls most often mention: teacher, artist, actress, musician, scientist, psychologist, sociologist. Boys mention: doctor, dentist, lawyer, writer, engineer, architect... (At sixteen) boys most often choose engineering, law, architecture, politics and medicine. Girls choose art, teaching and child psychology. Journalism and science are often mentioned by both boys and girls." (pp.376-382).

Considering that most of the subjects in their study, come from a high socio-economic level, and had high-average to superior intelligence as measured by standard psychometric tests, such 'choices' do not appear to be too unrealistic. There certainly appears to be some variety in the kinds of choices across most age levels, although the degree of specificity appears to be increased with age.

Powell & Bloom (1962) distinguish between preferred and expected occupations. The most popular preferred occupations for boys were professional (64.9%), and skilled (12.5%). However, the specific occupations selected by boys were: engineering (23.3%), medicine and automotive mechanics (each 5.6%), research in physics and chemistry (4.1%), aviation and the business world (each 3.4%). Powell & Bloom note that,

"the choice of occupation as given by the boys was dispersed over 50 different fields with 33 of the named occupations being ranked on the professional level. About 6.6 percent. of the boys selected various fields of science as biology, archeology, astronomy, and geology. The occupations which were given on the skilled labour level included those of electrician, carpenter, television serviceman and automotive mechanic." (p.127).

For girls however, the preferences were somewhat different. They most frequently preferred professional (69.7%) and clerical-sales (23.2%) almost to the exclusion of all else. The actual vocations preferred by girls were office worker (21.6%), teaching (15%), and nursing (13.7%). These were chosen significantly more than others, the fourth in rank being air hostess (4.1%). The girls named 35 different vocations, 33 of

which had professional status. Some other vocations named by girls were journalism, modelling, dramatics, fashion designer, interior decorator, physical therapist, lawyer, librarian and social worker. When the expected vocations are examined, although the general trend is the same, with the emphasis on the professional occupations, there are significant differences between the desired and expected occupations. Fewer boys expect to enter professional and skilled vocations, and more expect to enter clerical-sales, semi-skilled trades and the armed services. The specific occupations listed as those which they plan to enter are engineering (18.6%), automotive mechanic (5.4%), business world (4.7%), salesman (4.5%), and semi-skilled labour as factory work (4.1%). A similar pattern is noted in the girls' expected vocations, with fewer expecting professional and more expecting clerical-sales vocations, and also more expecting to be housewives. The actual vocations are office and clerical work (29.8%), teaching (16.9%), nursing (12.8%) and housewife (5.5%). The age range of the subjects from which this data was obtained was 14-19 years, and although no control was made for a sampling bias, a higher proportion of their parents, compared to the general population had attended college. The range and the kind of vocations preferred do not appear to be too much out of line with what could be expected from such a group.

In data obtained from children about to leave school, from modern, grammar and technical schools in Britain, Veness (1962) found that overall the most popular intended occupations were factory work (27%), engineering (10%), agriculture (9%), craft (8%), and the armed forces (13%) for boys. For girls, the most popular occupations were clerical (33%), distributive (16%), craft (10%), children's nurse (6%), nursing (7%) and teaching (6%). These figures are the combined total of all three kinds of schools. It was interesting too, that the occupations chosen reflect the influence of local conditions, in

that a school in an industrial area had a high percentage of boys choosing factory work. Veness also reports that many children do not regard a job they first enter as their career. Many regard a career as something developing and perhaps changing in direction. Many see their ultimate aim as self-employment, rather than promotion within an organization. This is not for wealth, since not all describe themselves as being successful, but for independence, or not having a boss. Thus, even at this stage children can foresee a future which does not involve a commitment to a job. What they value most of all is their independence, and self-employment, and such jobs as those in the armed forces and merchant navy, which are seen more as a way of life than as a job.

A study by Douvan & Adelson (1966) is particularly relevant to vocational choices. They found that the main characteristics of boy's choices was a strong desire for achievement and concrete realistic planning. Few boys chose a glamour job, with only 1% choosing professional sports, 1% choosing a job in entertainment and about 2% choosing pilot. Overall, boys tended to choose a broad range of occupations, including everything from mill hand to doctor, barber to carpenter, as well as highly specific jobs like ornithologist and physicist. The most popular jobs were engineering, farmer and mechanic (about 15% for each). No other job attracted more than 5%. Five year old boys choose fireman and policeman, partly perhaps because they symbolize authority or because of lack of knowledge of the variety of jobs available. However, 90% of the older boys had fairly realistic choices, and 10% only, anticipated an educational future which would be inappropriate to the desired job. Girls on the other hand, focussed on the interpersonal features of their future lives. They wanted jobs that permitted expression of traditional feminine interests or that might lead to meeting a prospective husband. Generally, their plans, when compared to boys, were riddled with fantasy, and were

quite unrelated to realistic or concrete achievement goals. It appeared that while a boy's choice reflected faith in himself, the girls' plans for mobility most often involve aspiring to marry a vocationally capable boy. So much was this so, that Douvan & Adelson feel that there is really no other practical measure of a girl's choices, because a married woman's status and that of her family, is linked to her husband's achievements.

Thus, while boys do not often aspire to extreme upward mobility, girls often do, but in terms of their future husbands. However, where girls do choose occupations for themselves, they are more realistic, choosing nurse, teacher or secretary. These are jobs that are useful, but not necessarily requiring lasting commitment. Such jobs are more likely to be time-fillers before marriage. Therefore, they see little chance of breaking with tradition and can afford to romance a little in the kinds of jobs they may like their husbands to do. For many girls choices of jobs become, in fact, aspirations. With the growing impetus of the women's liberation movement, perhaps a change in such a situation is imminent.

Baldock (1971) reports that for fourteen year old New Zealand boys, the most popular aspiration was that of craftsmen and labourers (28.4%), then professional and technical (24.4%), farmers, fishermen and loggers (19.5%), armed forces (12.8%) and transport and communication (6.5%). She concludes that these figures show lack of realism because apart from farming, administrative work and transport, they are not consistent with the occupational distributions shown in the New Zealand Population Census of 1961. The reason for this is clear. She asked, "In what kind of industry or organization would you like to work?" Then she listed 21 options, including 'Don't know' and the child was required to select one. Such a procedure is far too general, and is bound to include fantasy selections.

Besides, a ten year old census might not be reflecting the work opportunities available at the time of her survey.

Daw (1966) when discussing the career choices of high and low creative thinkers found that highly creative students tend to choose more unconventional careers. In his study, however, he found that overall the 712 boys and girls selected 152 different jobs, of which 41 were chosen by both sexes, 76 were selected only by boys and 35 only by girls. Of these jobs, five accounted for 87% of girls' choices, i.e. office worker, teacher, nurse, social worker and beautician, in that order. For boys the five most popular choices accounted for only 35% of them. The selections were engineering, mechanic, armed services, craftsman and electrician. Considering the greater overall number of selections for boys, and the fact that there were very similar numbers of boys and girls, these results were not surprising. Daw does not comment on the reality basis of these choices, but they appear satisfactory. Certainly it would seem likely that highly creative students would make unconventional selections. And since these results were obtained from high school seniors, the tendency towards reality is bound to be significant. Of interest again, is the sex difference, with respect to range and type of job.

A study by Gupta (1974) on a group of Indian 11-16 year olds, who were asked to list ten vocations in the order they would like to join, from a list of 200 important vocations, yielded similar results for both sexes, and a tendency towards lack of realism. For boys the most popular selections were doctor (at all age levels), army officer, aeroplane pilot, scientist, Air Force officer, engineer, Judge, Indian Administrative Service (I.A.S.), lawyer, Indian Foreign Service (I.F.S.), and businessman. All of these are fairly high status jobs. For girls the results were doctor, air hostess, lawyer, aeroplane pilot, scientist, Air Force Officer, I.A.S.,

teacher, judge, Army Officer, I.F.S., lecturer, decorator. Again these were fairly high status jobs. The method of obtaining these vocational preferences makes them aspirations, as defined by the present study, and therefore it is not surprising that they are largely unrealistic.

It would appear that there is a wide range of kinds of vocational choices made at each age level. This is true in a number of different cultures. There seem, however, to be many differences between the sexes in the kinds of jobs selected. There are indications that the choices are largely realistic, but that preferences and aspirations, as defined by the present study, tend not to be.

Chapter 7.

The Number and Kinds of Reasons Given for the choices.

McQueen et al. (1941) claim that few of us can give reasons that will stand examination, for our choice of a given line of action, and that therefore, it is not to be expected that 11-14 year old children will be able to explain rationally, why they will probably take up a given occupation. However, they note that 40% gave reasons of some kind. McQueen et al. feel that parents are better qualified to give realistic reasons for their children's choices. Two thirds of the parents of the children in their study did this, and yet 80% of these took what their children said into account anyway. Thus, children appear capable from an early age, of giving reasons, directly or indirectly through their parents, and their reasons appear realistic. Since this early study, stated reasons have been well studied.

Powell & Bloom (1962) report reasons given for not expecting to enter the preferred occupation, as well as reasons for not selecting the preferred occupation. The main reasons for not expecting to enter the preferred occupation were, for boys; 'like chosen work' (18.42%), 'undecided regarding a vocation' (15.79%), 'choice of parents' (11.05%) and 'plan to enter armed services immediately' (10.53%). For girls they were: 'inadequate finances' (15.39%), 'plan to marry' and 'necessity of entering preparatory work for the vocation' (each 12.8%), 'like the chosen work' (10.26%), and 'ability for chosen work' (9.4%). There were actually more reasons given for selecting the preferred occupation, than for not expecting to enter it, but fewer of these former reasons had a high percentage of subjects selecting them. For boys the most popular reason was 'interest in work' (36.2%) and the only other reason chosen by any great number, was that 'the job offered security' (11.9%). For girls a similar

trend emerged, although the reasons were different. The main reasons were: 'interest in work' (27.4%), 'service to others' (17.4%), and 'interest in people' (15.2%). In general these results indicate some differences across age levels and between sexes. Boys tend to show an increase in social awareness and a desire for adventure and travel with increased age. For girls there is a greater and increasing social awareness with increasing age, and a decrease with age in the desire for financial security. Overall boys claim greater interest in the work than girls. Girls more often than boys, place as more important the desire to be of service to others, an interest in people, and the desire for security. This study is useful, because it compares the reasons for the preferences and the reasons for not expecting to enter them. Most studies are concerned with the reasons given for the actual choices.

Wilson (1953) asked children what made them decide what they wanted to be. Following are the responses given to this question, with the percentages for boys then girls, given in parentheses. The most frequently given reason was^a liking for the work (41.4%, 48.3%). Others given were working conditions (10.6%, 9.6%), prospects of promotion (10.3%, 7.7%), good pay (7.6%, 6.4%), influence of admired friends or relatives (5.7%, 1.2%), the chance of meeting interesting or friendly people at work (3.0%, 12.0%), the need for variety (6.6%, 3.3%), excitement (1.7%, 0.3%), being useful (1.8%, 2.7%), having the necessary skills (5.5%, 5.0%), the work is easy (0.9%, 1.0%), the ease of getting the work (0.5%, 1.1%), curiosity (2.3%, 0%) and social prestige (0.9%, 0%). Although these general trends do not reveal marked sex differences, Wilson reports that there were some differences. Whereas boys cited fresh air, and being in the open as being good working conditions, girls preferred cleanliness, absence of noise and an even temperature. Girls prefer working with other people, but boys prefer variety, excitement,

curiosity and promotion prospects. However, what is apparent is that nearly half of the boys and girls report that their reason is simply that they like the work. This does not necessarily mean that the children had great knowledge of the various jobs, but Wilson reported, that she related the reasons given with the occupations chosen and came to an interesting conclusion.

"The fact that the reasons given may vary with the types of occupation chosen, does not indicate that the children had observed distinguishing features of the work, whether or not this consideration preceded the actual choice. Moreover, it can be seen that in most cases the reasons are meaningfully related to the occupations chosen... (This does) add to the impression of realism gained from the study of vocational choice by suggesting that many of the children not only choose appropriately but give appropriate reasons for their choice." (p.171).

While it is true that many children do not have a great knowledge about any particular job, and are not likely to gain this knowledge until they actually do the job, they appear in many cases to have some general idea about whether or not they will like the job. Simulation techniques could be useful to enable practice and avoid disastrous mistakes, Krumboltz & Thoreson (1969), but they are not yet readily available. Most children learn whether or not they will like a particular job from a variety of sources, such as family and friends, television and films. While many children may not be able to clearly express why they like a certain job, they seem quite sure that they do like it.

Hill (1965) asked boys to state what influenced them to choose a particular occupation, or if they were undecided, what they were looking for in a career. He found that there were three fairly distinct groups of motives. One was an interest or ability in a particular school subject or outside activity. Another was conditions of work such as travel, open air, use of hands 'meet people', 'be of use', in general applying to a wide variety of jobs, and finally rewards, not only

salary but such fringe benefits as a car or status. He found that ^{of} those who gave the first reason, 89% had chosen a career. However, for those who gave as reasons the conditions of work and rewards, only 33.3% and 25.6% respectively had chosen a career. Hill concluded that motives relating to personal abilities and interests are more important factors in career choices of younger boys, rather than the older boys who allow greater emphasis for working conditions and rewards. He implies that this shows a lack of realism in the choices of younger boys. However, it may also indicate, since Hill does not adequately define choice, that the older boys, having received feedback from examinations, about their academic standing, are actually giving reasons for choices as defined by the present study. The younger boys however, are probably aware of their choices, but are still optimistic about their preferences prior to finding out about their performance in examinations yet to be taken. The boys in this study were from grammar schools, and as such would no doubt have a greater chance of making their preferences and even their aspirations, become their choices than most other children.

Holden (1961) has found that students with high scholastic ability maintain a high level of occupational choice (the occupations they had considered and which they might select as a career) from the eighth to eleventh grade. However, students with lower levels of scholastic abilities tend towards vocational choices more suited to their abilities. This is probably a result of feedback from examinations, and the responding with actual choices not preferences, as Holden's definition of choice implies.

Veness (1962) analysed what determined the choices of boys and girls and distinguished between three broad categories: tradition-directed, inner-directed and other-directed. The reasons selected by boys and girls

are similar, as can be seen in TABLE B.

Veness has data from three kinds of schools - modern, technical and grammar. While there are a number of minor differences, overall the boys from all schools tend to cite most often inner-directed reasons (about 50%), then other-directed (30-40%) with the rest citing tradition-directed. The same general trend is apparent with the girls, but technical school girls tend to cite more often other-directed, rather than inner-directed reasons. Veness feels that for many people basic orientations of these kinds may be important regardless of age, or the stage in vocational development reached. However, she notes that it is only at times when there are plenty of job vacancies that most young people can afford the luxury of considering their own demands on life in planning a career. This would tend to suggest that for many people, at quite an early age, a choice for a general area of work may be decided upon, but that, the actual job entered is probably out of the control of the worker to the extent that it depends on what is available at the time when entry to a job is sought.

Douvan & Adelson (1966) gave evidence that boys gave a variety of reasons for their vocational choice. A majority had a work model or knew someone in the line of work they had chosen. Seven out of ten gave 'personal interest' as a reason for choosing a particular occupation. About half felt that job security was important. Twenty-five percent, chose jobs because of certain work-style features; for example, working outdoors or being one's own boss implied independence and freedom from restraint. Boys concentrated on characteristics of particular jobs other than high pay or good hours, that might be equally well met by a variety of jobs. Girls however, were quite unrealistic in their life plans, and were not very vocationally oriented. However, Douvan & Adelson feel this is quite realistic, because of the emphasis society places on their orientation toward marriage and family life.

TABLE B. The tradition-directed, inner-directed and other-directed determinants of the job choices of boys and girls, in approximately descending order of popularity. Based on Veness (1962), Tables 45 and 46, pp. 180-181.

x indicates a determinant for that sex.

DETERMINANTS	BOYS	GIRLS
<u>TRADITION-DIRECTED</u>		
Runs in family; 'influence' can be brought to bear	x	x
Others do it; friends go into it; neighbours do it	x	x
<u>INNER-DIRECTED</u>		
Popular school subject; does it at home; likes this sort of activity	x	x
Has tried it already	x	x
Does it at weekends etc.	x	
Is good at it;	x	x
machine-minded, etc.	x	
Interest in cars, flying, sea, land, children, animals	x	x
clothes		x
Wants job in open air, where meet people,	x	x
can travel,	x	x
help people		x
<u>OTHER-DIRECTED</u>		
Suggested by lectures, talks books, conversations	x	x
Watching it being done;	x	x
likes the life;	x	x
the uniform		x
Parents keen on it	x	x
Prospects, pay;	x	x
it's a good trade	x	
a useful skill after marriage		x
Clean, pleasant, easy		x

This is, they feel, what causes many girls' plans to be ambiguous. It would be interesting to see if with the emergence of the feminist movement, this still applies.

Pallone et al. (1970) note that for Black youth, the jobs they aspire to are most influenced by the same-sex parents together with appropriate occupational role models whatever the race or sex. This is probably so, they conclude, because this is where most of the vocational information and opinion comes from about self and work. To that extent these youth are being realistic, in that perhaps they see that counsellors who inform them primarily about what their ability and aptitudes are, are giving information that in the real world does not have much relevance. It is the job that they can get, rather than the job that they are suited for that is most important.

Thompson (1966) reports that the characteristics of a vocation that are important to students may be internalized relatively early in life, and there is little change over time. There are however, differences between the sexes as to what is important in a job. Generally for boys and girls the most important value in a job is that it is interesting, secure, enables expression of their own ideas and enables them to help other people, although the latter is more important for girls. The least important values are a job where you could become a leader, and where you could become a boss, both of which are cited considerably less frequently by girls.

What appears to be evident from examining the reasons given for their choices, variously defined, of occupations, is that adolescents seem to be quite realistic and sensible about them. This would tend to suggest that the jobs selected must also be realistic. Hurlock (1968) has written what could be an explanation of this.

"While many adolescents aspire to jobs above the occupational level of their families, they are realistic about their chances of getting them. Most follow in the occupational footsteps of their fathers and go into lines of work characteristic of

the socioeconomic class to which their family belongs." (p.425).

A similar view is expressed by Thornburg (1971).

Certainly adolescents appear to give a very wide range of reasons for their selections, although the impression gained from the data surveyed would indicate that the number of reasons given by any individuals for their choice or choices is relatively few. This may be because implicit in many of the questions asked regarding reasons for choice, was that the researcher was interested in one reason. Veness (1962), for example, asked, "What gave you the idea of going in for the job?" This question tends to imply that one idea only is required as a response, and consequently many children would have given one reason only.

Chapter 8.

The Differences Between the Choices of Males and Females

Traditionally women have been cast in the role of homemaker, and when they have entered the labour market they have done so in selected occupations. Often the roles of homemaker and career woman have been contrasted, but it is becoming evident that it is not only possible but for some families, necessary for economic reasons, that the two roles be combined. There is however, the growing trend for women to take on an increasing variety of occupations and many of these women either have no families, or subordinate their role as mother, or wife, or for that matter career woman, to that of woman. While a number of writers feel that there is a change in the role of women in work, Ginzberg (1966), Peters & Hansen (1971), many others have noted that while this may be so, there are still significant differences in the development of vocational choices in boys and girls.

Super (1957) notes that,

"the sex roles of men and women are socially as well as biologically determined, as anthropological studies and the changing roles of women during the past century make clear. But women's careers, career orientations, and career motivations differ from men and are likely to continue to differ in important respects." (p.76).

However, he feels that homemaking has a central place in a woman's career, because of her role as childbearer, even though more women are joining the work force.

Ausubel (1954) follows a similar line of thought, noting reasons why girls rarely develop serious and sustained aspirations for a vocational career. He therefore sees women as preparing for marriage and selecting such jobs as nursing, teaching and secretarial work. He sees advantages in this in that,

"girls are apt to be better informed than boys about the requirements, duties, job opportunities, and remuneration of their chosen occupations (and) since they can afford to be more modest in their vocational aspirations, they are less frequently out of line with realistic possibilities." (p.444).

This is in keeping with Douvan & Adelson (1966) who reported females want jobs that permitted expression of traditional feminine interests or which provide opportunities to meet prospective husbands. These may be unrealistic in terms of certain criteria relating to success in a job, but they are realistic in terms of life as it is. Horner (1972) reports on this dilemma faced by many women and notes that,

"a bright woman is caught in a double bind. In achievement-oriented situations she worries not only about failure but also about success." (p.69).

Many women wish to go ahead with careers, but feel the conditioning of their role as mother and wife and often find it very difficult to know what to do.

Rogers (1972a) reports a study which showed that women seek different factors in job satisfaction, aim lower than men because of distinctive social attitudes about what girls are supposed to do and generally choose less active and less adventurous work than men. They like work that is social in nature and provides opportunities to help others and a chance to meet eligible young men. Many women would rather give up promising careers to be homemakers. However, career women are those women who have redefined their traditional woman's role to include behaviours appropriate to both sexes. The aspirations of both sexes vary according to how fully they accept their presumed role.

So far, it would seem that in^a/broad sense, young girls are brought up to be homemakers and not to follow careers. Therefore, those girls who can modify or change this role have a number of personal, cultural and sociological barriers to contend with, if they wish to pursue a career. Brown (1970) reports that the actual process of vocational choice making is different for boys and girls. He cites studies that show that girls appear to arrive earlier at more realistic choices, are influenced by different factors in making their choices, seem to manifest vocational needs other than that of

entering an occupation, e.g. selecting a husband, enter occupations somewhat lower in status and have less predictable vocational choice patterns. A similar approach is seen by Hurlock (1968).

The traditional idea that vocational choices do not have any relevance for girls is illustrated by the considerable amount of research which collects data only from boys. Data on vocational choices of girls is limited, and generally gathered as a means of comparison with boys, rather than for its own worth, although the growing concern for women and women's rights is changing this, Oliver (1975).

More recent studies have begun to include girls as an integral part of the study on vocational choices. Gupta (1974) notes considerable overlap between boys and girls in terms of vocational preferences. He sees this as indicating a diminishing separation of the sexes with reference to the vocations they choose. This research on Indian children reports that barriers about vocations that were outside their bounds as vocational choices for girls, appear to be considerably broken down in Indian society. Barnett (1975) reports that women are underrepresented in many prestigious occupations, probably because of early sex-related learning with respect to the attractiveness of prestigious occupations. Women do not necessarily opt for less prestigious occupations, but early in their development they learn not to aspire to such positions. Barnett feels that this is probably due to the rebuffs faced by many women in previous generations, resulting in external barriers eventually becoming internalized. She feels that with time such barriers may be removed and that the removal of such barriers is an important step to make.

Thus, the evidence seems to be overwhelmingly in favour of finding that in the field of vocational choices, there are differences between boys and girls. These appear to be based largely on the traditional role prescribed for women as that of housewife and mother, and

not as worker. However, as has been suggested, there is a considerable change occurring, slowly but steadily, which should eventually result in a balancing of these differences, Wright (1975). Time (1974) reports that while many countries in Europe have granted equal rights legally, genuine social and economic equality is slow in coming. Any changes in the vocational choice process for girls may also be gradual in appearing. Ginzberg (1966) however, states that,

"One cannot fail to be impressed with the broadened options of educated women to pattern lives in which work has an important place. As they avail themselves of these opportunities, their life styles will resemble those of men. But physiological or social realities will continue to keep young women anchored in the two worlds of home and work. However, if conventional hours of work decline, men in turn, may increasingly develop a counterpoise to the imperatives of a career. They may seek and find more of their satisfactions off the job. It is no longer simply that more and more women are following the pattern usually followed by men; men are also beginning to enjoy the broadened options that have become available to many women. The place of work in the lives of women is being radically altered, but this change has its counterpoint in the lives of men. We are in the midst of a larger revolution." (pp. 255-256).

Chapter 9.

Summary.

The most popular theories of vocational choice have been the psychological theories, particularly the self theories and the developmental theories, or a combination of these. Such theories make at least two assumptions. They are that the vocational choice process, as part of the overall development of the individual, is a continuous process over a number of years, and that the culmination of this process is of vital importance to the overall well-being of the individual.

The importance of a vocational choice has traditionally been great. It has been seen as the means of gaining ones identity and giving meaning to one's life. Today, however, there is growing evidence to suggest that with the increasing affluence of Western society, people are placing an ever decreasing emphasis on work in their lives, and that the future may not require that nearly everyone work. This has profound implications regarding work and leisure.

Although there has been considerable research on vocational choice and its importance, there has been considerable diversity when it comes to defining what is meant by vocational choice. It seems that different theorists have different conceptions and definitions of vocational choice. Chapter 3 presents a definition of vocational choice which distinguishes between vocational attainment, vocational choices, vocational preferences and vocational aspirations on a continuum from, 'based entirely on reality for attainment', through to, 'little or no basis in reality for aspirations'.

Two key aspects of the vocational choice process are identified. These are its continuity and its exclusive nature. The former states that there is a gradual reduction in the number of vocational choices over time. The latter states that allied with this reduction in the number of choices, is a gradual increase in the extent to which the vocational choices are based on reality. Thus,

reality is seen on a continuum across ages, rather than across kinds of selection at each age level. A discussion of the evidence reveals that from an early age, as early as about eleven, there is a considerable degree of reality in the vocational choices of children.

An examination of how many choices are made at each age level reveals that there are generally very few at all age levels. Certainly, there does not appear to be a continuous reduction in the number of choices made.

The kinds of choices made are many and varied, as are the reasons given for these choices. However, little indication is given about how many reasons are actually given. It would appear that there are very few, largely due to the structuring of the questions asking for such reasons.

The evidence strongly suggests that there are considerable differences in the vocational choice process, the actual choices, and their reasons for the choices, between boys and girls. With the growing feminist movement, and the generally changing attitudes towards the role of women in society, this may eventually result in a compromise where both males and females will move towards each other in their roles, rather than, say, females adopting traditionally male roles. This may take some time, however.

Thus, the major traditional theories of vocational choice are open to question in some of their basic assumptions. Doubt is cast on some key aspects of the vocational choice process. The actual relevance of a vocational choice to an individual, previously considered so vital, is seriously questioned. The whole theories themselves are even considered to be going in the wrong direction. Rather than discard all the work that has been done, and rather than accept all that has been recently proposed, it is felt that by re-examining traditional theories, particularly with regard to their

definitions of terminology, and by examining the basis of vocational choice in reality, some new direction may be found. This direction would consolidate the research that has been done in this area, bear in mind the needs and demands of life styles of a citizen of the 21st century, Walz (1975), and seek new areas in which to direct future research.

The two opposing views that have been discussed, could be reassessed, and a kind of compromise between them found. This would combine the good aspects of both views, with other variables, to create something more relevant to the future. Certainly the whole area of vocational choice is undergoing some considerable revolution, and changes must be made.

PART TWO.

A STUDY OF THE NATURE AND BASIS
IN REALITY OF THE STATED FUTURE
VOCATIONS OF MALES AND FEMALES
AGED ELEVEN TO SEVENTEEN YEARS.

There have been surveys on the vocational choices of children in New Zealand, McQueen (1940), Baldock (1971), but these have generally involved males only, and have been done from a non-psychological viewpoint. The present study was primarily a cross-sectional investigation into the number and kinds of vocational choices at ages 11 through to 17, and the reasons for these choices. It was also intended to compare data for males and females to see if there were any differences between the sexes on vocational choices.

The study also had a second objective. This was to investigate the extent to which vocational choices are realistic. Vocational choices are defined as the jobs that people expect that they will most likely end up doing. Vocational preferences are defined as the jobs that an individual likes and could possibly do, but for various reasons does not expect to end up doing. Vocational aspirations are defined as the jobs an individual would do if by some magic they could do any job they wanted. Vocational attainment was the jobs actually entered. This distinction was made to help clarify the sometimes confusing interpretations of what vocational choice means. It was felt this would be helpful in enabling children to distinguish between the vocational selections they had, which could include both the realistic and unrealistic.

There has been considerable discussion on the extent to which vocational choices are based on reality and this has been quite a significant aspect of the more popular theories of vocational choice. The most popular of these theories are the developmental theories of Ginzberg et al. (1951), Super and his associates (1953, 1957, 1961a, 1961b, 1962, 1970), and Holland (1959, 1973) and the self theories e.g. Roe and her associates (1956, 1957, 1966). The basic assumptions it would seem of these and other theories, are that vocational choice is a developmental process, which is part of overall development, and that a decision on a vocational choice is a significant aspect

of a person's life.

The belief that vocational choice is a developmental process, is in part, based on the assumption that this process is continuous and exclusive in nature. It is continuous because there is a gradual reduction in the number of vocational choices made with increasing age. It is exclusive in nature in that along with the reduction, with age, in the number of choices, there will be an accompanying increase in the degree to which these choices are realistic, Crites (1969). That vocational choice is a very significant aspect of a person's life is based on the traditional concept that a person's work is very important to them in terms of their identity, prestige, livelihood or self actualization.

It was felt that generally there would not be many vocational choices made at any age level, and that these choices would generally be realistic from an early age. Three factors contributed to this feeling; the general trend towards an increase of leisure, Childs (1965), Roberts (1973), the changing importance of work, Kreps & Spengler (1973), Warnath (1975), and the large number of children in New Zealand leaving school at about 15 or 16 years of age. It was also felt that the continuity and exclusive nature, as key aspects of the vocational choice process would not be supported and that an early realistic choice would indicate that children are placing less importance on such a decision, as part of overall development. An early choice implies less concern about making the 'right' choice in terms of self-actualization, and a concern with other aspects of development.

OBJECTIVES OF THE RESEARCH.

The main hypothesis was whether or not vocational choice is realistic from the age of 11 years. It was decided that this was best determined by considering,
a) Whether or not children could distinguish between vocational choices, vocational preferences and

vocational aspirations.

- b) The number of vocational choices made at each age level.
- c) The kinds of vocational choices made at each age level.
- d) The kinds of reasons given for vocational choices.
- e) The extent to which expressed vocational choices, as defined above, were reliable.

The specific hypotheses to be tested in this study were, therefore, as follows:

- 1) Vocational choices, vocational preferences and vocational aspirations are three distinct categories able to be distinguished as early as age 11.
- 2) At any age level, the average number of choices as well as preferences and aspirations will be few (defined as less than or equal to 5).
- 3) There will be many different kinds of jobs selected at each age level.
- 4) At any age level, the average number of reasons given for selecting the first choice and aspiration, and for not expecting the first preference will be few (defined as less than or equal to 5).
- 5) There will be many different kinds of reasons given for first choice and aspiration, and for not expecting first preference, at each age level.
- 6) There will be significant differences due to sex.

METHOD.

Subjects: The subjects were 646 children, 313 males and 333 females, 11 to 17 years of age, and heterogeneous with respect to school grade as shown in TABLE 1. The sample comprised all the children present at school, on the day of the survey, at a modern, co-educational, form 1 to 7 private school, as well as 18 males and 19 females, all aged 11, at a State Intermediate school. Although no data was obtained on ability, it was assumed that there was a normal distribution of ability in the group.

The subjects were also heterogeneous with respect to

TABLE 1. The distribution of subjects across age, school form and sex.

FORM	1		2		3		4		5		6		7		SEX TOTAL	TOTAL	
AGE	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
11	48	50	1	1											49	51	100
12	25	19	36	36	1										62	55	117
13			15	15	35	35									50	50	100
14					30	21	31	45	1						62	66	128
15							18	14	25	38			1		43	53	96
16							1	1	20	21	9	22			30	44	74
17									4	2	9	8	3	5	16	15	31
SEX TOTAL	73	69	52	52	66	56	50	60	50	61	18	31	3	5			
TOTAL	142		104		122		110		111		49		8		n = 646		

KEY: M - male

F - female

social class. Subjects were almost all of the same religious denomination. This is not considered to be significant by Baldock (1971) who reviewed the literature in this area and found that many writers found no significant differences between religious denominations in success striving and level of aspirations. She herself came to a similar conclusion.

Questionnaire: A questionnaire was chosen for the collection of data, primarily because of convenience. However, the questionnaire has been shown to be a reliable means of obtaining data on vocational choices, as well as having good predictive validity, Super & Crites (1962), Crites (1969), Whitney (1969), Gade & Soliah (1975). The questionnaire was designed to provide information on;

- a) The age, name, form, and sex of each subject.
- b) The number of vocational choices, vocational preferences and vocational aspirations selected.
- c) The kinds of vocational choices, vocational preferences and vocational aspirations selected.
- d) The number of reasons given for selecting the first vocational choice and vocational aspiration, and for not expecting the first vocational preference.
- e) The kinds of reasons given for selecting the first vocational choice and vocational aspiration, and for not expecting the first vocational preference.
- f) The ranking of each vocational choice, vocational preference and vocational aspiration.
- g) The ranking of each reason given for selecting the first vocational choice and vocational aspiration, and for not expecting to do the first vocational preference.

The questionnaire included brief instructions about the distinctions to be made between vocational choices, vocational preferences and vocational aspirations, as well as general instructions. It was not to suggest that only one selection or reason was to be given in each case,

although one only may be given. The questionnaire seemed to adequately meet all these criteria. (See APPENDIX).

Procedure: The day before the questionnaire was to be administered all the staff at the school in which the questionnaire was to be administered, met with the author in the staffroom of the school. The questionnaire was examined and the distinctions between vocational choices, vocational preferences and vocational aspirations were made clear to all. All were instructed to read the questionnaire through slowly with the subjects and then to answer questions relating to the distinctions between vocational choices, vocational preferences and vocational aspirations, but not as to what jobs may be included, except to reply, 'You write down what you feel is most appropriate for you'. Any questions about the ranking were also allowed to be further explained to subjects. It was emphasized to staff that this was not a test and that they were to tell the children this, and that the data would be treated confidentially. Subjects were to be informed that they were being asked to complete a questionnaire on their vocational choices, vocational preferences and vocational aspirations and that they were to be honest in their responses, since this information could prove helpful to them. It was assumed that, with teachers following similar procedures, the conditions for all subjects were similar. All children were administered the questionnaire in their classrooms by their classroom teachers during one class period.

RESULTS.

A) Questionnaire: The results are presented in sections, as indicated by the hypotheses being tested.

1) Vocational choices, vocational preferences and vocational aspirations are three distinct categories, able to be distinguished as early as age 11.

Since all subjects responded to the questionnaire, and were able in most cases to select a job for each

category, it must be assumed that they could make the distinction. A small number of subjects made no selection for one or two of the categories choice, preference, or aspiration, but this is to be expected, because it is possible that these subjects did not have any choice, preference or aspiration. No subject was unable to give at least one job for one of the categories. Teachers reported that subjects seemed able to make the distinction, and any initial confusion was clarified. TABLE 2. presents the number of subjects in each age/sex group whose first choice is the same or similar to the first preference or aspiration, or whose first preference was the same or similar to the first aspiration. Jobs were considered similar if they were in the same categories outlined by Miller (1968). It may be assumed that if many subjects listed the same or similar jobs in each category, that this would be an indication that they were not making the distinctions. In general the results suggest that there was a very low percentage of same or similar selections of jobs across categories.

2) At any age level the average number of choices as well as preferences or aspirations will be few (defined as less than or equal to 5.)

TABLE 3. presents the average number of vocational choices, vocational preferences and vocational aspirations selected at each age level for males, females and overall. The overall range is from 2.00 to 4.41. The overall average number of choices for males and females, at all age levels is 3.36. For preferences this figure is 3.02 and for aspirations 2.71. The overall average number of selections, irrespective of age, sex or kind of selection is 3.03.

TABLE 4. presents the frequency of the number of choices over all age levels. The number of subjects who made greater than 5 choices is 97 or 15%. The similar figures for preferences and aspirations are as follows: 50 (8%) and 45 (7%) respectively.

FIGURE 1. presents the main data of TABLE 3. in

TABLE 2. The percentage of subjects in each age/sex group whose first choice is the same as or similar to the first preference or aspiration, or whose first preference is the same as or similar to the first aspiration.

AGE		11		12		13		14		15		16		17	
SEX		M	F	M	F	M	F	M	F	M	F	M	F	M	F
n		49	51	62	55	50	50	62	66	43	53	30	44	16	15
First Choice and Preference	Same	8	2	5	2	0	2	2	3	0	4	3	2	0	0
	Similar	2	4	0	2	2	2	5	0	0	2	0	0	0	13
First choice and Aspirat-ion	Same	10	2	10	9	12	4	5	2	7	2	0	2	0	7
	Similar	2	2	2	2	0	2	2	0	0	2	3	0	6	7
First Preference and Aspirat-ion	Same	22	12	0	13	4	6	2	2	5	4	3	12	0	0
	Similar	4	2	5	2	0	0	0	2	5	6	0	0	0	7

KEY: M - male

F - female

n - number of subjects in each age/sex group

TABLE 3. The average number of choices, preferences and aspirations made by males and females, and the overall total of subjects, at each age level.

AGE	SEX	CHOICE	PREFERENCE	ASPIRATION
11	Male	2.94	2.51	2.57
	Female	2.63	2.25	2.16
	Overall	2.78	2.38	2.36
12	Male	3.32	2.71	2.58
	Female	5.07	3.87	3.65
	Overall	4.15	3.26	3.09
13	Male	4.16	3.60	3.02
	Female	4.66	3.18	3.20
	Overall	4.41	3.39	3.11
14	Male	3.68	3.10	2.85
	Female	4.24	4.08	3.41
	Overall	3.97	3.60	3.14
15	Male	3.26	2.95	2.81
	Female	3.25	3.38	3.47
	Overall	3.25	3.19	3.18
16	Male	2.83	2.20	1.73
	Female	2.57	2.43	2.30
	Overall	2.68	2.34	2.07
17	Male	2.75	3.13	1.94
	Female	1.87	2.80	2.00
	Overall	2.32	2.97	2.00

TABLE 4. The frequency distribution of the number of choices in all age/sex groups.

n	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	19	T
f	7	63	150	166	108	55	44	22	11	7	5	3	2	1	1	1	646

KEY: n - number of choices
f - frequency
T - total

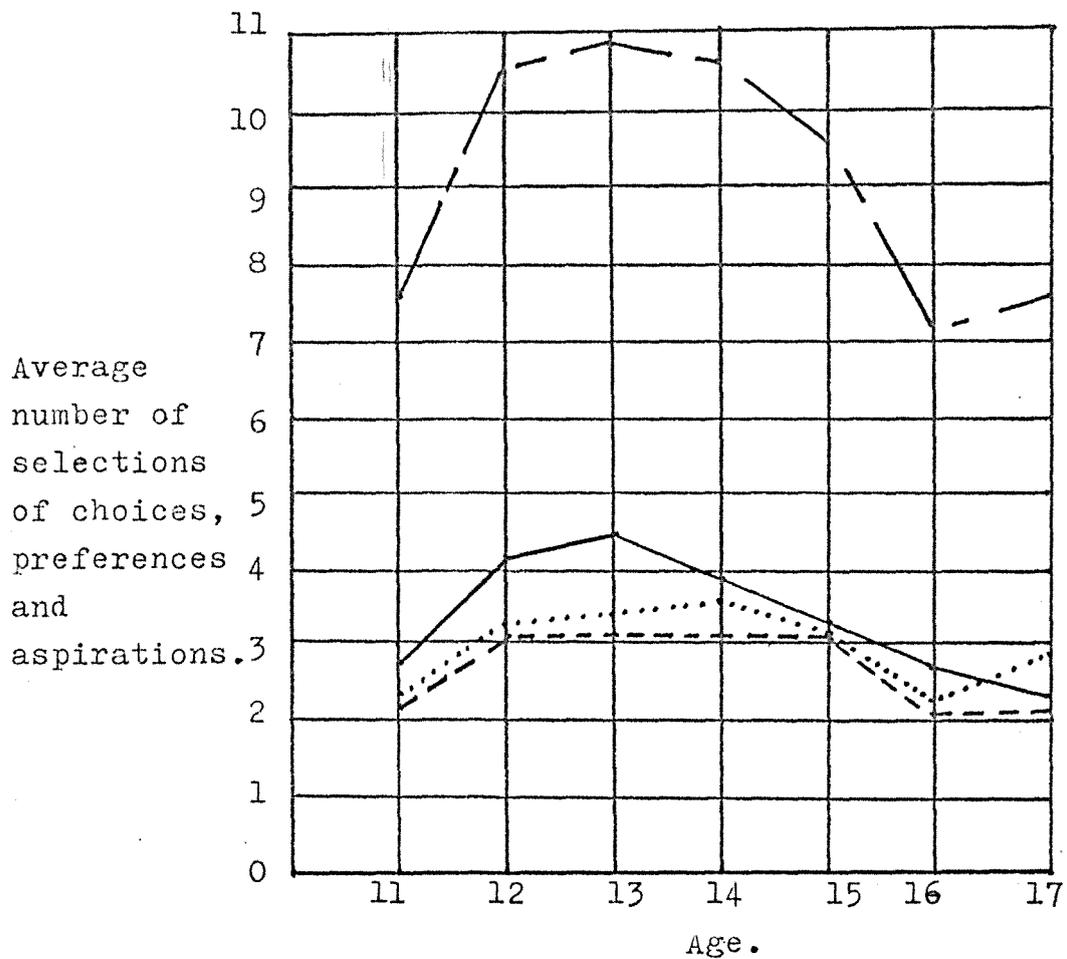


FIGURE 1. The average number of selections of choices, preferences and aspirations at each age level, and the average combined total number of choices, preferences and aspirations.

KEY: ——— Choices
 Preferences
 ----- Aspirations
 - - - - - Average combined total number of choices, preferences and aspirations.

graph form, and includes the overall average number of selections made in each age/sex group, including choices, preferences and aspirations in one total. For this figure the number of 'choices' is 'many'.

3) There will be many different kinds of jobs selected at each age level.

TABLE 5. shows the number of different kinds of jobs selected by subjects for their first choice, preference and aspiration in each age/sex group. In general there were at least about half as many different jobs selected for each of choice, preference and aspiration at each age level, as there were subjects at that level.

Overall there were 266 different kinds of jobs selected. TABLE 6. shows the jobs selected by equal to or greater than 10% of the subjects in each age/sex group, as their first choice, preference or aspiration. These are the most popular choices, preferences or aspirations. For the males there is, at each age level, quite a variation in the most popular jobs selected as choices. For females there are jobs like nurse and teacher which are popular at all age levels.

4) At any age level the average number of reasons given for selecting the first choice and aspiration and for not expecting the first preference will be few (defined as less than or equal to 5).

In general, the average number of reasons given for the first choice and aspiration and for not expecting the first preference was small. The maximum number given was 6, but all but a few subjects gave between 1 and 4. TABLE 7. shows the average number of reasons given at each age level for males, females and overall.

5) There will be many different kinds of reasons given at each age level.

Although the average number of reasons given by subjects was generally few, the variety of reasons was not.

TABLE 5. The number of different kinds of jobs selected by subjects as their first choice, preference and aspiration, at each age/sex group.

AGE	11		12		13		14		15		16		17	
SEX	M	F	M	F	M	F	M	F	M	F	M	F	M	F
NUMBER OF SUBJECTS	49	51	62	55	50	50	62	66	43	53	30	44	16	15
CHOICE	33	19	29	21	28	18	38	25	33	20	25	26	14	9
PREFERENCE	37	30	36	32	30	28	41	35	30	24	24	30	14	12
ASPIRATION	36	32	32	36	31	29	40	41	28	35	21	33	12	9

KEY: M - male
F - female

TABLE 7. The average number of reasons given for first choices and aspirations, and for not expecting first preferences, by males and females, and the overall total of subjects, at each age level.

AGE	SEX	CHOICE	PREFERENCE	ASPIRATION
11	Male	1.55	1.10	1.06
	Female	1.59	1.06	1.02
	Overall	1.57	1.08	1.04
12	Male	1.47	1.18	1.26
	Female	2.33	1.69	1.95
	Overall	1.87	1.42	1.58
13	Male	2.14	1.38	1.46
	Female	2.32	1.48	1.68
	Overall	2.23	1.43	1.57
14	Male	1.98	1.26	1.55
	Female	2.38	1.86	1.94
	Overall	2.19	1.57	1.75
15	Male	2.21	1.47	1.49
	Female	1.98	1.36	1.70
	Overall	2.08	1.41	1.60
16	Male	2.47	1.20	1.60
	Female	1.75	1.32	1.39
	Overall	2.04	1.27	1.47
17	Male	1.75	1.00	1.38
	Female	1.40	0.87	0.47
	Overall	1.58	0.94	0.94

TABLE 8. shows the number of different kinds of reasons given at each age level for their first choice and aspiration and for not expecting their first preference. However, although there was a wide variety of reasons, there was at each level a tendency for certain reasons to be given more frequently than others. TABLES 9. and 10. present a summary of these most popular reasons, The most popular reasons for making the first choice and aspiration were 'liking the job' and 'good pay'. For preferences, the most popular reason for not expecting to end up doing the job were 'lack of an essential personal quality', 'lacking intellectual ability' and 'no reason'.

6) There will not be any significant differences due to sex.

In order to determine differences due to sex, data was compared between males and females on:

- a) The average number of choices, preferences and aspirations made at each age level (TABLE 3.)
- b) The number of different kinds of jobs selected by subjects as their first choice, preference and aspiration. (TABLE 5.)
- c) The kinds of jobs selected by equal to or greater than 10% of the subjects at a particular age level as their first choice, preference or aspiration, i.e. the most popular jobs, (TABLE 6).
- d) The average number of reasons given by subjects for their first choice and aspiration and for not expecting their first preference, at each age level. (TABLE 7).
- e) The number of different kinds of reasons given by subjects for their first choice and aspiration and for not expecting their first preference at each age level, (TABLE 8).
- f) The kinds of reasons selected by equal to or greater than 10% of the subjects at a particular age level for making their first choice and aspiration and for not expecting their first preference, (TABLES 9. and 10).

TABLE 8. The number of different kinds of reasons given by subjects for their first choice and aspiration, and for not expecting their first preference, in each age/sex group.

AGE	11		12		13		14		15		16		17	
SEX	M	F	M	F	M	F	M	F	M	F	M	F	M	F
NUMBER OF SUBJECTS	49	51	62	55	50	50	62	66	43	53	30	44	16	15
CHOICE	26	24	29	25	28	30	39	40	34	35	28	26	20	18
PREFERENCE	25	15	25	26	23	26	32	41	18	26	18	27	12	7
ASPIRATION	24	12	22	21	31	24	33	32	15	28	23	23	15	16

KEY: M - male
F - female

Reason	Age	11			12			13			14			15			16			17		
	Sex	M	F	O	M	F	O	M	F	O	M	F	O	M	F	O	M	F	O	M	F	O
Lack an essential personal quality		12	29	21	19	36	27	14	38	26		36	21		23	15		18	12	31	33	32
Lack intellectual ability									10		15	23	19		23	17		20	12		20	13
Want to be something else more								12	12	12				19						13	20	16
Do not like some aspect			14	11		18	12						17									
A physical inadequacy			10									14										
Lack of finance								14	12	13				12				11				
Few positions available														12	17	15	13	14	14	13		10
Lack academic qualifications			10												19	10	17	20	19	13	13	13
Parents object						13					11	11	11							13		
Too much study involved									18					40		22	27	27	27	19		13
None		10	24	17	23	25	24	20	10	15	22		14	17	19	16	10	16	13	25	23	29

KEY: M - male
F - female

TABLE 10. The reasons selected for not expecting their first preference, by equal to or greater than 10% of the subjects in each age/sex group, and the overall total at each age level. A blank means less than 10%.

The results of these comparisons are presented, lettered as above.

a) The data in TABLE 3., the average number of choices, preferences and aspirations made by the subjects at each age level was subjected to tests for two randomized groups, McGuigan (1968), to determine if there were any significant differences at each age level and for each kind of selection, between the sexes, (see TABLE 11.). Significant differences at the .001 level were found between the choices and preferences of male and female 12 year olds. At the .01 level of significance, differences were found between the sexes on the preferences of 14 year olds. At the .05 level of significance, differences were found in the aspirations of 12 and 16 year olds, and the choices of 17 year olds. All other differences between the sexes on the number of choices, preferences and aspirations selected were not significant.

b) The number of different kinds of jobs selected by subjects as their first choice, preference and aspiration is expressed as a percentage of the number of subjects in that age/sex group in FIGURES 2,3, and 4. This enables comparisons between the sexes to be seen more readily. For their first choices, males overall average 27% more different kinds of jobs than females. This ranges from 20% more at 13 years to 39% more at 15 years. For preferences the overall average is 11% more for males with a range of 1% more for females at 12 years to 24% more for males at 15 years. For aspirations the overall average is 2.16% more for males, with a range of 14% more for females at age 12, to 15% more for males at age 17. Thus, there appears to be a much greater range of choices at all age levels for males, but that the difference is not quite so great for preferences and there is no overall difference for aspirations. In fact 12, 14 and 16 year old females select a greater range of jobs for their first aspiration, than do their male contemporaries.

c) There are considerable differences between the sexes in the kinds of jobs selected by greater than or equal to

TABLE 11. t test comparisons between males and females of the average number of choices, preferences and aspirations made at each age level. A row blank means that p is greater than .01.

AGE	SELECTION	MEAN		SUMS OF SQUARES		LEVEL OF SIGNIFICANCE	
		MALE	FEMALE	MALE	FEMALE	.01	.001
11	Choice	2.94	2.63	110.82	59.92		
	Preference	2.51	2.25	64.24	75.69		
	Aspiration	2.57	2.16	116.00	123.75		
12	Choice	3.32	5.07	106.55	645.71		x
	Preference	2.71	3.87	70.77	276.11		x
	Aspiration	2.58	3.65	58.10	789.53		
13	Choice	4.16	4.66	202.72	377.22		
	Preference	3.60	3.18	156.00	165.38		
	Aspiration	3.02	3.20	146.98	126.00		
14	Choice	3.68	4.24	201.55	216.12		
	Preference	3.10	4.08	141.42	336.62	x	
	Aspiration	2.85	3.41	169.69	231.95		
15	Choice	3.26	3.25	221.19	203.81		
	Preference	2.95	3.38	149.91	150.45		
	Aspiration	2.81	3.47	294.51	511.21		
16	Choice	2.83	2.57	98.17	66.80		
	Preference	2.20	2.43	30.80	78.80		
	Aspiration	1.73	2.30	25.87	81.16		
17	Choice	2.75	1.87	30.00	5.73		
	Preference	3.13	2.80	23.75	34.40		
	Aspiration	1.94	2.00	14.94	26.00		

x - indicates the level of significance.

The equation for computing t was:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{SS_1 + SS_2}{(n_1 - 1) + (n_2 - 1)}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

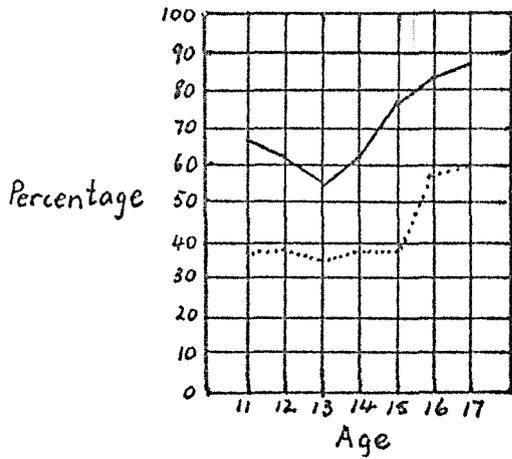


FIGURE 2. The number of different kinds of first choices selected in each age/sex group, as a percentage of the number of subjects in that group.

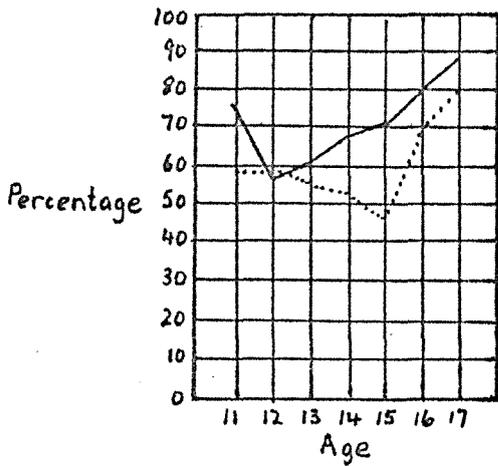


FIGURE 3. The number of different kinds of first preferences selected in each age/sex group, as a percentage of the number of subjects in that group.

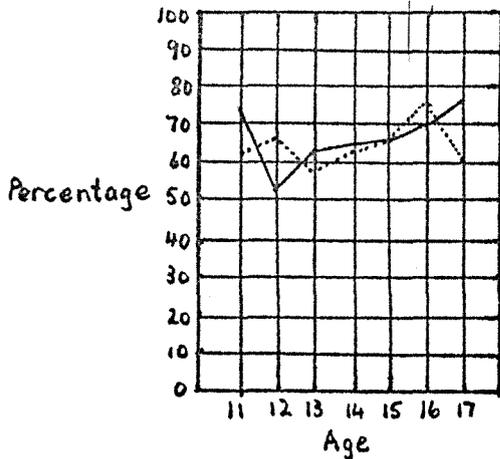


FIGURE 4. The number of different kinds of first aspirations selected in each age/sex group, as a percentage of the number of subjects in that group.

KEY: ——— - male
 - female

10% of the subjects at a particular age level as their first choice, preference or aspiration, i.e. the most popular jobs. An examination of TABLE 6, reveals that the only overlap was teaching and that only for 14 year old preferences. There was overlap in jobs chosen by less than 10% of subjects in any age/sex group, as may be expected, but for the more popular jobs, overlap was almost non-existent. Females select quite different choices, preferences and aspirations to males.

d) An inspection of TABLE 7, shows that overall there were no apparent differences between the sexes on the number of reasons given for first choice and aspiration and for not expecting the first preference.

e) The number of different kinds of reasons selected for the first choice and aspiration and for not expecting the first preference is expressed as a percentage of the number of subjects in each age/sex group in FIGURES 5, 6, and 7. This enables all of the comparisons between the sexes, to be made more easily.

It can be determined that for their first choices, males overall average 8.3% more different kinds of reasons than females, ranging from 4% less at 13 years to 35% more at 16 years. For preferences, males overall average 2.3% more different kinds of reasons than females, ranging from 11% at 14 years to 28% more at 17. For aspirations, males overall average 4.9% more different kinds of reasons than females, ranging from 18% less at 15, to 25% more at 11 years. Overall males give more kinds of reasons for their first choices than females, but apart from ages 11 to 17, females give more kinds of reasons for their preferences. For aspirations, females give more kinds at ages 12, 15 and 17, and males give more kinds at ages 11, 13, 14 and 16.

f) There are differences apparent in the kinds of reasons given for selecting the first choice and aspiration and for not expecting the first preference, by equal to or greater than 10% of the males and females. This data is presented in TABLES 9, and 10.

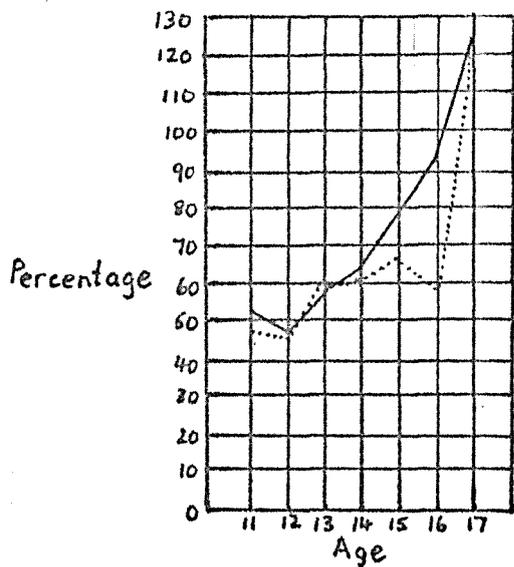


FIGURE 5. The number of different kinds of reasons given for the first choice, by each age/sex group, as a percentage of the number of subjects in that group.

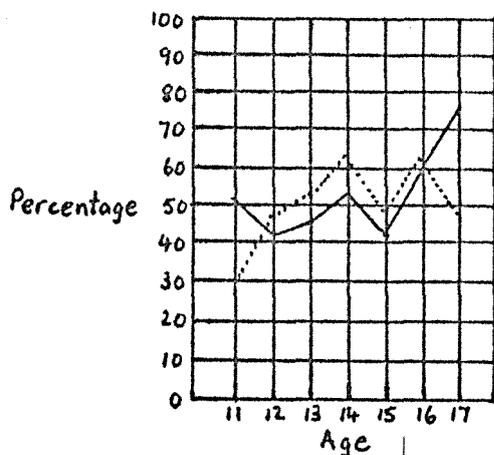


FIGURE 6. The number of different kinds of reasons given for not expecting the first preference, by each age/sex group, as a percentage of the number of subjects in that group.

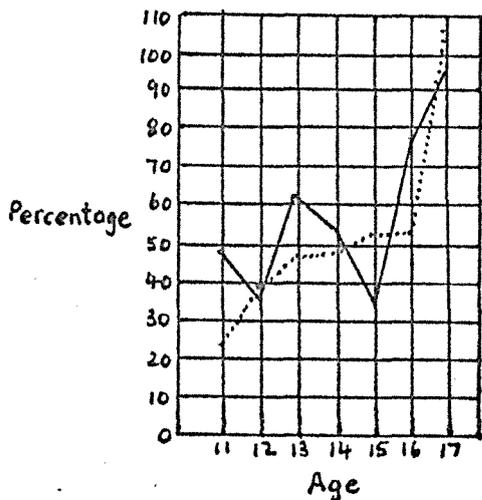


FIGURE 7. The number of different kinds of reasons given for the first aspiration, by each age/sex group, as a percentage of the number of subjects in that group.

KEY: ——— - male
 - female

B) Reliability Study: In order to test whether or not this study was reliable, four weeks after the initial administering of the questionnaire, a random sample of 139 subjects, comprising 10 males and 10 females from each age level (except age 13 where there were only 9 males, and age 17, where there were 8 males and 12 females) was administered the questionnaire again. This study was done to compare the results for these subjects at two times, one month apart, on the following points.

- i) The average number of choices, preferences and aspirations at each age level.
- ii) The number of subjects who selected the same first choice, preference and aspiration at each age level.
- iii) The average number of reasons for choice, preference and aspiration at each age level.
- iv) The number of subjects who gave the same reasons at each age level.

TABLES 12, 13, 14 and 15 present the results of these comparisons.

i) TABLE 12. compares the average number of choices, preferences and aspirations at each age level on both occasions, using the Pearson Product Moment r . As can be seen the correlations were generally indicative of reliability.

ii) TABLE 13. compares the first choice, preference and aspiration of the subjects in the reliability study.

The comparison was divided into six categories. These are as follows:

- A. Identical choice, preference or aspiration on both occasions.
- B. Similar choice, preference or aspiration on both occasions, according to categories, used by Miller (1968).
- C. The first choice, preference and aspiration was interchanged with the second one, which was similar.
- D. The first choice, preference or aspiration was

TABLE 12. Correlations using the Pearson Product Moment r , between the number of choices, preferences and aspirations made by subjects in the reliability test group, on the two administrations of the questionnaire, one month apart.

AGE \ SELECTION	CHOICE	PREFERENCE	ASPIRATION
11	.76	.67	.51
12	.52	.64	.42
13	.84	.79	.79
14	.54	.12	.31
15	.51	.69	.68
16	.72	.59	.56
17	.55	.25	.66

TABLE 13. Comparisons of the first choices, preferences and aspirations, of the subjects in the reliability test group, on the two administrations of the questionnaire, one month apart.

KEY: A - Identical on both occasions.
 B - Similar on both occasions, as categorized by Miller(1968).
 C - The first selection interchanged with the second, which was similar.
 D - The first selection interchanged with the second, which was different.
 E - The first selection was ranked third or lower on the second occasion.
 F - On one occasion no selection was made.
 G - Different on both occasions.
 Ta- Total of A, B and C.
 Tb- Total of D, E, F and G.
 Tc- Overall total.

	CATEGORY	A	B	C	D	E	F	G	Ta	Tb	Tc
AGE	SELECTION										
11	Choice	65	-	5	15	10	-	5	70	30	100
	Preference	35	15	-	5	5	5	35	50	50	100
	Aspiration	50	10	-	5	5	10	20	60	40	100
12	Choice	75	5	-	5	5	-	10	80	20	100
	Preference	15	15	-	5	5	-	60	30	70	100
	Aspiration	40	5	-	-	25	-	30	45	55	100
13	Choice	85	5	-	-	-	5	5	90	10	100
	Preference	32	10	-	5	11	-	42	42	58	100
	Aspiration	42	-	-	-	21	5	32	42	58	100
14	Choice	65	5	-	-	25	-	5	70	30	100
	Preference	30	15	-	-	15	-	40	45	55	100
	Aspiration	30	10	-	-	15	-	45	40	60	100
15	Choice	65	10	-	-	5	10	10	75	25	100
	Preference	50	5	-	5	10	5	25	55	45	100
	Aspiration	35	5	-	-	15	10	35	40	60	100
16	Choice	65	10	-	-	10	-	15	75	25	100
	Preference	40	15	-	5	10	-	30	55	45	100
	Aspiration	55	-	-	-	15	15	15	55	45	100
17	Choice	90	-	-	-	10	-	-	90	10	100
	Preference	50	10	-	-	15	-	25	60	40	100
	Aspiration	70	5	-	5	-	5	15	75	25	100

TABLE 14. Correlations using the Pearson Product Moment r between the number of reasons given for the first choice and aspiration, and for not expecting the first preference, by the subjects in the reliability test group, on the two administerings of the questionnaire, one month apart.

AGE \ SELECTION	CHOICE	PREFERENCE	ASPIRATION
11	.10	.20	.33
12	.60	.64	.53
13	.64	.37	.57
14	.32	.28	.52
15	.39	.56	.46
16	.93	.33	.71
17	.57	.46	.15

TABLE 15. Comparisons of the reasons given for the first choice and aspiration, and for not expecting the first preference, by the subjects in the reliability test group, on the two administrations of the questionnaire, one month apart.

KEY: A - Identical reasons on both occasions.
 B - Similar reasons on both occasions.
 C - On one occasion no reasons given.
 D - Different reasons on both occasions.
 Ta- Total of A and B.
 Tb- Total of C and D.
 Tc- Overall total.

AGE	CATEGORY	A	B	C	D	Ta	Tb	Tc
	SELECTION							
11	Choice	40	10	5	45	50	50	100
	Preference	30	10	15	45	40	60	100
	Aspiration	30	10	25	35	40	60	100
12	Choice	55	25	-	20	80	20	100
	Preference	5	10	-	85	15	85	100
	Aspiration	25	50	-	25	75	25	100
13	Choice	68	6	6	20	74	26	100
	Preference	32	5	5	58	37	63	100
	Aspiration	21	16	5	58	37	63	100
14	Choice	40	5	-	55	45	55	100
	Preference	40	10	5	45	50	50	100
	Aspiration	30	15	5	50	45	55	100
15	Choice	45	15	10	30	60	40	100
	Preference	35	10	20	35	45	55	100
	Aspiration	20	20	20	40	40	60	100
16	Choice	60	10	-	30	70	30	100
	Preference	45	5	-	50	50	50	100
	Aspiration	50	10	20	20	60	40	100
17	Choice	55	15	-	30	70	30	100
	Preference	40	-	5	55	40	60	100
	Aspiration	35	20	10	35	55	45	100

interchanged with the second one, which was different.

- E. The first choice, preference or aspiration was still selected, but was ranked third or lower.
- F. On one occasion no choice, preference or aspiration was selected.
- G. A completely different choice, preference or aspiration was selected.

It was felt that a combination of A, B and C would indicate a tendency towards reliability of selections. A combination of D, E, F and G, would indicate lack of reliability of choices, preferences and aspirations. Results for choices suggests a tendency towards reliability. For preferences and aspirations there is little reliability.

iii) TABLE 14 compares the average number of reasons given by subjects for their first choice and aspiration and for not expecting their first preference, on both administerings of the questionnaire, using the Pearson Product Moment r . In general these correlations are not very high, except for choices and aspirations for 16 year old males.

iv) TABLE 15 presents the comparison of the kinds of reasons given by subjects on both administerings of the questionnaire. The comparison was divided into four categories.

- A. Identical reasons on both occasions.
- B. Similar reasons on both occasions.
- C. On one occasion no reason given.
- D. Different reasons on both occasions.

It was felt that a tendency towards a combination of both A. and B. would indicate support for reliability of the kinds of reasons given. A tendency towards a combination of C. and D. would indicate lack of reliability for the kinds of reasons given. For choices the trend is towards reliability. Preferences and aspirations are less reliable.

DISCUSSION:A. Reliability Study.

i) The average number of choices, preferences and aspirations at each age level.

The Pearson Product Moment r between the number of choices selected on the first and second administration of the questionnaire were all positive and at least greater than 0.5. While none of these correlations is extremely high, there was in fact, on both occasions a low number (few) of choices, preferences and aspirations made at each age level. For the reliability study subjects, the average number of choices, preferences and aspirations over all age levels and undifferentiated for sex were as outlined in TABLE 16.

Thus, while the correlations were not extremely high, there was little difference in the overall average number. Since the present concern is with demonstrating that the number of choices, preferences and aspirations would be less than five, it would appear that this is so.

ii) The number of subjects who selected the same first choice, preference and aspiration, at each age level.

The percentage of subjects who made the same or a very similar choice on both occasions was very high. This ranged from 70% at ages 11 and 14 to 90% at 13 and 17. This would tend to suggest that for most subjects their choice is stable over a least one month. It also indicates that the children were not answering the questionnaire randomly, since they are hardly likely to remember a one month old lie. Quite a different situation is evident for preferences and aspirations. Generally the percentage of subjects selecting the same first preference and aspiration is much lower than for choices. This is what can be expected, considering that they have less basis in reality, as defined by this study, and are therefore more susceptible to changes in whim.

iii) The average number of reasons for choice, preference and aspiration, at each age level.

TABLE 16. The average number of choices, preferences and aspirations, for all age/sex groups, of the subjects in the reliability test group, on the two administerings of the questionnaire, one month apart.

SELECTION	CHOICE		PREFERENCE		ASPIRATION	
	1st	2nd	1st	2nd	1st	2nd
ADMINISTERING OF THE QUESTIONNAIRE						
AVERAGE NUMBER OVERALL	3.2	3.0	2.9	2.8	2.8	2.7

The stability of the number of different reasons given, over time, does not appear to be very high. The correlations were generally quite low. Since most subjects gave very few reasons, 1, 2, or 3, then this would tend to suggest that while subjects may be fairly definite as to what they select with respect to choices, preferences and aspirations, they are changeable as to why they select these choices and aspirations and do not expect to do their preferences, except perhaps the 16 year olds.

iv) The number of subjects who gave the same reasons at each age level.

For selecting choices, preferences and aspirations the questionnaire required a list of jobs. Because the format of the responses was not specified, the questionnaire allowed greater flexibility in the responses to the reasons for selecting these jobs. However, TABLE 15 shows that the percentages of subjects who gave the same first reason for choice and aspiration and for not expecting preference on both administerings of the questionnaire is quite high, although not as high as for selecting first choices, preferences and aspirations.

Overall, the data collected to test reliability, suggests that most subjects have a fairly reliable selection for their first choice and that the kinds of reasons given are also quite reliable. There is less reliability in the number of reasons given for choices. The comparable data for preferences and aspirations is much less reliable. However, for choices, preferences and aspirations, the numbers of selections and the number of reasons are few on both occasions. Certainly the data indicates that choices are more reliable than preferences which are more reliable than aspirations. It is to be expected that preferences and aspirations will be less reliable than choices, and in this respect the study has proved not only reliable, but valid, in that the different distinctions seem to be made with understanding of their definitions by the subjects.

B. The Present Study.

The hypotheses of the present study tend to have

been to varying degrees, confirmed.

1) Vocational choices, vocational preferences and vocational aspirations are three distinct categories able to be distinguished as early as age 11. The distinctions between vocational choice, vocational preference and vocational aspiration appear to have been made quite readily. The amount of overlap in the selection of choices, preferences and aspirations was very small in all age/sex groups. Since it is to be expected that for some subjects their choices, preferences and aspirations will be the same or similar, for example, in that an adolescent may choose, prefer and aspire to become a doctor, and this may be a realistic choice for the adolescent, it would appear that the overlaps that have occurred do not represent necessarily a failure to distinguish between choices, preferences and aspirations. Certainly, there were no reported difficulties in understanding the distinctions, and class teachers were asked to be aware of these.

Such a distinction then, would not only seem to be desirable in terms of clarifying what is meant when adolescents are asked what they want to do on leaving school, or some other similar question, for the adolescents themselves, but also for research, where, as has already been discussed, the proliferation of meanings applied to the term vocational choice, where they are in fact applied at all, has made it virtually impossible to comprehend what many researchers are discussing, particularly when comparisons are being made of different research. Thus, the making of the distinctions is clearly useful and important.

The hypothesis that these distinctions are able to be made as early as age 11, seems to have been supported. There does appear to be a slightly greater overlap between choices and preferences, choices and aspirations, and preferences and aspirations for 11 year old males, than any other age/sex group, (TABLE 2.), particularly

for preferences and aspirations. This cannot be explained in terms of a lack of knowledge of the variety of jobs available, since the data in TABLE 5 shows that these children can make as wide a variety of job selections as any others. Since the only overlap in selections that was unusually great was that between the 11 year old males' preferences and aspirations, it would seem reasonable to conclude that these males make more realistic preferences and aspirations, or that they still perceive these preferences and aspirations as being capable of being attained. Perhaps both these would apply. Some examples of these aspirations are City Council workers and farm hand, both of which are able to be attained, if desired, by most people as far as ability is concerned. On the other hand, some of these adolescents put their choices as realistic jobs, but seem to combine their preferences and aspirations somewhat. However, apart from these relatively minor incidents of overlap, the distinctions appear to have been made quite clearly.

2) At any age level, the average number of choices, as well as preferences and aspirations will be few (defined as less than or equal to 5). The percentages of subjects who selected less than or equal to 5 choices, preferences and aspirations are 85, 92 and 93 respectively. In fact 61% of subjects made less than or equal to 3 choices. The only age/sex group that, on the average, selected greater than 5, was 12 year old female choices, at 5.07. With the overall average number of choices, preferences and aspirations being 3.36, 3.02 and 2.71 respectively, it does seem reasonable to conclude that with the criteria of few being less than or equal to 5, the hypothesis that the average number of choices, preferences and aspirations at any age level will be few, has been strongly supported.

Not only is this small number of selections in each age/sex group interesting, but also the curve that

emerges in FIGURE 1. Rather than the number being gradually reduced over time, the results suggest an inverted U pattern for each of the choices, preferences and aspirations at each age level. There is some deviation from this when the data is differentiated for sex, but the general pattern is still evident. For choice, preference and aspiration there is a slight, but perceptible increase in the number of selections from age 11 to about 13 or 14, and then a similarly slight but perceptible decrease from these ages to 16. What is interesting is that the average numbers selected at 16 are remarkably similar to those at 11 for choice, preference and aspiration. This is quite at variance with traditional curves, particularly that of Gesell et al. (1956) whose least number of selections occurs at 13, whereas in the present study, the overall maximum is at 13.

This curve could perhaps be explained by the school in which the study was done. It was a Form 1 to Form 7 school, which had been opened for about 12 months. Most of the 13 and 14 year olds were in the third form, or at the beginning of the high school part of this school. Such a move may have prompted these adolescents to 'broaden their horizons', now they were secondary school students. However, they were able not only to distinguish between choices, preferences and aspirations, but also to rank them. Thus, it appears they did have fairly definite ideas about their vocations. Perhaps too, they were becoming more aware of the variety of jobs available and were including in their list of selections some newly discovered jobs. Whatever explanation is offered, the fact remains that what is being discussed is merely relative differences and that these differences are very small. Certainly there is not a continuous reduction in the number of choices, preferences and aspirations over time, or for that matter, in the combination of all three.

3) There will be many different kinds of jobs selected at each age level. An examination of the number of different kinds of jobs selected at each age level for choices, preferences and aspirations reveals an interesting trend. While there were many different kinds of jobs selected at all age levels for each of the subjects first choice, preference and aspiration, there were considerably fewer first choices selected by females, at all age levels than by males. Such a finding would tend to support making the distinction between choices, preferences and aspirations (TABLE 5.). Overall, when the number of different jobs selected as first choice, preference and aspiration is divided by the number of subjects, females tend to select about 62% the range of choices, 85% the range of preferences and about the same range of aspirations as males. The range for males at each of choices, preferences and aspirations is similar in number, but for females it gradually increases through preference and aspiration until it almost equals the males at aspirations.

Bearing in mind the definitions of choice, preference and aspiration, a likely explanation emerges. There are many different kinds of jobs females dream about doing, and there are even many jobs females feel they are capable of doing and would like to do, but mainly because of the expected cultural role of the female to get married and have a family, they do not. However, when females consider the jobs they are most likely to end up doing, then the range is considerably reduced, when compared with males. Even though there are considerable changes being made in attitudes towards and opportunities for women working there is still a strong tendency for females to choose more traditionally female jobs. This suggests influences are being brought to bear on girls to make them feel that they could not do traditionally male jobs. The results suggest that females are choosing jobs they feel more confident about attaining.

This trend is evident at all age levels.

This is seen in the actual kinds of jobs selected for choices, preferences and aspirations by both males and females. The only overlap in the data for males and females in the most popular choices, preferences and aspirations (TABLE 6) is that of teacher and that only for 14 year old preferences. The most popular choice for 11 year old males is builder, for 12 year olds, farmer, 13's farmer and architect, 14's farmer and architect, 15's chef or cook, 16's accountant, mechanic or the navy and there was no popular choice for 17 year olds. There were, however, very few subjects at this age level. These jobs, except for builder are popular with a greater percentage of the subjects in this study than that of those who hold these jobs in New Zealand, in (1971), (N.Z. Yearbook, 1975). This may suggest that the choices are unrealistic, and it is likely that for some of these subjects this may be so. However, apart from architect, and perhaps farmer, these most popular jobs are hardly ones with very high prestige value and high financial rewards, or which require considerable skills and intelligence. It is not evident from the data why these jobs were chosen so frequently. Reasons given for farming often involved the fact that the father or a relative owned a farm. For architect, reasons given were ability or interest in this area. Certainly there appeared to be no reason why these adolescents should not attain these jobs other than lack of availability. The most popular preference and aspiration generally reflects an orientation towards being realistic about not getting them. Many males prefer and aspire to such jobs as doctor, pilot, professional sportsman and millionaire, but because these are preferences and aspirations they appear to accept that they are most unlikely to end up doing them.

A similar pattern emerges for females. They tend to choose jobs most commonly attained by females, such

as housewife, nurse, teacher, secretary, shop assistant, typist and office worker. Younger females tend to choose the first three above, with the older females selecting the latter jobs in greater numbers. Again, these figures, apart from housewife, are greater than the number of workers employed in such jobs in 1971, (N.Z. Yearbook, 1975). This, like the males, may indicate a lack of realism in choices for some of these adolescents. But the data does not indicate any reason for this, and apart from availability, there appears to be no real reason why these females could not attain these jobs. They are not the usual glamour jobs such as air hostess and filmstar, which were popular selections for preferences and aspirations.

Thus, some males and females are selecting choices that because of lack of availability they will probably not attain. There is no indication that these children are not capable of attaining these jobs in terms of ability, therefore it is most likely that it is a lack of knowledge or awareness of the availability of some jobs that causes these children to select such jobs. Further research is needed to determine the extent of knowledge of availability of jobs, particularly the most popular ones.

- 4) At any age level, the average number of reasons given for selecting the first choice and aspiration and for not expecting the first preference will be few (defined as less than or equal to 5). The average number of reasons selected for choices, preferences and aspirations at all age levels was few. The maximum average was for 14 year old females choices (2.38) and this was less than half the maximum of the definition of 'few' as less than or equal to 5. This would tend to suggest that subjects do have a few fairly specific reasons why they choose, prefer and aspire to a job.
- 5) There will be many different kinds of reasons given for the first choice and aspiration and not expecting

the first preference, at each age level. It appears however, that the range of reasons is quite wide. For both sexes, at all age levels, and for choices, preferences and aspirations the number of different reasons was at least a third, and usually more than one half, the number of subjects in that age/sex group. There appears to be a slight tendency for the number of reasons given to increase with each age level. This increase is most marked for choices at ages 16 and 17. This could be explained by the fact that these subjects will most probably have passed School Certificate and University Entrance examinations, and are preparing for a very specific job, probably professional, and have more awareness of the specific needs that are to be fulfilled for themselves in these jobs, and these needs may be quite diverse. The actual reasons given by 16 and 17 year olds tend to show a greater awareness of others, so that they are more likely to put their reasons as being 'help others' and 'meet others' than are younger subjects.

This increase in the variety of reasons given with increasing age could be accounted for in terms of the adolescents becoming more aware of why they choose certain jobs. Younger adolescents may not be all that aware of why they make a choice, preference or aspiration, particularly choices, but with increased age they come to an increased awareness of why they make such choices. It could also be that the children are better able to express themselves as they get older. Overall however, there is a tendency for certain reasons to be more popular than others, at all age levels. For choices and aspirations the most popular are 'good pay' and 'liking the job', either or both of which were given as reasons for choices and aspirations by at least 50% of subjects in most age/sex groups. An 'interest' in the job was selected by approximately 20% for choices in most age/sex groups. Other reasons given as outlined in TABLE 9. show that for different age/sex groups, some

reasons are more popular than others.

The reasons given tend to be reasonable and reflect an awareness of what is behind the selection of the choice, preference and aspiration, although this awareness probably increases with age. Certainly very few subjects did not give at least one reason for choices.

Interesting trends are apparent from TABLE 10, in the reasons given for not expecting to do the preferences. At all age/sex groups subjects gave no reason for not expecting their first preference. In some cases subjects gave reasons why they preferred their preference, but not why they did not expect to enter it. These subjects were classified as having no reason, although this was really an inappropriate reason, probably due to not clearly following instructions. Many subjects, especially females, feel they lack certain personal qualities essential to the job, such as 'not strong enough' and 'too quiet'. Older males and females see the 'lack of available positions', 'lack of qualifications' and 'too much study' as being important reasons. This would tend to suggest that there is an increasing awareness with age of why subjects made their preferences and why they do not expect to enter them.

6) There will be significant differences due to sex.

There were a number of differences due to sex. For the number of choices, preferences and aspirations, the differences were most marked at 12 years. No really plausible explanation of this is apparent from the data. Since the females chose, preferred and aspired to significantly more jobs than the males, it can be assumed that these females are becoming more aware of the range of jobs available and which are quite likely to be attained. However, such a great number would tend to indicate that these females are not yet decided on any specific job, but are keeping their options open. There is no evidence from the data to suggest that the choices

are not realistic, in that they are not within the capabilities of the females, but further research in this area could be fruitful.

While there may be few sex differences with respect to the number of jobs, there is a very interesting pattern in the average number of different kinds of jobs selected. Males tend to make a greater range of choices, a slightly greater range of preferences and an almost similar range of aspirations to females. This suggests that females do not feel they have a great range of jobs open to them, in so far as they can reasonably expect to end up doing them. This is not quite so for preferences and aspirations. That females do see this much narrower range is understandable in the light of the traditional view of women and work, but this need not apply today. There is, it appears, a need for educating females to be more determined to make preferences and some aspirations become the jobs they actually choose and eventually attain.

There are clear differences in the more popular jobs selected by males and females as their first choice, preference and aspiration. ^{in the sample} Females tend to select jobs which are traditionally those jobs selected by females, e.g. nurse, teacher, housewife, secretary. While such differences are understandable and probably wise in some respects, because of job availability and family commitments, there does appear to be considerably more education of females needed in the kinds of jobs available to them.

Overall females seem to choose, prefer and aspire to similar numbers of jobs. In all cases, the average number was low, although overall there were slightly more reasons given for preferences and aspirations than choices. This is most likely so because males tend to give a greater variety of first choices, but not first preferences and aspirations than females. A greater range in kinds of jobs is most likely to result in a greater

range of kinds of reasons for these jobs.

There are some apparent differences in the less popular reasons / between males and females. Females tend to give 'involves children' and 'taking the course at school' as reasons for their choices more often than males. Males more often than females cite 'involves outdoors' as a reason for choices. For aspirations and sometimes choices, females more frequently than males give 'involves animals', 'travel', 'meeting people' and 'fame' as reasons. For not expecting their preferences, females more often than males give reasons such as 'lack of intellectual ability', 'do not like some aspect of it', 'physical handicap' e.g. 'too short', 'not pretty enough'. Males more often than females give as reasons for not expecting their preferences, 'lack of finance', 'too much study involved'. Generally these differences between the sexes for choices and aspirations and for not expecting preferences reflect the traditional roles ascribed to females and males. In a changing situation in the world with regard to women and work, the results suggest that arrangements should be made for women to be better informed about the opportunities available to them.

The data generally tended to support the hypothesis that vocational choice is realistic from the age of 11 years, in that:

- a) It appears that children can distinguish between vocational choice, vocational preference and vocational aspiration from age 11.
- b) The number of vocational choices at each age level is few (defined as less than or equal to 5).
- c) The kinds of vocational choices at each age level are many and varied.
- d) The kinds of reasons for vocational choices at each age level are many and varied.
- e) There was some evidence that this data was reliable.

Most of the specific hypotheses appear to have been supported, to some degree at least.

- 1) Adolescents do appear to be able to make the distinction between vocational choice, vocational preference and vocational aspiration, as outlined in this study, from about age 11.
- 2) At any age level the average number of choices, preferences and aspirations is few (defined as less than or equal to 5).
- 3) There are many different kinds of jobs selected at each age level.
- 4) The average number of reasons given for selecting the first choice and aspiration and for not expecting the first preference is few (defined as less than or equal to 5).
- 5) There are many different kinds of reasons given for selecting the first choice and aspiration and for not expecting the first preference at each age level.
- 6) There are differences between the sexes in the actual kinds of jobs and reasons given, though generally not in the average numbers of selections of choices, preferences and aspirations and the numbers of reasons for these. Both sexes appeared to distinguish between the terms vocational choice, vocational preference and vocational aspiration.

CONCLUSIONS:

1. The Number of Choices Selected.

Whereas the traditional theories suggest 'many' choices are made by younger children and that the number is gradually reduced with increasing age to 'few', the present study supports trends, implied in the literature by showing the number of vocational choices, as defined by the present study is 'few' (less than or equal to 5), at all age levels. This suggests that continuity as an aspect of the vocational choice process is not supported. It also suggests that children realize from an early age that they are limited, for a number of reasons in the kinds of jobs they can expect to attain, even though the range of jobs available today is many thousands.

2. The Kinds of Choices Selected.

Vocational choices are many and varied and generally different from vocational preferences and vocational aspirations. There are some jobs more popular with different age levels and some selected by a greater percentage of the subjects than the percentage of the population as a whole employed in such jobs, but no indications are apparent suggesting these young people are not capable of attaining such jobs, apart from their availability. This suggests that some individuals are unaware of the lack of availability of even much less prestigious and poorer paid jobs. Education in this area is seemingly lacking.

3. The Number and Kind of Reasons Given for the Choices.

These appear to be many and varied, and generally different from those for aspirations and for not expecting preferences, although there are some considerable similarities between those for choices and aspirations. They tend to reflect a realistic approach and certain reasons are more popular with different age levels. There is an indication that younger children, while quite realistic about their vocational choices, are perhaps not fully aware as to the reasons behind them. A greater awareness of these reasons comes with increasing age.

4. The Differences Between the Choices of Males and Females.

The differences outlined, generally reflect, it would seem, a tendency for females to give evidence for being discriminated against. The traditional concepts of women as 'mother' and 'wife', and 'working only until has children', appear to be far from dead.

5. Theories of Vocational Choice.

These are many and varied and come from a number of different disciplines, e.g. psychology, education, sociology and economics. The most popular and influential of these seem to have been the psychological, in particular the developmental and self theories. These

theories seem to assume that vocational choice, as part of overall development is a process, which has as some of its key aspects the continuity and exclusiveness of nature of this process. In terms of the number of vocational choices made at each age level, and the extent to which the choices are realistic these aspects are not supported, thus putting to question the more influential theories of vocational choice.

6. The Importance of Vocational Choices.

With the advent of increased leisure and a tendency for work to be a less important factor in the lives of many people, this not only puts into question the theories of vocational choice which emphasize the importance of the making of a vocational choice, but also whether or not this will be needed to be made at all. If in the future many people will not only not have to work, but also be unable to find work if they want it, they will be unable or find it unnecessary to make a vocational choice. For the present it seems that most adolescents do make a choice and that this tends to be made at an early age on quite a realistic basis.

It seems that most adolescents choose a job they like and for which they can get reasonably well paid, but few seek a job for its intrinsic rewards or for some concept of 'self-actualization'. However, to the extent that they are aware of the realities of vocational choice, then they will probably be satisfied. Certainly they do not appear to be overly perturbed by the process of vocational choice and seem to make their choices quite readily. Considering the changing emphasis on work and leisure, it would seem sensible to pursue means of enabling people to develop life plans that do not overemphasize work, but which integrate both work and leisure into a harmonious life style. Change does appear to be necessary and education seems to be the way of making it.

7. Defining Vocational Choice.

A vocational choice is not a vocational preference

or a vocational aspiration, nor is it vocational attainment. Considerable divergence of meanings and terminology is evident. The present study has proposed a useful means of distinguishing between these terms and it appears to be able to be used with success by children as early as age 11.

8. The Reality Basis of Vocational Choices.

In so far as vocational choices as defined by this study are few, that the distinction between vocational choice, vocational preference and vocational aspiration can be made, that vocational choices themselves and the reasons for these are different from those for vocational preferences and vocational aspirations, and are apparently attainable in terms of availability and ability of the individual, then it would seem that vocational choices are realistic. More notice should be taken of the vocational choices as well as the preferences and aspirations of children, Brown & Srebalus (1973), because what a person says he wants to do is an important piece of information, Gottfredson & Holland (1975). This information could be used constructively in giving help to young people, as young as eleven, where it is needed, to develop a satisfying life style. This would need to include adaptability, according to Toffler (1970). It would also need to take into account the part that work, leisure and all aspects are going to play in the life of each individual, Gysbers & Moore (1975). Considering that guidance and counselling services in New Zealand secondary schools are inadequate, Dawson (1972), Renwick (1972), much must be done in this area quickly. Renwick (1972), and Webster (1974) feel we have the resources in this country now, and all we need is action.

IMPLICATIONS FOR VOCATIONAL CHOICE AND SUGGESTIONS FOR FURTHER RESEARCH.

This study has shown that many traditionally held ideas about vocational choice need to be re-examined in terms of the changing trends in work and leisure.

Further research is needed to explore some of the trends suggested by this study.

- Longitudinal studies are needed to establish more definitely the 'reality' of the vocational choices made at age 11, in terms of actual attainment.
- More reliable measures of the extent to which early vocational choices are realistic, would be useful.
- Proposals regarding theories which are not just of vocational choice, but of life styles involving work and leisure and continuing throughout the lifespan, are necessary.
- Further research on the place of work in the lives of women is urgent, considering changing world trends.

APPENDIX.

QUESTIONNAIRE.

Vocational Choices, Preferences and Aspirations.

Surname..... First names.....
 Age(years).... Date of Birth.../.../.. Today's Date../.../..
 School/College..... Form..... Sex.....
 Occupation of a)Father.....b)Mother.....

INSTRUCTIONS:

It has been suggested that there are three different ways people look at jobs. They are called CHOICES, PREFERENCES and ASPIRATIONS.

Choices refer to the jobs you expect you will most likely end up doing. Preferences refer to the jobs you like and could possibly do, but for various reasons, you do not expect to end up doing. Aspirations refer to the jobs you would do, if by some magic you could do any jobs you wanted.

You are to list all your job choices, job preferences and job aspirations in the three separate lists provided. Then you are to rank each list in the space provided. This means that for choices place 1 beside the job you expect you are most likely of all to end up doing, 2 beside the second most likely job, and so on. For preferences and aspirations place 1 beside the job you like most of all, 2 beside the second most liked job, and so on. NUMBER ALL JOBS IN EACH LIST.

CHOICES		PREFERENCES		ASPIRATIONS	
Rank	What are the jobs you are most likely to do?	Rank	What are the jobs you like and could possibly do, but don't expect to do?	Rank	What are the jobs you would do if by some magic you could do any job you wanted?

List your answers to the questions below, in the spaces provided. Then, for each list, rank the answers you gave, in the order of how important you feel they are for you. The most important reason you gave as an answer, is to be ranked 1, the second most important 2, and so on for each of the three lists. Put these numbers in the columns provided. RANK ALL THE REASONS IN EACH LIST.

Rank	What are the reasons for selecting your first CHOICE?	Rank	For what reasons do you <u>not</u> expect to end up doing your first PREFERENCE?	Rank	What are the reasons for selecting your first ASPIRATION?

REFERENCES.

- AUSUBEL, D.P. Theories and Problems of Adolescent Development. New York: Grune & Stratton, 1954.
- AUSUBEL, D.P. The Fern and the Tiki. New York: Holt, Rinehart & Winston, 1960.
- BALDOCK, C.V. Vocational Choice. Christchurch: University of Canterbury Publication No. 13, 1971.
- BARNETT, R.C. Sex differences and age trends in occupational preference and occupational prestige. Journal of Counseling Psychology, 1975, 22, 35-38.
- BERGER, E.M. Vocational choices in college. The Personnel and Guidance Journal, 1967, 45, 888-894.
- BEST, F. The Future of Work. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
- BLAU, P.M., GUSTAD, J.W., JESSOR, R., PARNES, H.S. & WILCOCK, R.C. Occupational choice: A conceptual framework. Industrial and Labour Relations Review, 1956, 9, 531-543.
- BOROW, H. Vocational development research: Some problems of logical and experimental form. The Personnel and Guidance Journal, 1961, 40, 21-25.
- BOROW, H. The adolescent in a world of work. In J.F. Adams (Ed.), Understanding Adolescence. Boston: Allyn & Bacon, 1968.
- BROWN, D. Implications of research for career development and vocational choice. In D. Brown & D.J. Srebalus (Eds.), Selected Readings in Contemporary Guidance. Dubuque, Iowa: Wm. C. Brown, 1973.
- BROWN, D. & SREBALUS, D.J. (Eds.). Selected Readings in Contemporary Guidance. Dubuque, Iowa: Wm. C. Brown, 1973.
- CARKHUFF, R.R. Helping and Human Relations. Vol. II. New York: Holt, Rinehart & Winston, 1969.
- CHILDS, G.B. Is the work ethic realistic in an age of automation? Phi Delta Kappan, 1965, 46, 370-375.
- CRITES, J.O. Vocational Psychology. New York: McGraw-Hill, 1969.
- DAUW, D.C. Career choices of high and low creative thinkers. Vocational Guidance Quarterly, 1966, 15, 125-140.

- DAWSON, R.W.K. The rise and fall of the guidance counsellor in the New Zealand secondary school, 1940-1971. The Australian and New Zealand Student Services Association, Counselling Monograph, No. 1, 1972.
- DEUTSCHER, M. Adult work and developmental models. American Journal of Orthopsychiatry, 1968, 38, 882-892.
- DOUVAN, E. & ADELSON, J. The Adolescent Experience. New York: Wiley, 1966.
- GADE, E.M. & SOLIAH, D. Vocational preference inventory high point codes versus expressed choices as predictors of college major and career entry. Journal of Counseling Psychology, 1975, 22, 117-121.
- GARRISON, K.C. Psychology of Adolescence. 6th ed. Englewood Cliffs, New Jersey: Prentice-Hall, 1965.
- GESELL, A., ILG, F.L., & AMES, L.B. Youth: The Years From Ten to Sixteen. New York: Harper & Brothers, 1956.
- GINZBERG, E. The Development of Human Resources. New York: McGraw-Hill, 1966.
- GINZBERG, E., GINSBURG, S.W., AXELRAD, S., & HERMA, J.L. Occupational Choice. New York: Columbia University Press, 1951.
- GOOCH, S. & KELLMER PRINGLE, M.L. Four Years On. London: Longmans, Green, 1966.
- GOTTFREDSON, G.D. & HOLLAND, J.L. Vocational choices of men and women. Journal of Counseling Psychology, 1975, 22, 28-34.
- GUPTA, A.K. Status values of professions and vocational preferences: studying vocational development among 11+ pupils in an Indian school. Adolescence, 1974, 9, 443-459.
- GYSBERS, N.C. & MOORE, E.J. Beyond career development-life career development. The Personnel and Guidance Journal, 1975, 53, 647-652.
- HACKMAN, R.B. Vocational counseling with adolescents. In J.F. Adams (Ed.), Understanding Adolescence. Boston: Allyn & Bacon, 1968.
- HAYES, J. Occupational choice and the perception of occupational roles. Occupational Psychology, 1969, 43, 15-22.
- HILL, G.B. Choice of career by grammar school boys.

- Occupational Psychology, 1965, 39, 279-289.
- HOLDEN, G.S. Scholastic aptitude and the relative persistence of vocational choice. The Personnel and Guidance Journal, 1961, 40, 36-41.
- HOLLAND, J.L. A theory of vocational choice. Journal of Counseling Psychology, 1959, 6, 35-43.
- HOLLAND, J.L. Making Vocational Choices. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
- HORNER, M. Fail: Bright women. In Readings in Psychology Today. 2nd ed. Del Mar, California: C R M Books, 1972.
- HURLOCK, E.B. Developmental Psychology. 3rd ed. Bombay: Tata McGraw-Hill, 1968.
- KARMEL, B. Education and employment aspirations of students: A probabilistic approach. Journal of Educational Psychology, 1975, 67, 57-63.
- KIELL, N. The Universal Experience of Adolescence. Boston: Beacon Press, 1964.
- KREPS, J. & SPENGLER, J. Future options for more free time. In F. Best (Ed.), The Future of Work. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
- KRUMBOLTZ, J.D. & THORESEN, C.E. (Eds.). Behavioral Counseling: Cases and Techniques. New York: Holt, Rinehart & Winston, 1969.
- KUVLESKY, W.P. & BEALER, R.C. The relevance of adolescents' occupational aspirations for subsequent job attainments. Rural Sociology, 1967, 32, 290-301.
- LAYTON, W.L., SANDEEN, C.A. & BAKER, R.D. Student development and counseling. Annual Review of Psychology, 1971, 22, 533-564.
- LEVENSTEIN, A. Work is in disrepute. The Personnel and Guidance Journal, 1975, 53, 646.
- LIVERSIDGE, W. Life chances. In W.M. Williams (Ed.), Occupational Choice. London: George Allen & Unwin, 1974.
- MASLOW, A.H. Motivation and Personality. New York: Harper & Row, 1954.
- MCDANIELS, C. Youth: Too young to choose? Vocational Guidance Quarterly, 1968, 16, 242-249.
- MCGUIGAN, F.J. Experimental Psychology. 2nd ed. Englewood Cliffs, New Jersey: Prentice-Hall, 1968.

- McQUEEN, H.C. Vocational Guidance in New Zealand.
Christchurch: Whitcombe & Tombs, 1940.
- McQUEEN, H.C., HARRIS, W.B., GLASGOW, K.W.R., BOYES, G.H.,
O'HALLORAN, K.H., & WOODS, N.S. The Background of
Guidance. Christchurch: Whitcombe & Tombs, 1941.
- MILLER, K.M. Manual for the Rothwell-Miller Interest
Blank. Buckinghamshire: National Foundation for
Educational Research, 1968.
- MOORE, B.M. Testing knowledge and understanding of
careers. British Journal of Guidance and Counselling,
1975, 3, 107-113.
- MORRIS, D. The Human Zoo. London: Corgi Books, 1971.
- MULLER, P. The Tasks of Childhood. London: World
University Library, 1969.
- MUUS, R.E. Theories of Adolescence. 3rd ed. New York:
Random House, 1975.
- NEW ZEALAND OFFICIAL YEARBOOK 1974. Wellington:
Government Printer, 1975.
- NOETH, R.J., ROTH, J.D., & PREDIGER, D.J. Student career
development: Where do we stand? Vocational Guidance
Quarterly, 1975, 23, 210-218.
- OLIVER, L.W. Counseling implications of recent research
on women. The Personnel and Guidance Journal, 1975, 53,
430-437.
- PALLONE, N.J., RICKARD, F.S., & HURLEY, R.B. Key
influencers of occupational preference among black
youth. Journal of Counseling Psychology, 1970, 17,
498-501.
- PARKER, S. The Future of Work and Leisure. New York:
Praeger, 1971.
- PETERS, H.J. & HANSEN, J.C. (Eds.), Vocational
Guidance and Career Development. 2nd ed. New York:
MacMillan, 1971.
- POWELL, M. & BLOOM, V. Development of and reasons for
vocational choices of adolescents through the high
school years. Journal of Educational Research, 1962,
56, 126-133.
- RENWICK, W.L. Guidance in secondary schools. Education,
1972, 21, 4-9.
- ROBERTS, K. Leisure. London: Longman, 1970.

- ROE, A. Psychology of Occupations. New York: John Wiley & Sons, 1956.
- ROE, A. Early determinants of vocational choice. Journal of Counseling Psychology, 1957, 4, 212-217.
- ROE, A., HUBBARD, W.D., HUTCHINSON, T. & BALEMAN, T. Studies of occupational history. Part 1: Job changes and the classification of occupations. Journal of Counseling Psychology, 1966, 13, 387-393.
- ROGERS, D. The Psychology of Adolescence. 2nd ed. New York: Appleton-Century-Crofts, 1972.(a).
- ROGERS, D. Adolescence: A Psychological Perspective. Monterey, California: Brooks/Cole, 1972.(b).
- SMART, M.S. & SMART, R.C. Adolescents: Development and Relationships. New York: MacMillan, 1973.
- SUPER, D.E. A theory of vocational development. American Psychologist, 1953, 8, 185-190.
- SUPER, D.E. The Psychology of Careers. New York: Harper & Row, 1957.
- SUPER, D.E. Consistency and wisdom of vocational preference as indices of vocational maturity in the ninth grade. Journal of Educational Psychology, 1961, 52, 35-43.(a).
- SUPER, D.E. Some unresolved issues in vocational development research. The Personnel and Guidance Journal, 1961, 40, 11-15.(b).
- SUPER, D.E. & BOHN, M.J. Occupational Psychology. Belmont, California: Wadsworth, 1970.
- SUPER, D.E. & CRITES, J.O. Appraising Vocational Fitness. New York: Harper & Row, 1962.
- SWIFT, B. Job orientations and the transition from school to work: A longitudinal study. British Journal of Guidance and Counselling, 1973, 1, 62-78.
- TAFT, R. Aspirations of secondary school children of immigrant families in Victoria. Education News, 1975, 15, 38-41.
- THOMPSON, O.E. Occupational values of high school students. The Personnel and Guidance Journal, 1966, 44, 850-853.
- THORNBURG, H.D. (Ed.). Contemporary Adolescence: Readings. Belmont, California: Brooks/Cole, 1971.

- TIEDEMAN, D.V. Decision and vocational development: A paradigm and its implications. The Personnel and Guidance Journal, 1961, 40, 15-21.
- TIME. The Emerging European Woman. October 28, 1974, 20-31.
- TIMPERLEY, S.R. Personnel Planning and Occupational Choice. London: George Allen & Unwin, 1974.
- TOFFLER, A. Future Shock. London: Pan Books, 1970.
- VENESS, T. School Leavers. London: Methuen, 1962.
- WALZ, G.R. Swinging into the future. The Personnel and Guidance Journal, 1975, 53, 712-716.
- WARNATH, C.F. Vocational theories: Direction to nowhere. The Personnel and Guidance Journal, 1975, 53, 422-428.
- WEBSTER, A. New Zealand Education Research 'Five Years Behind'. The Dominion, Wellington. March 13, 1974, p.4.
- WERTS, C.E. Paternal influence on career choice. Journal of Counseling Psychology, 1968, 15, 48-52.
- WHITNEY, D.R. Predicting from expressed vocational choice: A review. The Personnel and Guidance Journal, 1969, 48, 279-286.
- WILLIAMS, W.M. (Ed.). Occupational Choice. London: George Allen & Unwin, 1974.
- WILSON, M.D. The vocational preferences of secondary modern school children. British Journal of Educational Psychology, 1953, 23, 97-113, 163-179.
- WRIGHT, D. Beneath the bikini. Education, 1975, 24, 2-3.
- WRIGHT MILLS, C. The meanings of work throughout history. In F. Best (Ed.) The Future of Work. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
- ZILLER, R.C. Vocational choice and utility for risk. Journal of Counseling Psychology, 1957, 4, 61-64.