THE AUSTRALIAN ACADEMIC ELITE:  
their 
FAMILY ORIGINS AND STRUCTURE

By 
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This thesis is my original work undertaken, as a research scholar from 1956 to 1959, in the Department of Demography, the Australian National University.

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Canberra, A. C. T.  
H. Y. T.
Precis

The inverse relationship between mobility and fertility has generally been explained either in terms of "environmental" factors, or in terms of "hereditary" causes. In his theory of "social capillarity", Dumont asserted that "just as a column of liquid has to be thin in order to rise under the force of capillarity, so a family must be small in order to rise in the social scale." (Italics added.) On the other hand, Fisher advocated that "the dominating cause (of differential fertility by social classes) lies in the social promotion of the relatively infertile."

However, Fisher's thesis of infertile selection in the social mobility process has gained little acceptance. Nor has it been given any empirical confirmation in various past studies of mobility and fertility and fertility behavior. Variations in the fertility of the socially mobile have increasingly been attributed to "environmental" factors, and the results of past studies indicated varying degrees of substantiation of the existence of the inverse relationship.

The present study seeks to investigate further the relation of social mobility to fertility and fertility
behavior. The data for the present study were collected (with two principal, though not strictly related, purposes in mind) from persons in the Australian academic profession.

One of the purposes was to record some statistical facts of the academic profession and to ascertain the patterns of opportunity therein with reference to family origins. These facts are given in Part II of the thesis which is subtitled "The Profession." Included in this part are descriptions of the characteristics of the academic personnel, such as country of birth, age, academic rank by age and country of birth, and religion. A more detailed examination is made of the Australian-born university teachers, dealing with their geographical origins, family background, marital status, age at marriage, and the similar characteristics of their wives.

In Part III of the thesis, a test of the mobility/fertility hypothesis is made, using the relevant data supplied by the Australian-born respondents. The three propositions which guide the analysis in Part III were taken from early empirical investigations, namely, (1) Immobility is associated with larger families, (2) mobility is associated with smaller families, and (3)
fertility is influenced by both present social status and social origin. In addition, a test is also made of a hypothesis derived from Propositions 1 and 2 and other empirical studies of birth intervals: Immobility is associated with a shorter interval between marriage and first birth; or, conversely, mobility is associated with a longer interval between marriage and first birth.

The present study adopts a seven-fold occupational classification. University teachers whose fathers were in the first two occupational categories are defined as non-mobile, and the mobile teachers are those whose fathers were in the other 5 occupational categories.

The relationship between mobility and fertility and fertility behavior is first assessed quantitatively in terms of both the number of children ever born and the average intervals between marriage and first birth. Then, to explore the relationship further, this statistical treatment is followed by a detailed review of some biographical data of selected university teachers.

For this group of university teachers investigated, the present data show that mobility is not associated with the size of their own. Nor is there any evidence that fertility is influenced by social origin (i.e., the size of parental family.).
This absence of any relationship between mobility status and fertility is seen to reflect several things. First of all, members of the academic profession have been recruited from among university graduates and, on that account, have gained social mobility through the same channel.

Secondly, as the occupational achievements of university teachers is related fundamentally to their educational attainments, their mobility was, as it were, at the expense of their parents who undertook to finance their education. Moreover, university teachers were not married not only until after the attainment of professional qualifications, but also until after the actual attainment of their occupational careers. Their mobility and fertility are, therefore, two independent events that occurred in different points of time in their lives. Thus, it is not surprising that the average family sizes of university teachers by mobility status are nearly uniform. Given the time-lag between mobility and parenthood, this uniformity reflects the assimilation of group standards and life style which presumably militate against excessive fertility within the academic circle. It seems, therefore, that, for the population studied, mobility facilitates
family limitation (i.e., the limitation of family size) rather than the reverse as Dumont implied a decade before the present century. In other words, family limitation follows rather than precedes social promotion.

Nevertheless, mobility status may still be regarded as a significant variable in relation to fertility behavior. In terms of the average intervals between marriage and first birth by mobility status, the present data show that, holding constant age at marriage, mobile university teachers tend to exhibit, in most instances, longer average marriage-birth intervals than non-mobile teachers. But, only in three cases the observed differences are found to be statistically significant. Various methodological defects in the research design may have accounted for this lack of statistical conclusiveness. Furthermore, the absence of information in regard to the medical and contraceptive histories of the subjects prevents a clear understanding of the variations in marriage-birth interval by mobility status. From the biographical data, it appears that they could have been due to differences in the employment experiences of the wives.
In conclusion, the present findings suggest a reasonable doubt concerning the propriety of employing the number of children itself as an effective or sensitive measure in studies of mobility and reproductive performance. It seems that further research in this area should take into account the circumstances under which mobility, marriage, and parenthood commence, and should probably be focussed more upon the timing of births than upon the number of children ever born to the couples investigated.
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PART ONE

INTRODUCTION
CHAPTER I

DEMOGRAPHIC INTERESTS AND RESEARCH IN AUSTRALIA

Evidence of family limitation in Australia

Immigration and fertility are the two major issues which have dominated, either singly or in combination, much of the discussion of Australian population problems. Of these two, the former attracted attention almost as soon as the settlement of Australia took place in 1788. As regards fertility, it assumed an important position in the arena of debate on Australian population questions only since the latter part of the 19th century.

The discussion on Australian fertility appeared to have commenced as its decline became evident after the late 1890's. Coghlan effectively called attention to the decline first in 1900 when he published his *Childbirth in New South Wales*, though the fact was mentioned in passing by Borthwick in 1891.

Borthwick examined population data of South Australia and commented as follows:

The birth-rate of the colony has varied from year to year, but has always been high... Since 1885 the birth-rate has been steadily declining... The constant stream of young adult immigration was doubtless the chief factor in causing the high birth-rate, and the decrease in recent years is in great part the result of the exodus of young adult population to the Barrier silver fields, ... and probably in part
to the period of depression the colony has been passing.¹

Nevertheless, Coghlan's studies² were probably the first comprehensive attempts to analyze Australian vital statistics. The onset of the decline in Australian birth-rate, according to Coghlan, appeared to have begun in 1889, fertility being measured in terms of the number of births per 100 married women of reproductive ages. From 1881 to 1888, inclusive, the annual marital birth-rate varied slightly around 29 per 100 women. Thereafter, it dropped steadily and substantially down to 20 per 100 in 1898.³

Excluding the first births of women whose pregnancies antedated their marriages, Coghlan showed that the proportion of women who gave first births fell from an annual rate of 27 per 100 in 1891 to 19 per 100 in 1898. The year 1891 also marked roughly the beginning of large diminution in the births of second and third orders. The reduction in births of fourth and higher orders dated as early as 1888.⁴


³/Coghlan, *Childbirth in New South Wales*, p.17.

⁴/Ibid., pp.18-19.
The fall in births of higher orders since the late years of the last century was doubtless the result of the growing practice of family limitation. Coghlan alluded to such practice in many places in his studies. However, the best evidence of the practice of family limitation can be found in two court decisions. The first, EX PARTE Collins, was adjudicated in 1888 by the New South Wales Supreme Court, involving a pamphlet by Annie Besant, The Law of Population: Its Consequences and its Bearing on Human Conducts and Morals. It may be recalled that Annie Besant was initially convicted for selling Charles Knowlton's Fruits of Philosophy in 1877 in England. On appeal, she and her co-defendant were freed on purely technical grounds.

The sale of Knowlton's book began in England in 1832, and for over forty years it received no interference from the authorities. During these forty-five years, 1832-1877, Australia had a net immigration of more than a million. Some of the immigrants undoubtedly could have come under the persuasion of Knowlton's book and similar literature in those days advocating family limitation. There is no direct proof of this, but it may be noted that The Malthusian,

5/EX PARTE Collins, 9 Law Reports - N.S.W. 497.
7/Ibid., p.32.
a publication of the Malthusian League in England, had six subscribers (all women) in New Zealand in 1879. Hence, by the time the Collins' case went to court in 1888, the sale of birth control literature in Australia must have already existed for some time.

Collins, a bookseller, was convicted for selling The Law of Population, which the prosecution charged as obscene. On appeal to the New South Wales Supreme Court, he was freed by a two-one decision.

Fourteen years after EX PARTE Collins, another case was brought before the Supreme Court of New South Wales in

8/Ibid., p.38.

9/Chief Justice Darley dissented largely on legalistic grounds, citing various decisions previously pronounced by courts in England. The opinions of the other two Justices, Windeyer and Stephen, treated the issue in a broader context. Stephen stated: "The delicate subject of prevention is discussed (in the Law of Population), the improbability of prudential motives leading to abstinence from marriage, and the evils of late marrying, the book being earnest in its advocacy of early marriage. ... But in the course of the writer's argument, she is brought face to face with the problem of early marriage, and the possibility, notwithstanding, of offspring being limited in number. The writer touches upon the yet more delicate subject of the feasibility of this limitation being brought to pass by continence after marriage, and... the checks by which, apart from self-restraint, the object may be accomplished. ... Now this obviously cannot be done without referring in the plainest possible terms to the ... physiological details ... necessary to the case... My opinion is that a book is not obscene, because only of its advocacy of, and the consequent suggestion and description of, the means to prevent the undue increase of progeny." EX PARTE Collins, p.532.
1902. Unlike the former case, the defendant in Potter v. Smith was first exonerated by a lower court, and the appeal was taken by the Crown. The Supreme Court unanimously reversed the decision below. The case involved a publication, Illustrated List of Domestic and Surgical Specialties, by Lambert & Son, London. It was termed "indecent" by Justice Stephen who evidently veered from his early view in EX PARTE Collins. Concurring in the decision, Justice Owen relied much on the advice of Pring who acted for the prosecution in the Collins case, but who was now a justice of the Court. Print tartly remarked in the Potter case that "I am very glad we have had the

Windeyer argues as follows: "The first objection taken to the conviction raises a question which involves not only the consideration of a topic difficult of discussion corum popula, but the very right of the public discussion of a subject of great importance to civilised society. The difficulty of dealing with the matter is not lessened by the fact that the question involved comes for consideration surrounded by all the prejudices with which centuries of ignorance and thoughtlessness have invested it, accompanied by fear of the world's censure, on points about which all who reverence purity and the ideal life of goodness would least wish to be misunderstood." Ibid., 505. "A Court of Law has now to decide for the first time whether it is lawful to argue in a decent way with earnestness of thought and sobriety of language the right of married men and women to limit the number of the children to be begotten by them by such means as medical science says are possible and not injurious to health." Ibid., 506. "If admitted, as it is, that the information, physiological and otherwise, given can be found in medical works of an expensive kind, it cannot affect the character of the information for obscenity that it is given in a cheap form. Information cannot be pure, chaste, and legal in morocco at a guinea, but impure, obscene, and indictable in a paper pamphlet at sixpence. ... The time is past when knowledge can be kept as the exclusive privilege of any caste or class." Ibid., 514.

opportunity of showing people who disseminate documents of this character that they cannot shelter themselves behind the case of EX PARTE Collins. 11/

It is appropriate to emphasize that the court dramas served to substantiate the existence of the practice of family limitation. 12/ The reversal in Potter v. Smith merely reflected the reaction against it. The majority opinions in EX PARTE Collins were explicit as regards the right of married couples to limit the number of their children. They made it clear that information to this end should be allowed free and cheap circulation and, thus, available to anyone who might be inclined to adopt it, anticipating much of the contemporary governmental actions in the promotion of population policies in various countries.

Orientation and Scope of Australian Population Studies

The initial decline in fertility was received with much misgiving in Australia because it coincided with a

11/ Ibid., p. 224.
12/ The existence of the practice of family limitation received a definite and official recognition when the New South Wales Royal Commission was appointed in 1904. The Commission was instructed "to make a diligent and full inquiry into the causes which have contributed to the decline in the birth rate of New South Wales, and the effect of the restriction of child-bearing upon the well-being of the community".

This coincidence was taken to mean that Australia with its small population could never hope to become a nation of power. The New South Wales Royal Commission warned:

The growth of population in New South Wales, and the future prosperity of the country, are seriously imperilled by artificial restriction of natural increase, coupled with the fact that immigration has practically ceased to be an important factor in the maintenance and increase of the population.\footnote{14}{New South Wales, Legislative Assembly, Royal Commission on the Decline of the Birth Rate and on the Mortality of Infants in New South Wales, Vol. I Report, 1904, p.53. Also, Sir George Knibbs, the first Commonwealth Statistician, once remarked that "...though numbers are not everything, they form a potent factor in the great political equations of the times." *The First Commonwealth Census: Notes*, Bureau of Census and Statistics, Melbourne, 1911, p.4.}

The implications of these statements are clear, and they sum well up the Australian concern over its population. Quite reasonably, this concern has strongly colored the orientation of past population inquiries in Australia.

Major studies during the 1920's and the 1930's were almost wholly concerned with immigration, its effects on the Australian economy, and Australia's capacity to absorb successfully additional population.\footnote{15}{See P.D. Phillips, and G.L. Wood, *The Peopling of Australia*, Melbourne, Macmillan & Co., 1928, and Eggleston, *op.cit.*, 1933.}
The subject of fertility was, therefore, generally neglected until after the late 1930's. Even then, the evident inclination was to treat fertility in its immediate context of Australian population problems. Rarely had there been any attempt to examine those aspects of family limitation that are sociologically significant.

The lack of probe into those sociological aspects of family limitation after 1920 reflected, if not the absence of interest and facilities for such research, at least, a markedly modified attitude towards the practice of controlled fertility. No longer was it expressed as in the New South Wales Royal Commission in 1904:

... the people - led astray by false and pernicious doctrine into the belief that personal interests and ambitions, a high standard of ease, comfort, and luxury, are the essential aims of life, and that these aims of life are best attained by refusing to accept the consequences which nature has ordained shall follow from marriage - have neglected, and are neglecting, their true duty to themselves, to their fellow country-men, and to posterity. 17/


17/ N.S.W. Royal Commission, op.cit., p.52.
For some time family limitation has come to be regarded, in the words of the National Health and Medical Research Council of Australia, as "the adaptation of the family to the fundamental changes in social and economic organization that took place during the 19th century." This interpretation is generally supported by the views of others. The British Royal Commission on Population stated in 1949, for instance, that "the gradual permeation of the small family system through nearly all classes has to be regarded... as a fundamental adjustment to modern conditions."

The Australian National Health and Medical Research Council elicited in 1944 via radio broadcast from women "who had deliberately decided to limit their families" their reasons for making this decision. In all, the Council received some 1400 replies to its radio appeal, which provided "overwhelming evidence that, after the birth of the second child, the financial position forces a decision as to the impossibility of assuming the liability of the third or subsequent children."

18/ National Health and Medical Research Council, Report of the 18th Session, Canberra, 1944, p.22.
20/ National Health and Medical Research Council, op. cit., p.71 and p.73.
Unfortunately, because of the lack of a sound research design in the Council's effort, the stated financial reasons by these women shed little light on the practice of family limitation. Had the socio-economic characteristics of the women who responded been known, it would have been possible to assess to what extent the financial considerations were subjective and what their socio-economic correlates were. Were they associated with more education? Higher occupational groups? Did they reflect differences in social class positions or aspirations?

The Council approached the issue of fertility decline with sufficient objectivity; but, with its attention focused on the formulation of a pro-natal policy, it achieved only limited success with respect to sociological aspects of family limitation. For instance, the Council identified "mobility" as one of the many factors which increased the proportion of married people who planned the size of their family, and which at the same time reduced the number of children in planned families.\(^{21}\) It offered, however, no evidence in support of this assertion. Nor did it touch upon in what precise and specific manner "mobility" operated to induce married couples to plan and limit the number of children.

\(^{21}\) Ibid., p.22.
The Council's analysis of the socio-economic factors affecting fertility\(^\text{22/}\) remained therefore largely hypothetical and was devoid of empirical data. Thus, in this field in which much has been accomplished in other countries, little systematic effort has been made in Australia. The present study has been therefore undertaken with the hope that it may stimulate some further work in this country.

Scope of the present inquiry

The present study has two principal purposes. One is to record some statistical facts of the Australian academic profession. They are given in Part II of this thesis which is subtitled "The Profession." This second part includes descriptions of the characteristics of the academic personnel, such as country of birth, age, academic rank by age and country of birth, and religion. A more detailed examination is made of the Australian-born university teachers, dealing with their geographical origins, family background, marital status, age at marriage, and the similar characteristics of their wives.

The other purpose of the present study is to test the mobility/fertility hypothesis. The results are reported in Part III of the thesis, "Mobility and Fertility." This

\(^{22/}\) For a list of the factors mentioned, see \textit{ibid.}, p.22.
analysis is guided by the three general propositions on
which the attention of previous investigations elsewhere
have been focussed. They are:

1. Immobility is associated with larger families.
2. Upward mobility or social promotion is associated
   with smaller families.
3. Fertility is influenced by both the present
   social status and social origin.

Fertility will first be examined with reference to
inter-generational mobility. By relating the average number
of children ever born to the mobility status of the respon­
dents, it should be possible to show whether or not there
is an association between fertility and mobility. To see
if fertility is influenced by both achieved status and
social origin, attention will also be given to the size
of parental family and the number of children ever born
to the respondents themselves.

In the second section of the analysis, the temporal
character of reproduction will be examined, again with
reference to inter-generational mobility. Derived from
Propositions 1 and 2 and other empirical studies of birth
intervals is the hypothesis:

Immobility is associated with a shorter interval
between marriage and first birth, or, conversely,

Mobility is associated with a longer interval
between marriage and first birth.
Both sections of the analysis are quantitatively oriented. To complement this statistical analysis, details of the education, marriage, reproduction, and career patterns of selected respondents are reviewed and given in the third section of the analysis.

The data for this study were obtained from the members of the academic staffs of the University of Sydney and the University of Melbourne. The methods of collecting the data will be described after a review of past studies of the interrelationship between mobility and fertility has been made.
CHAPTER II

THE FRAMEWORK

Investigations of the long-term fertility decline in the Western world have produced a substantial body of knowledge. The two distinct types of causes found or believed to be responsible for the fall in the birth rate are:

the extension of deliberate family limitation, and... changes which may have taken place in... "reproductive capacity"; in brief, ... voluntary and involuntary factors.\(^1\)

Whereas explanations of the decline in terms of involuntary factors have not been supported by direct and consistent evidence, the spread of voluntary family limitation can \textit{ipso facto} be regarded as the principal cause of the reduction in the birth rate. This view is also far better endorsed than the theory of impaired "reproductive capacity" by the knowledge accumulated up to the present.\(^2\)

The spread of voluntary family limitation that has taken place in the modern era has probably been fundamentally contingent upon changes in both the material and non-material "conditions" of life in Western society; for, as Himes observed, "the desire to control conception has been a

2/ For a survey of literature as regards the long-term decline in fertility, see United Nations, \textit{The Determinants and consequence of Population Trends}, N.Y. 1953, Ch.V.
constant characteristic of civilizations throughout the entire range of social development". Himes also recapitulated such changes in these words:

All the following social, economic and intellectual changes have paved the way for widespread adoption of contraceptive practices: the growth of hedonism, utilitarianism, materialism; the declining hold of orthodox religion and the rise of rationalism and the scientific spirit; growing emancipation or independence of women and feminism, including careers for women outside the home and their industrial employment; urbanism, the automatic development of a controlled death rate consequent upon the progress of general and preventive medicine, a change necessitating socially a controlled birth rate; fear, in the early stages of the Industrial Revolution, of overpopulation, a fear not totally unfound before... the mechanization of agriculture and of ocean and land transport; ... To these should be added other social forces, a few newly accelerated: urbanism, making a large family costly and inconvenient, social mobility and social ambition likewise promoting family restriction; ... (t)he widespread desire for self-advancement economically ... is no doubt fundamental. Most of the other forces mentioned have dovetailed well with personal ambition; hence the unique thoroughness and sweep of the Vital Revolution.

But, it should be emphasized that the acceptance of deliberate family limitation did not take place simultaneously in all segments of population in any given Western society. Nor is it even now universal among all persons


4/ Ibid., pp.392-393.
belonging to any particular segment whether defined in
terms of occupation, amount of education, income, or some
other socio-economic criteria.

These "leads and lags" in the acceptance of voluntary
family limitation by persons differentiated by various
socio-economic criteria have expressed themselves in well
defined patterns of fertility. These patterns have been numerous
investigations of these fertility differentials along
three diverse but related lines.

"Descriptive empirical" studies of differential
fertility were mainly concerned with the relationships
between fertility performance and socio-economic status
and their stability over time. Major conclusions from
these studies were the existence of an inverse relationship
between fertility and socio-economic status and the sub­
sequent modification in this relationship: from that of
a straight linear form to that of an oblique "J" curve.

5/ Cf. Pearl, Raymond, The Natural History of Population,
London, Oxford Univ. Press, 1939, ch. IV. "The extent
of the contraceptive efforts in the American popula­
tion."

Fertility Research: The Social Mobility Hypothesis",
The Milbank Memorial Fund Quarterly, 31(1): 24-38,
Jan.1953.

7/ K.A. Edin and E.P. Hutchinson, Studies of Differential
The possible effects of differential fertility on population quality constituted the second area of inquiry. Emerging from such "evaluative" studies has been the opinion that differential fertility was on the whole detrimental to the quality of a population because of the under-reproduction of persons with higher socio-economic status, but, this feature of differential fertility was also noted by others who thought that it facilitated social mobility, and hence allowed the retention of an open-class system.8/

The third and most recent development in differential fertility research has been concerned with its causes. This was a logical extension of prior empirical studies on fertility differentials. Given the general finding that the inverse relationship between fertility and socio-economic status was due almost entirely to variations in the prevalence and effectiveness of contraceptive practices and the recognition that contraception is only the means of voluntary family limitation, it appeared next in order to explore the social and psychological factors affecting the reproductive behaviour of individuals occupying different socio-economic positions.9/

9/ Westoff, ibid.
Some investigators of the relation of various social and psychological variables to fertility and fertility behaviour have adopted what is termed the "dragnet approach". The reasons favoring such an approach were that the possibility of missing a factor related to fertility behaviour would be minimized and that it would be possible to assess whether any factors should be kept or eliminated in further research. One major defect in this approach is, as exemplified by the Indianapolis Study of Social and Psychological Factors Affecting Fertility, that it is not conducive to the formulation of a conceptual framework within which findings on separate factors can be incorporated and interpreted.

The alternative to this "dragnet approach" is to select one or several factors which early studies have shown to be fruitful and which can be integrated into one meaningful conceptual framework. This approach underlies the present analysis which seeks to further investigate the relation of social mobility to fertility and fertility behaviour.


That social motility is an important factor affecting the reproductive behaviour has lately been re-emphasized by Westoff:

... social class differences in fertility planning and differential fertility itself are related to the differential frequency of socio-economic ambitions and social mobility within and between class levels ...12/

The notion that social mobility occupies an important place among factors affecting fertility and fertility planning has evidently been known to many in the past. The New South Wales Royal Commission on the Decline of the Birth Rate, for example, observed in 1904 that "the effort of the race towards its increase in numbers is in inverse ratio to the effort of the individual towards his personal development", 13/ echoing the words and ideas articulated by Dumont a few years earlier.

Describing the decline in fertility as a by-product of individual mobility, Dumont declared that "the development of numbers in a nation is in inverse ratio to the development of the individual." 14/ The effect of mobility on

12/ Westoff, op.cit., p.31.
13/ N.S.W. Royal Com. Report, p.17.
fertility was believed to reflect the tendency for individuals to limit the size of their families in order to rise socially. Dumont epitomized this relationship in his theory of "social capillarity," which asserted that "just as a column of liquid has to be thin in order to rise under the force of capillarity, so a family must be small in order to rise in the social scale."\(^{15}\)

Indirectly, numerous studies on differential fertility by social status tended to support Dumont's theory of social capillarity. Persons in higher socio-economic classes have, on the average, fewer children than those below them. Evidence of this sort offers, at least, only a partial test of theory. The socio-economic fertility differentials commonly observed do not permit any generalizations as regards the nature of the relationship between social mobility and fertility. As Berent recently pointed out,

Most of the investigations undertaken during the last 50 years have taken what may be called a 'static' approach to the problem. Having defined the social status of a family in some way, generally on the basis of the occupational grade of its head, it was usual to assess the fertility, in terms of birth rates or average family size, of a group of families enjoying a similar social prestige.\(^{16}\)


The orientation of such studies leaves much to be desired. In population studies, a distinction can be made between two types of sub-groups within a population unit defined for investigation. "Thus for example, racial, year of birth, sex, and place of birth groups are of fixed definition, their members being permanently enrolled at birth. In contrast, occupational, social, and place of residence groups are of variable definition since they may be entered or left with more or less freedom."  

The conventional assessment of fertility behaviour by social status therefore overlooks what may be called the "dynamic" aspect of social mobility and fertility: "people who find themselves in a particular grade or class at the time of (an) inquiry may have arrived there in a number of ways. Some of them were born in a lower class and have moved up the social ladder, others have come down and yet others have remained in the class of their fathers. Can the direction of this movement, i.e. social promotion or demotion, be associated with the number of children born to the families concerned?"  

17/ E.P. Hutchinson, "The use of Routine Census and Vital Statistics Data for the Determination of Migration by Age and Sex in the Absence of Continuous Registration of Migrants," in D.S. Thomas, Research Memorandum on Migration Differentials, N.Y. SSRC Bulletin No. 43, 1938, p. 370. Of course, "subgroups of both fixed and variable definition may gain or lose members through migration, depending on whether they are included in open or closed units of population." Loc. cit.  

18/ Berent. Loc. cit.
Moreover, the procedure commonly employed in investigations of fertility differentials focuses the attention on the relationship between social status and "total fertility" of women who have passed through the reproductive period or who have been married for 10, 15 or more years. Consequently another significant aspect of fertility behaviour has been neglected by many investigators, namely, the timing of births within marriage in relation to mobility.

It is hoped that the present study will permit more definite generalizations and, in this way, extend the knowledge already gained from early studies dealing with the relation of social mobility and fertility behaviour.

Review of Early Studies

Two types of social mobility may be distinguished, namely, vertical and horizontal mobility. The former refers to changes in personal status in the social scale, and the latter to movements of individuals from one location to another. As vertical and horizontal mobility are usually concurrent phenomena, they must both be considered to be related to fertility.

In an exhaustive survey of literature on migration differentials with special reference to internal migration

in the United States, Thomas concluded in 1938 that "There have been no satisfactory published studies of the married fertility of migrants in comparison with non-migrants, and such analyses as have been made fail to meet the minimum requirements of holding constant age of husband and wife, time of migration, length of residence, or type of community of origin and of destination." 20/ Thus, the state of knowledge then existing provided no adequate answers to questions as regards differences in marriage and fertility between migrants and non-migrants with comparable socio-economic status. 21/

In a few studies before 1938, migrants, variously defined, were shown to have higher fertility than non-migrants also variously defined. 22/ It is, however, impossible to infer from such findings the effect of mobility on fertility and fertility behaviour. The fertility differences shown for migrants and non-migrants within a nation reflected principally the known urban-rural fertility differentials; for, the migrants included in such studies were for the most part from agricultural communities and the non-migrants were of urban origin.

20/ D.S. Thomas, op.cit., pp. 91-92.
21/ Ibid., p.164.
Since 1938 the results of a few other investigations dealing with internal migration (mobility) and fertility behaviour have become available. Kantner and Whelpton, for example, utilized the data collected for the Indianapolis study and analyzed fertility and fertility planning with reference to the number of moves of 860 couples between communities of various sizes for the ten years before marriage and the period since marriage. Their hypothesis was that "frequency of movement is inversely related to the size of planned families and directly related to the extent of fertility planning." Kantner and Whelpton pointed to

the secularizing effect of movement on such attitudinal systems as the "large family ideal." Or, approaching the matter somewhat differently, it appears that movement involves certain costs and that these vary directly with the frequency of movement. Other things being equal, the restriction of family size and extent of planning would vary directly with the costs and therefore the frequency of movement. 24/

Fertility was defined as the number of children ever born, and fertility planning classified, in descending

23/ Kantner and P.K. Whelpton, "Fertility Rates and Fertility Planning by Character of Migration," in Whelpton and Kiser, ed. op. cit., vol. III, pp. 706-707. An "inflated" sample of 1,440 couples was used as the basis of all tabulations of this study.

24/ Ibid., pp. 705-706. Three other hypotheses also tested in this study are more relevant to migration differential studies and, on that account, are not mentioned here.
degree of success in planning family size, as number and spacing of pregnancies planned, number planned, quasi-planned, and excess fertility.

As regards fertility planning, Kantner and Whelpton found that frequency of movement was not related, either positively or negatively, to it. Neither was there a consistent relationship between mobility before marriage and fertility. "Above average fertility" was associated with high mobility for the wife before and after marriage and with heterogamous marriages involving high premarital mobility for the wife and low premarital mobility for the husband. And, high mobility for the husband both prior to and since marriage was related to somewhat reduced fertility.

When couples were grouped according to their mobility since marriage, a negative relationship between fertility and mobility was found to exist at the extremes of the mobility scale. That is, couples who made 4 or more moves after marriage (high mobility couples) had lower fertility than those who experienced no move (low mobility couples) in that period. For couples intermediate between the extremes, fertility rates were irregular and, in the opinion

25/ Ibid., p.711
26/ Ibid., p.722
of Kantner and Whelpton, suggested that the real relationship between mobility and fertility might be non-linear.  

Kantner and Whelpton also presented data on the patterns of family growth of couples in the high and low mobility groups. They observed that

Even though low mobility couples ultimately have larger families, proportionately more of them are childless during (the) first (four years of marriage). In other words, there is no apparent tendency for mobile couples to be those who avoid reproduction during this period. 28/

and that

To the extent that these early years are the years of greatest mobility this finding is inconsistent with (the) (h)ypothesis ... 29/

On the basis of these inconclusive and contradictory findings, Kantner and Whelpton remarked that

The fact that (the) (h)ypothesis ... receives only qualified substantiation from this analysis may be due in part to the rather high degree of homogeneity of the sample, one aspect of which is a limited range of mobility. However, the importance given to mobility in sociological theory would lead one to expect it to produce differences in behavior even among a fairly homogeneous group. Perhaps the most important implication of this analysis ... is the question it raises concerning the sufficiency of the concept of mobility in sociological generalizations. 30/

The study of Kantner and Whelpton represents one of the few investigations since 1938 in which mobility (i.e.  

27/ Ibid., p.718  
28/ Ibid., p.722  
29/ Ibid., p.723  
30/ Ibid.
frequency of movement) was explicitly made a variable. Other studies in this period treated "mobility" only in terms of migration status, and their findings like those reported before 1938 preclude little more than speculative inference as regards the relationship between mobility and fertility behavior. Nor do they show any agreement on the nature of the relationship.

Kiser reported that from data obtained from approximately 7,000 white couples in two American cities and 2,300 Negro families in a third city, no significant differences in fertility were found to exist between migrants from villages and rural areas and city-born residents of comparable age and social status.\(^{31}\) It was uncertain, however, whether the absence of fertility differences meant that migration from villages and rural areas tended to depress the fertility of the migrants or that migration from these places tended to select persons disinterested in child-bearing.\(^{32}\)

Luykx assessed the "permanence of residence" of families in another American city with respect to their sizes. He showed that there was a strong tendency for


large families to remain in one place whether they owned or rented their houses. But, although Downes, Collins, and Jackson reported a similar finding that "family stability" (i.e. non-moving) was inversely related to the size of family, they indicated that home ownership undoubtedly contributed to the immobility of large families.

In both of the last two studies, the lack of controls for such factors important to demographic analyses as age, age at marriage, duration of marriage, etc. was clearly evident. In both, moreover, mobility status was defined in terms of residential changes, or the lack thereof, during a specified period of time, and the term "family" was used to refer to all persons living in a household.

Apart from the methodological defects apparent in some of the studies in the past, the early analyses of "mobility" and fertility behavior appeared to be deficient conceptually. The only aspect of mobility which received attention was spatial mobility. Whereas spatial mobility may take place without any alteration of the positions of individuals on the vertical scale, it is theoretically


permissible to treat it independently. Yet, it seems reasonable to maintain that the significance of mobility in relation to fertility is not likely to be fully assessed when spatial mobility per se is regarded as a variable without reference to vertical mobility.

In relation to vertical mobility, spatial mobility may also be antecedent to, concomitant with, or a result of vertical promotion and demotion. Perhaps, owing to the inter-relatedness of spatial and vertical mobility, past investigations with reference to the former alone have not been conducive to meaningful generalizations as regards the relationship between mobility and fertility and fertility behavior.

The relationship between vertical mobility and fertility was briefly examined by R.A. Fisher, who advocated that

in a society in which members of small families are on the average at a social advantage compared to members of large families, the parents being in other respects equivalent, society will become graded, not only in respect of physiological infertility, but much more rapidly and more steeply graded in respect of those temperamental differences which conduce to celibacy, postponement of marriage and birth limitation. 35/

In other words, Fisher believed that "hereditary influences" supplied a major and controlling cause of

inversed birth rate by "social classes". 36/ Social promotion not only favored persons of small families, but also selected persons "temperamentally" infertile. Otherwise, were "social environment" the important causes of differential patterns of reproduction, Fisher argued that "we should confidently expect the families who rise in the social scale to carry with them some measure of the fertility from which they originated." 37/

In an attempt to give statistical substance to his thesis, Fisher transposed some data collected by Huntington and Whitney, which related to "the average number of children per person in the American Who's Who ... according to the education (the persons) received." 38/

The assumption is that persons, for example, who had only high school education would have experienced "more" social promotion than those with college and professional education, to be included in Who's Who. The data thus showed, Fisher declared, that

among Americans who attain a sufficient level of eminence to be included in Who's Who, those whose social promotion has been most striking have, on the average, fewer children than those whose social promotion has been less. Such a result would appear inexplicable

36/ Ibid., pp.234-235
37/ Ibid., p.234
38/ Ibid.
### TABLE I

<table>
<thead>
<tr>
<th>Kind of Education</th>
<th>Estimated children per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>College &amp; Professional</td>
<td>2.4</td>
</tr>
<tr>
<td>College &amp; Ph.D.</td>
<td>2.3</td>
</tr>
<tr>
<td>College</td>
<td>2.3</td>
</tr>
<tr>
<td>Normal, Business, Trade, Secretarial</td>
<td>2.3</td>
</tr>
<tr>
<td>Highschool</td>
<td>2.1</td>
</tr>
<tr>
<td>Elementary schools &amp; home</td>
<td>2.1</td>
</tr>
<tr>
<td>Professional school only</td>
<td>1.9</td>
</tr>
</tbody>
</table>


on any of the views that connect social environment, and is a striking confirmation ... of the theory that the dominating cause lies in the social promotion of the relatively infertile. 39/

That is, persons enjoying rapid social promotion are less fertile than those in the classes to which they rise, and "the fertility of the upper social classes must be prevented from rising by the lower fertility of those whom social promotion brings into their rank." 40/

The original work of Huntington and Whitney was examined by Berent who criticized the appropriateness of

39/ Ibid., p.236.
40/ Ibid., p.235.
the data borrowed by Fisher as a convincing test of the theory of infertility selection:41/

"A closer inspection of the original table from which Prof. Fisher cited but one column, as well as evidence from other sources, does not, however, seem to support his thesis. To begin with it should be noted that if the ranking order were to be maintained, the last educational category ("Professional schools") would have to be placed much higher. In fact, Huntington and Whitney put it before 'College', so that the range over which the average vary is from 2.1 to 2.4 with a trough in the middle. Secondly, the averages which appear to be based partly on records actually investigated (13,843 cases) and partly on rough estimate (11,297 cases), refer not to the number of children per family, but to the number of children per person, irrespective of his marital status. ... Actually it is impossible to ascertain the exact position, because whilst 393 persons (men) out of the total of 13,843 were reported as unmarried, in as many as 586 cases the information about marital status was not available."

"It is evident to students of demography that the kind of information provided in reference books like Who's Who is not accurate enough for studying fertility problems. Since the publication of Prof. Fisher's book it has been shown in a number of studies carried out in America that within each special class (defined by the criterion of socio-economic status) family size is in fact inversely related to the educational level of husband or wife."

Similarly, Burks remarked that while the data obtained from Who's Who appeared to support Fisher's theory, it was not certain whether "social promotion" or something else was the intrinsic factor in the observed fertility pattern:

Those who had received the least education (i.e. those whose social promotion had been greatest) averaged about half an offspring less than those who had attended college. But we are given no information as to whether the "promoted" group is really comparable with the groups that won distinction under less handicap. Some professions e.g. teaching, medicine, the ministry, scientific research, etc., are virtually closed to individuals whose formal education is inadequate, whereas other professions such as art, music, and authorship are open to anyone who can find the key. ... In the absence of data upon differential fecundity (fertility) within occupational groups, we are not safe in the inference of a social promotion differential. 42/

These criticisms make explicit the necessity of securing more adequate data for a test of Fisher's theory of infertility selection. As a matter of fact, Fisher's "unproved theorem" has stimulated a number of investigations, which will now be reviewed in the order of their appearance.

From data collated from records in the archives of the Genetics Records Office, Burks compared the average family sizes (number of sibs) of two successive generations, the descendants and their parents. Three contrasting groups were identified as follows: 1) Both parents of superior attainment originated in families of superior attainment. 2) Both parents of superior attainment originated in families of non-superior attainment, and 3) Both parents of non-superior attainment originated in

families of non-superior attainment. By "superior attainment" was meant "occupational status in the professional or 'higher business' group ... and/or attendance at college, normal school, or university," and "non-superior attainment" "occupational status of laborer (skilled to unskilled), clerk, or retail salesman and/or less than high school education and occupation not in professional or higher business group." By definition, therefore, parents in Group I were born into superior status or "socially established" families, parents in Group II enjoyed social promotion themselves, and parents in Group III, though themselves immobile, had socially promoted descendants.

The data show that "in families of non-superior socio-economic status, the chance of winning social promotion is inversely related to size of sibship." A comparison of the size of sibship of the descendants in Groups I and III produced further evidence of the inverse association between family size and social promotion, though the data as regards the entire group did not follow the pattern.

Again, with reference to the descendant generation, the number of descendants born to the parents in Group

43/ Ibid., pp.105-106.
44/ Ibid., pp.111-112.
II was consistently greater than that of those parents in Group I. Thus the socially promoted (i.e. parents in Group II) seemed to carry with them the fertility pattern of the class from which they ascended to superior status.

In the case of families established in superior status for two generations, the number of descendants was smaller than in families produced by those who themselves enjoyed social promotion, or by those who had promoted descendants. Also, in all groups the descendant generation was smaller than the parent generation, reflecting the reduced fertility in the general population.

In the discussion which follows her findings, Burks suggested that the relations between family size (sibship) and social promotion could be interpreted either by Fisher's theory of infertile selection or the hypothesis that among families able to limit the number of children voluntarily, fertility tends to be proportional to ability

45/ Ibid., pp.109-110. Burks seems in error when she declares that as "the average size of father's sibships and of mother's sibships in group II falls between the corresponding averages in groups I and III, ... the socially promoted appear to carry upward a fresh stream of fecundity." Ibid., p.109. This generalization does not follow from the data because the size of sibship reflects the fertility behavior of the grandparents rather than the parents themselves.

46/ Ibid., p.110.
to provide for them. In addition, the consistently low fertility shown by families established in their high socio-economic status for at least two generations throws the question back to the environment; i.e. "there may be something in the tradition, in the social preoccupations, or in the increased urbanization of the established parents as compared with the socially-promoted parents which predisposes to greater family limitation. And, the data controverted, at least partially, Fisher's theory in that parents who were themselves promoted had a higher fertility than those born to high socio-economic status.

A later study of the interrelation between social status, social origin and family size, while demonstrating the inverse association between family size and social promotion, points further to the effect of social environment on fertility behavior, "which manifests itself in the maintenance of the social characteristics of the class of origin as well as in the acquisition of the fertility habits of the social class subsequently reached." This study was based on a representative sample of the adult population of England and Wales

47/ Ibid., p.110 and p.111.
48/ Berent, op.cit., p.252.
in 1949. In the statistical analysis, however, only those marriages lasting more than twenty years were included, i.e. marriages still in existence in 1949, which had been contracted before 1930. Fertility was measured in terms of average family size (number of live births per couple), and social status in terms of four broad classes based on the occupational grade of the head of the family at the time of interview, and his social origin was the occupational grade of his father.\textsuperscript{49} The major findings pertinent to the present study are as follows:

1. Holding social origin constant, family size is inversely related to present social status.

2. Holding present social status constant, family size is also inversely related to social origin.

3. Holding social origin constant, those who have moved up have smaller families than those who remained static or who have moved down.

4. Holding present social status constant, those who have moved up, however, have larger families than those who remained static, or who have moved down.\textsuperscript{50}

\textsuperscript{49} Ibid., pp.245-6. A seven-grade occupation scale is used in this study:

<table>
<thead>
<tr>
<th>Occupational Trade</th>
<th>Social Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional and high administrative</td>
<td>I</td>
</tr>
<tr>
<td>Managerial and executive</td>
<td></td>
</tr>
<tr>
<td>Inspectional, supervisory and other non-manual (higher grade)</td>
<td></td>
</tr>
<tr>
<td>Inspectional, supervisory and other non-manual (lower grade)</td>
<td>II</td>
</tr>
<tr>
<td>Skilled manual and routine grades of non-manual</td>
<td>III</td>
</tr>
<tr>
<td>Semi-skilled manual</td>
<td></td>
</tr>
<tr>
<td>Unskilled manual</td>
<td>IV</td>
</tr>
</tbody>
</table>

\textsuperscript{50} Ibid., pp.245-248.
With respect to the first two findings, Berent stated that they are indicative of the differentiating effect of the present social status when social origin is the same and the negative association between fertility and social origin when present social status is identical. In his opinion, therefore, there are two forces influencing fertility, the operation of which is illustrated by the following examples:

If we compare three persons A, B and C who are now all in the same class, say all doctors, but who differ with respect to their social origin, because A's father was a doctor, B's was a small employer and C's a manual worker, then the expectation is that C will have a larger family than B, who in turn will have more children than A. ... (that is,) ... class habits relating to family size seem to be so to speak "inheritable". Although A, B and C are in the same social class now, they differ in their fertility because they seem to have acquired and to some extent kept the family building habits of the class in which they were born.

At the same time, ... if we compare the fertility of another set of three persons, L, M and N, who were all born in the same class, say their fathers were doctors, but whilst L also became a doctor, M is now an employee and N a semi-skilled worker, then the chances are that N will have more children than M who in turn will have larger family than L. It seems reasonable to deduce from this that M and N have to some extent acquired the fertility habits of the class into which they have moved.\footnote{Ibid., pp.247-48.}

By analysis of variance, it was shown that there is a significant variation in fertility which is due to both factors named by Berent, the present social status and social origin. This enables him to explain the apparent contradiction in the findings (3) and (4) above with respect to family size.
and direction of mobility. The arrangement of the data which
gave rise to these inconsistent observations, Berent declared
separated the effect of the two forces operating in the
situation: "the acquisition of the fertility characteristics
of the class into which the sons have moved and the maintenance
by them of the family building habits of the class in which
they were born." It remains uncertain, however, whether
the two forces assume an equal role in bringing about the
observed fertility patterns, or one of them leads the other
in importance.

The delineation of the relations between fertility and
social mobility, according to Berent, was based on categories
of persons pursuing occupations grouped together according to
social prestige. A gap therefore existed between his
generalizations underlying such statistics and the two
hypothetical examples illustrating them. For a start, at
least, it seems necessary that a particular occupation, say,
the legal profession, should be investigated to ascertain
whether or not the "expected" variations in fertility
envisaged in the illustrations do obtain among persons from
different origins but now in the same particular occupation.

52/ Ibid., p.248.
53/ Ibid., p.250.
54/ Ibid., p.245.
This is the point of departure of the present study.\footnote{55}{Bearing in mind, of course, this approach probably illuminates only one aspect of the relations between fertility and social mobility because it does not provide data about those who have not enjoyed social promotion and those who experienced social demotion.}

Equally important is it to note that the findings reported by Berent do not permit any inference regarding the nature of the relations between fertility and social mobility. The socially demoted have a higher fertility than those remaining in their class of origin, or tend to acquire the family building habits of the class into which they have descended, on the one hand. On the other hand, the socially promoted exhibit a lower fertility than their less "fortunate" peers, or tend to adopt the fertility pattern of the class into which they have ascended. Little is known about whether the acquisition of family building traits precedes or results from social demotion or promotion as the case may be. In other words, which is the cause and which the effect? With the data collected for the present study, it is hoped that these questions can be, if not wholly, at least partially answered.

\footnote{56}{Berent himself calls attention to the difficulties involved in interpretation of his findings: "Do people who move up the social scale during their married life produce fewer children than those who remain static, or do they go down the scale because they acquire the fertility habits of the class into which they move, or are they enabled to move up because of the smallness of their family, whilst others are constrained to move down under the burden of a large family? Which is the cause and which the effect?" Ibid., p.254.}
The existence of an inverse relationship between upward social mobility and family size, as shown by Burks, Berent and others, was further tested by Baltzell with data secured from *Who's Who in America* which in 1940 listed 770 residents of a large American metropolis. Of the 770 so listed, 226 persons were also mentioned in the *Social Register* for that city in the same year. Whereas the 226 also listed in the *Social Register* were more likely, on the whole, to possess what Baltzell called "attributes of high ascribed position" and were therefore "less mobile", the remaining 544 presumably achieved the high occupational status which caused them to be included in *Who's Who* and were thus "more mobile".

Comparisons of differences in family size between these two groups consistently show that those who achieved their status had, on the average, fewer children than those parents who were less mobile. The significance of these findings, Baltzell asserted, was that they provide some insight into


60/ Ibid., pp.414-419. Because of incompleteness of information supplied in *Who's Who*, statistics underlying their study refer to 501 males who reported the names of their children.
the nature of differential fertility:

In interpreting (the) relationship between fertility and socio-economic position, differential social mobility and its various social and psychological consequences may be an important intervening variable. ... In other words, fertility declines as one ascends the social-class hierarchy mainly because the requirements of a more expensive pattern of consumption militate against having children and partly because of the internalization of small-family norms already existing in the cultural definitions of the class of destination. Consequently, fertility should be expected to decline at successively higher levels in the social-class hierarchy partly because those persons in higher positions are, on the average, more mobile than those below them. On the other hand, as the top of the hierarchy is approached, this inverse differential may be reversed precisely because, in contrast to those immediately below them, social mobility may be less characteristic of persons at the top levels. 61/

The Indianapolis Study of Social and Psychological Factors Affecting Fertility, (which, as previously mentioned, is a recent outstanding example of research into the causes of differential fertility) was originally formulated without explicit reference to the social mobility/fertility hypothesis. Subsequent to the publication of the research results obtained by Berent, Baltzell, etc., however, an analysis of the relationship of intergenerational social mobility to both fertility and fertility planning, employing Indianapolis Study data, was made by Kantner and Kiser, 62/ to test the mobility/fertility hypotheses.

61/ Ibid., pp.411-12.
Occupational mobility was indicated by a difference in the occupational class of the husband (based on his longest occupation) and his father (occupation pursued at the time when the son was aged 6 to 16).

Comparisons of the differences in family size between the mobile couples and those non-mobile couples (origin group) having the same occupational position that the former had prior to mobility and those non-mobile couples (destination group) of the same occupational class as that achieved by the mobile couples, respectively, showed that regardless of direction of mobility, lower fertility was associated with mobility. Kantner and Kiser believe that "this is not surprising with respect to upwardly mobile couples because their fertility is perhaps a function of the higher status they have achieved. The lower rates for the downwardly mobile couples are worthy of note but these may be chance results." When such comparisons were restricted to "planned families", it was found that among professionals and proprietors, the fertility rates of upwardly mobile

A seven-fold occupational classification is used: Professional and semi-professional; proprietors, managers, and officials; clerical, skilled; semi-skilled; unskilled; and farmers. "Sons of farmers were treated as upwardly mobile if they belonged to one of the upper three occupational classes; downwardly mobile if they were unskilled workers."

Ibid., p.971.
Ibid., p.970.
Ibid., pp.975-976.
couples were lower than those of the non-mobile couples in the "destination group". In the case of couples in the clerical and skilled occupations, however, the reverse was true.

It was also found that, when classified according to mobility status and the Index of Socio-Economic status, the extent of childlessness among "relatively fecund" couples was greater than that of non-mobile couples at the "destination". This was true whether such couples were downwardly or upwardly mobile. Thus, with the exceptions found in connection with the downward mobility and within the clerical and skilled occupational groups, Kantner and Kiser conclude that "the data indicate a tendency for mobile couples to have smaller planned families than non-mobile couples of comparable socio-economic status."

The data gathered in the Indianapolis Study were further explored by Riemer and Kiser, in relation to the effect of social mobility since marriage on fertility. They stated:

Hypotheses about social mobility after marriage are based upon a familiar line of argument. The expense and responsibility of rearing children, especially if undertaken at an early age, are handicaps to social advancement since they divert time, energy, and money into family care which might otherwise be devoted to further education, apprenticeship, and other activities facilitating upward social mobility. ...

67/ Ibid., pp.981-982.
69/ Kantner and Kiser, op. cit., p.984.
In general, total fertility is inversely related to socio-economic status because knowledge about contraception and ability to make use of it effectively are directly related to socio-economic status. And, in general, socially mobile persons are subject to some influence from their original status level and some acculturation to the new status level. However, for upwardly mobile persons, selection for low fertility and psychological orientation toward the higher status would minimize the influence of the background status level. Upwardly mobile couples thus would be likely to resemble the non-mobile couples at their destination much more than the non-mobile couples at their origin with respect to fertility control and fertility. 70/

Restricting mobility to signify a change in occupational position in terms of white collar-manual or "head-hand" work dichotomy, the data did not indicate that "upwardly mobile couples plan smaller families than non-mobile couples at their levels of either origin or destination." 71/ In fact, the average number of living children for all upwardly mobile couples was intermediate between the averages for couples non-mobile both at the "hand" and "head" work levels. This latter finding is however, a corroboration of Berent's conclusion previously mentioned.


71/ Ibid., p.1038.

72/ Ibid., pp.1036-1037.
By subdividing the mobility categories according to status of husband's father, (to yield a classification based on socioeconomic level of the husband at three time points: in childhood (6-16 years of age), at marriage, and in 1940 or 11-14 years after marriage), it was found that

The men who were upwardly mobile before marriage have a much smaller average family size (1.62) than men in "head" work at all three time points (1.76), with whom they were previously grouped as "nonmobile". Men from manual backgrounds who achieved their "head" work status only some time after marriage have somewhat larger families than the other upwardly mobile groups, but their average family size (1.82) is only slightly larger than the average for nonmobile "head" workers (1.76). 73/

Therefore, Riemer and Kiser considered that "the hypothesis that social mobility is associated with restriction of fertility now appears too general and too simple," and suggested that the research design of future studies can be refined to take into account the time at which shifts in socio-economic status occur, the stage of career at which marriage takes place, the timing of births within marriage in relation to status changes ... in order to assess the significance of fertility as a selective factor in upward and downward mobility, and ... the degree to which fertility reflects the socio-economic status of childhood and youth, acculturation to a new status, or the severity of the struggle to improve or maintain status at various stages in married life. 74/

73/ Ibid., pp.1039-1040.
74/ Ibid., pp.1050-1051
Also utilizing the non-manual-manual dichotomy, Scott analyzed the relationship between fertility and social mobility of male teachers serving in all types of grant-earning schools in England and Wales in 1955, who were married before 1945. It was assumed (a) that a teacher whose father was in the manual occupational class has been upwardly mobile, and (b) that within the teaching profession, heads of schools enjoy higher prestige and, hence, higher status than their assistants, and grammar school teachers than teachers in other types of schools.

For this group of males in the teaching profession, Scott found that social origin of neither the teacher himself nor his wife was associated with the family size subsequently achieved. That is, the data did not support the hypotheses (1) "that for given status of origin, upwardly mobility is associated with smaller family size, and (2) that for a given present status, the lower the social origin, the larger the family of procreation."

Nor was there a regular pattern between the size of teachers' family of origin and procreation. Though not statistically significant, teachers of non-manual origin

75/ For description of the data on which Scott based his analysis, see W. Scott, "The Fertility of Teachers in England and Wales," Population Studies, 11(1): 78-85, July 1957.


77/ Ibid., pp.254-259.
came from larger families than those originating from the manual class. Also, again not statistically significant, non-grammar school teachers, who by definition have been less mobile, came from families larger than those from which grammar school teachers were recruited. The lowest family size of origin was that of grammar school teachers of manual origin, whose average number of children was, however, the largest among all teachers. Therefore, while social promotion seemed to be related to family size, Scott gave the opinion that "the urge for children is clearly not the result of inherited fecundity or of parental example." 78/

The fact that fertility appears to be independent of family origin, Scott suggested, is important insofar as it draws attention to the differential aspects of social mobility. Teachers achieve their mobility early and are apparently quickly formed into a homogeneous group, irrespective of social origin, with behaviour patterns and conventions of its own. The common standards of education presumably tend to iron out whatever social distinctions there were. 79/

This observation by Scott again points to one recognized defect in the research design of past studies, including his own: the failure to take into account the timing of marriage and births in the social mobility process. Most of the studies assumed a priori that children are inimical

78/ Ibid., p.260.
79/ Ibid., pp.260-61.
to social mobility. Thus reasoned, they proceeded to relate the number of children to the status attained by individuals in the social or occupational hierarchy with or without reference to their social origin. In so doing, these studies further assumed the invariability of the belief that children are a hindrance to mobility throughout individual married lives.

However, a few writers have challenged, largely on the basis of circumstantial evidence, the notion that children and social mobility are incompatible. Bell, for instance, offered no data on the number of children, but relied heavily on the findings reported by others that demographic comparisons between central cities and their suburbs have shown for the suburbs "a large family size, more married males, more intact families, and more women not in the labour force." These suggested a preference for what he called "familism" on the part of the families who moved from central cities to suburbs.


81/ Bell, op.cit., pp.277-278. "By familism is meant investment in the familial system of the society, and marriage at young ages, short childless time space after marriage, large families, and other such characteristics are indicators of familism." ibid., p.277.
There is little dispute that, as Bell's data indicated, one of the principal reasons for these families moving to the suburbs had to do with "bettering conditions for their children." Thus, it should appear reasonable to argue that demographic characteristics of suburban families reflect to some extent the selection of persons with children in the migration process, not necessarily denoting that "the new suburbanites are largely persons who have chosen familism as an important element in their life styles." As a case in point, Boggs who supported Bell's contention reported that there were relatively few large families with three or more children in his population sample. Nevertheless, it is worth noting, as Boggs concluded, that greater restriction of fertility may be seen as a consequence of individual social mobility under conditions which appear to demand greater sacrifices in return for higher status. Prosperity, higher education, and successful experience in adapting to the social mobility required by the urban occupational system all minimize the impact of social mobility, with the result that younger white-collar men from metropolitan backgrounds may no longer see children as inimical to advancement.

82/ Ibid., p. 279.
83/ Ibid., p. 282.
84/ Boggs, op. cit., p. 212.
85/ Ibid., p. 213.
CHAPTER III

DATA AND DEFINITIONS

The Questionnaire and its Distribution.

A questionnaire was used to secure data for the present study. Preparation of the questionnaire began in May, 1957. Some eleven drafts were made before the final form was adopted in August, 1957. At this stage, the main consideration was to eliminate all questions from the original draft which might not be favorably received. It was thought that the inclusion of questions touching directly or indirectly upon the actual practice of family limitation and the means of its accomplishment would be likely to deter many people from giving any response at all. Consequently, this caution led to the exclusion of such questions as, "At the time of marriage, did you and your wife plan to have any children or no children?", "What methods did you use in the planning of your family?", etc.

The wording of the questions constituted the main bulk of work at the second stage. A number of conferences were held with others, and each question was carefully examined, and, whenever necessary, recast in order to render it as simple and un-ambiguous as possible. Before the adoption of the final questionnaire, two pre-tests were carried out,
after each of which additional revisions of the questions were also made.

The final questionnaire (See Appendix B) consisted of two parts, one for the husband and one for the spouse. The only differences between them were that the major source of financial support while attaining academic degrees or professional qualifications was asked of the subject but not the spouse, and that the question with respect to number of children, living or dead, born to the existing marriage was placed in the part intended for the spouse. Also, not repeated for obvious reasons was the question on the date of the existing marriage, which was given only in the part intended for the subject. Apart from the above, identical questions appeared in both parts of the questionnaire.

These questions fell into three general categories. The first related to information basic to the present study, namely, sex, date of birth (age), place of birth, marital status and experience, date of existing marriage (age at marriage), religion, and, if foreign-born, year of arrival in Australia.

Questions in the second category asked for information on educational attainment, major source of its financial support, and occupational experience and achievement.
The last category included questions on:

I. Paternal Grandfather
   a. Country of birth
   b. Migration status
   c. Occupation at the time of retirement or death, and place of occupation

II. Father
   a. Year of birth
   b. Country of birth
   c. Migration status
   d. Occupation and place of occupation
   e. Highest education attained

III. Mother
   a. Highest education attained
   b. Occupation before marriage

IV. Siblings
   a. Sex
   b. Age
   c. Highest Education attained
   d. Present occupation
   or e. If deceased, age and year of death and last occupation

The questionnaire in its final form was far from being lengthy, and the result of the two pre-tests showed that the time required for its completion was less than 30 minutes. However, it was not entirely free from a number of minor flaws which became apparent in the course of field work. There was, for instance, consistent objection to the terms "Protestant" and "Catholic" employed in the questionnaire. The gist of the complaint was that people would be forced to declare thus and so; whereas, in fact, they might desire to be distinguished by their specific affiliations, such as
Church of England, Roman Catholic, Methodist, etc.

One other defect related to the manner in which the question on major source of financial support was arranged. Instead of the words "1st degree", "2nd degree", and "3rd degree", it would have been less uncertain if the terms "B.A.", "M.A.", and "Ph.D." had been used.

Response and Refusals.

Even though the collection of information for the present study was by means of a questionnaire, the procedure commonly followed in the employment of this research tool was modified. In retrospect, the result seems to have justified the alterations introduced.

The conventional procedure for the questionnaire method is to mail the questionnaires, together with a letter of appeal for co-operation, to prospective respondents and ask them to complete the forms. Some instructions generally accompany the questionnaires. There is little or no personal contact between the researchers and the respondents. No prior warning is given to the latter about the arrival of the questionnaire, and information supplied depends entirely upon the interpretations placed on the questions by the respondents. A number of follow-up letters customarily go to those selected for the study but giving no response after a period of time. Sometimes a sample of
these non-respondents are interviewed before the analysis of the returns begins.

The lack of personal contact in this conventional procedure does not encourage large returns. To overcome this various schemes of inducement to stimulate replies have been devised and tried, i.e. stamped return envelopes, the enclosure of small tokens of money etc. These schemes still do not, however, obliterate the impersonality of the questionnaire method. In order to have as many replies as can be possibly obtained, some form of personal contact seems quite essential. It has been shown, for instance, that returns from mailed questionnaires can be increased even by contacting the respondents through the use of the telephone.

Another inherent disadvantage in the questionnaire method is that unless a considerable additional effort is made, it is often difficult to assess the reasons for non-response. It is both possible and probable that much of the additional effort will be wasted if the simple reason for it is that many of the non-respondents are on prolonged absence from their place of residence or work at the time of survey. Without definite knowledge of this, there is also the danger of treating them as bona fide refusals on other grounds.

Thus, in order to increase returns through personal contact and to assure the delivery of the questionnaire, the following procedure was devised for the collection of the present data. First, a list of names of the teaching staffs of the two Universities was drawn up. Only permanent full-time members from lecturers upwards were included. These constituted the population to be studied. A brief statement of the purpose of the survey in the form of a letter (see Appendix C) then went to each of them, notifying them of the impending arrival of the interviewer and the questionnaire and appealing to them for co-operation in the research project. In the same letter a pledge to treat all information requested confidentially was also given.

Field work for the present study was carried out from September to November, 1957. With the exception of those who were then on sabbatical or sick leave, resigned or deceased, each individual member of the two teaching staffs was interviewed, at which time the questionnaire was delivered. Almost as a rule, more information about the survey was asked for by the interviewees, and some expressed an initial

These names were obtained from Calendar of the University of Sydney 1957 and University of Melbourne, Lists of Members of Governing Bodies, Faculties, Boards, Academic Staff, 1st March 1957. Some revisions were made during the field work because of inclusion of persons teaching part-time in the original list and additions of new staff.
dissinclination to participate in the project. Being on the spot, it was possible to make a direct and personal appeal and to persuade those so inclined to complete the forms.

After the presentation of the questionnaire, each respondent was asked to read all the questions, and whenever there was any doubt as to their meaning, an explanation was given. The length of the interview varied from person to person, and lasted from 5 minutes to over an hour. Not all the time was used to discuss the questionnaire and the purpose of the survey. It was rather hard on many occasions to terminate the conversations on quite unrelated but interesting topics.

At the conclusion of each interview, the questionnaire blank was left with the respondent, to be completed later by him and his wife. This was necessary because the wives were not interviewed. A stamped and addressed envelope was also given to each respondent in which his completed questionnaire was to be placed and returned by mail.

The original list contained 634 names, but the number of questionnaires distributed totalled only 551. Six of the original 634 refused even to accept the questionnaire. The

4/ This might have been one of the reasons for some of the non-responses. See discussion below on non-response.
other 77 were not reached on account of sabbatical or sick leaves, resignations, or death. Table II gives the number of questionnaires distributed and received.

Of the 551 persons who accepted the questionnaire, 498 returned the forms. But, twelve of them returned the questionnaires unanswered. In addition, seven other forms were only partially completed and had to be excluded from the study. Complete information was therefore received from 479 persons, amounting to 86.9% of the 551 forms distributed.

Over three-quarters of the completed forms were returned before the first of two follow-up letters (See Appendix C) went out two weeks after the delivery of the questionnaire. The second letter was sent a week after the first and brought only slight response.

There were altogether 53 persons who failed to give any response at all. Adding the 12 persons who returned the forms unanswered, the total non-response amounted to 11.8% of the number of questionnaires distributed.

Before discussing the non-response or refusals, the adequacy of the representation of the population studied by the respondents will now be examined. Unfortunately, very

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5/ It should be pointed out that the timing of these letters unfortunately coincided with examinations and the beginning of summer vacation at the two Universities.
<table>
<thead>
<tr>
<th>TABLE II</th>
<th>NUMBER OF QUESTIONNAIRES DISTRIBUTED AND RECEIVED BY SEX</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MALE University A</td>
</tr>
<tr>
<td>Number listed</td>
<td>294</td>
</tr>
<tr>
<td>Sabbatical leaves</td>
<td>3</td>
</tr>
<tr>
<td>Deaths, illness etc.</td>
<td>9</td>
</tr>
<tr>
<td>Refusals</td>
<td>15</td>
</tr>
<tr>
<td>Number distributed</td>
<td>253</td>
</tr>
<tr>
<td>Number received</td>
<td>222</td>
</tr>
<tr>
<td>Answered</td>
<td>211</td>
</tr>
<tr>
<td>Unanswered</td>
<td>11</td>
</tr>
<tr>
<td>Non-response</td>
<td>26</td>
</tr>
</tbody>
</table>
little systematic information about the population was available. What was obtained related only to the distribution of the population studied by academic position, i.e. lecturer, senior lecturer, reader, and associate and full professor.

Table III gives the percentage distribution of the staff listed, questionnaires distributed and questionnaires completed by academic position. It is immediately evident that very slight discrepancies exist between them. These percentages indicate that the respondents are substantially representative of the population. Conversely the non-respondents are likewise randomly distributed throughout the population.

No separate figures by sex are given in Table III because, as is apparent in Table II, the number of female respondents is only slightly fewer, 8 to be exact, than the actual number in the population. Hence, little could be changed in these proportions shown in Table III if they were calculated separately for the two sexes.

Accuracy of the Data.

There is, of course, the question of the accuracy of the information supplied by the 479 respondents. There is no reason to doubt that the answers given by them were correct and accurate to the best of their knowledge. But, for purposes of the present study, it seems imperative to note possible sources of error or inaccuracy in the data.
TABLE III

DISTRIBUTION OF STAFF MEMBERS AND QUESTIONNAIRES COMPLETED BY ACADEMIC POSITION

(1) University A

<table>
<thead>
<tr>
<th>Position</th>
<th>Staff listed</th>
<th>Questionnaires distributed</th>
<th>Questionnaires completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>Full and Associate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professors</td>
<td>23.1</td>
<td>73</td>
<td>22.8</td>
</tr>
<tr>
<td>Reader</td>
<td>5.5</td>
<td>17</td>
<td>6.1</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>31.5</td>
<td>98</td>
<td>30.0</td>
</tr>
<tr>
<td>Lecturer</td>
<td>39.9</td>
<td>124</td>
<td>41.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
<td><strong>311</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

(2) University B

<table>
<thead>
<tr>
<th>Position</th>
<th>Staff listed</th>
<th>Questionnaires distributed</th>
<th>Questionnaires completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>Full and Associate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professors</td>
<td>22.6</td>
<td>73</td>
<td>22.6</td>
</tr>
<tr>
<td>Reader</td>
<td>4.3</td>
<td>14</td>
<td>4.5</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>35.6</td>
<td>115</td>
<td>35.7</td>
</tr>
<tr>
<td>Lecturer</td>
<td>37.5</td>
<td>121</td>
<td>37.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
<td><strong>323</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
TABLE III (Continued)

(3) Both Universities

<table>
<thead>
<tr>
<th>Position</th>
<th>Staff Listed</th>
<th>Questionnaires distributed</th>
<th>Questionnaires completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>Full and Associate Professors</td>
<td>22.9</td>
<td>145</td>
<td>22.7</td>
</tr>
<tr>
<td>Reader</td>
<td>4.9</td>
<td>31</td>
<td>5.3</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>33.6</td>
<td>213</td>
<td>33.0</td>
</tr>
<tr>
<td>Lecturer</td>
<td>38.6</td>
<td>245</td>
<td>39.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>634</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Two of the three categories of information related to the respondents and their spouses including such items as age, place of birth, marital status, educational attainment, occupational history, etc. During the editing of the questionnaires each personal data were found to be consistent. Only in fewer than a dozen cases did omissions of a few dates in items concerning education and occupation occur. These omissions did not reflect in any way upon the accuracy of the data.

Possible error or inaccuracy in the data generally were found in answers to questions on country of birth and
occupation of the paternal grandfathers and fathers. The same can be said of information on year of birth of fathers and decade of arrival of grandfathers and fathers of foreign birth who came to Australia.

It was learned during the field work, for instance, that some of the respondents were not sure whether their grandfathers were born in the United Kingdom or Australia. Also, some others were uncertain of the occupations of their grandfathers and/or fathers. In a number of still other cases, doubt as to the precise year of birth of their fathers was expressed. The suggestion to the respondents during the interviews was that they should put down what they thought or had reason to believe to be the true information.

The expedience of this suggestion seemed warranted because it served to keep the entry of "unknowns" at a minimum. Its disadvantage could be that some of the respondents might have felt compelled to answer a few of these questions with respect to their grandfathers and fathers; whereas, in fact, they might not have been in a position to do so.

As the availability of the required information to the respondents and their ability to recall differed, the margin of error or inaccuracy quite probably varies from person to person and is of unknown quantity. The data for the present study possibly contain some unavoidable inaccuracies.
Some possible reasons for refusals have already been mentioned. The wives were not personally interviewed and the timing of the survey coincided with examinations and the summer vacation. It must, of course, remain unknown to what exact extent these two reasons were responsible for the 65 refusals and what other factors were operative in this connection. Some impression gained during the field work and from letters subsequently received from some 14 non-respondents suggest that the refusals could be attributed to:

(1) Fear of indiscreet disclosure of information supplied.
(2) Refusal of wives to answer the questionnaire.
(3) Lack of time.
(4) Consideration of the survey as an intrusion into details of private life.
(5) Abhorrence of the treatment of individuals as statistical subjects.
(6) Disbelief in the usefulness and worthiness of the survey.
(7) Simply a change of mind after careful examination of the questionnaire.

Nevertheless, how the various factors ranked in importance in these refusals is unknown. It would have been advisable to re-interview a sample of the non-respondents, not to secure additional replies, but to ascertain their reasons for not completing the questionnaire. A number
of considerations prevented the assumption of this task. One was that the number of persons not responding was too small to justify the cost involved. The other was that the analysis of the data would have been too much delayed because of the intervening summer months between the mailing of the second follow-up letters and the resumption of university activities. The basic consideration was, of course, that the respondents were well distributed in terms of their academic positions. They are highly representative of the population delimited for the present investigation.

Definitions

The principal variables with which present study is concerned are mobility, fertility, and fertility behavior. Their relationship will be assessed quantitatively.

The present study accepts the usual definition of fertility, taking it to be the number of children ever born. Fertility behavior is used here to refer to that aspect of reproduction which expresses itself in terms of the interval between marriage and first birth and between successive births. The procedure by which such time-intervals are determined will be given subsequently when this temporal pattern of reproduction is analysed in relation to mobility.
As already mentioned, two types of mobility may be distinguished, viz., vertical mobility and horizontal mobility. Consideration will be limited to vertical mobility in this study.

The position of any particular individual on the vertical scale is determined both with and without reference to his abilities and qualifications. Its two component parts have been conventionally called

the ascribed and the achieved. Ascribed statuses are those which are assigned to individuals without reference to their innate differences or abilities. ... The achieved statuses are, as a minimum, those requiring special qualities, ... (and) are not assigned to individuals from birth but are left open to be filled through competition and individual effort. 6/

However, it is pertinent to emphasize that even though the so-called "achievable" statuses are theoretically open to all via competition and personal effort, the attainment of a given status by different individuals is in reality dependent upon their relative "ascribed" status. It can easily be envisaged that persons born to families low on the vertical scale would have much more to overcome than those born to families in the middle of the scale to rise to the top.

This assumes, of course, that the vertical scale on which statuses may be placed in relation to each other in a manner that is hierarchically precise, can be unimpeachably constructed. In fact, "sociologists as yet have no way to express the corresponding steepness or flatness of social hierarchies except crude counting of social categories."\(^7\) The conventional approach takes the view, as Foote and Hatt remarked, that "if it be assumed the jobs and occupations have status value which are hierarchically distributed and, in addition, possess qualities which distinguish them from others without invidious implications, then the occupational structure can be conceived as segmented both horizontally and vertically." They continued that "the first of these can be called strata and the second, situses. ... Little can be said of situses beyond the fact that people seem to think of them as groups of occupations. They do provide a series of vertical groups, which, though they may correlate with status, are not gathered on this principle.\(^8\)


\(^8\) Ibid., pp. 371-72.
In the absence of a more refined measure of vertical mobility, therefore, nearly all studies dealing with the relationship between vertical mobility and fertility and fertility behavior have employed occupational groupings as the basis of analysis, and the findings of these studies related explicitly to only occupational vertical mobility. In the present study, vertical mobility is likewise defined in terms of occupational mobility.

"Indeed, there is no other single characteristic that tells so much about a man and his status - social, intellectual, and economic - as does his occupation." 9/

Extensive and numerous investigations have been undertaken since the 1920's, of which the chief objective was to devise a vertical scale of occupations. The construction of such a scale generally involved the ranking of selected occupations by either "captive" or cross-sectional population segments. Beginning in the United States in 1925, empirical studies of occupational prestige by the ranking method have since been conducted in various countries. A critical resume of some of the studies of occupational evaluations in industrialized countries has been made by Davies. 10/


In recent years, similar studies were conducted in a number of less industrialized countries.

In Australia itself, there has been only one attempt to grade occupations. Its results were similar to those found in other countries of the British Commonwealth of Nations. Unfortunately, this Australian study contained only "those local occupations best known to the public", thus omitting from the list of occupations ranked such occupations as company director, business manager, lawyer, etc.

Consequently, there is little in the way of Australian empirical data on which to construct an occupation scale. Examination of various studies in other countries led to the adoption of a seven-fold classification which consists of:

A. Non-manual:

   I. Professional, semi-professional.
   II. High official, managerial.
   III. Low official, managerial.
   IV. Sales, clerical.

B. Manual:

   V. Skilled, unskilled.
   VI. Semi-skilled.
   VII. Rural occupations.


A list of selected occupational titles in each of the 7 occupational categories is given in Appendix E.

For the present study, a respondent whose father was in the first occupational category is ipso facto non-mobile, and respondents who were born to families in the secondary occupational category are also classified as non-mobile. This definition of "non-mobility" takes into account horizontal occupational transfer from one situse to another at the top of the occupational scale.

A mobile respondent is a person whose father was engaged in one of the other 5 occupational categories.
PART TWO

THE PROFESSION
CHAPTER IV

CHARACTERISTICS OF THE RESPONDENTS

The University of Sydney and the University of Melbourne are the two oldest institutions of higher learning in Australia.¹ Both of them celebrated their centennial anniversaries a few years ago, enjoying a seniority of almost a quarter of a century over the next oldest University. Furthermore, until recently, the number of persons teaching in these two institutions amounted to nearly two-thirds of all Australian university teachers. For these reasons the members of their teaching staffs have been selected to represent the Australian academic elite in this study. Their selection must not, however, be understood to imply that they constitute what can be termed the upper elite group within the Australian academic elite. There is actually little ground for assuming that they are representative of the university teaching profession as a whole in Australia.

¹All Australian universities have been established by Act of Parliament. The dates of the University Acts are: Sydney, 1850; Melbourne, 1853; Adelaide, 1874; Tasmania, 1889; Queensland, 1909; Western Australia, 1911; Australian National University, 1946; New South Wales, 1949; University of New England, 1953.
The membership of the Australian academic elite, which has never been very large, probably includes at present not more than 2,000 persons, counting permanent and full-time members only. Its growth has been slow, but has nevertheless been continuous.² At the turn of the century there were slightly fewer than 200 university teachers in all four Australian universities then in existence. The size of the present membership therefore represents a ten-fold increase.

Table IV shows that the four relatively young universities and college, i.e., the Australian National University, the University of New South Wales, the University of New England, and Canberra University College, engage some one-fifth of the total university teachers in Australia. Some of these teachers in the institutions listed above have been recruited from the staffs of the older universities, but the majority of them are probably recent graduates. It can be reasonably assumed that the composition of the staffs of the younger universities is quite likely to be different from that of the senior institutions.

<table>
<thead>
<tr>
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<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1906</td>
<td>76</td>
<td>70</td>
<td>--</td>
<td>34</td>
<td>--</td>
<td>9</td>
<td>--</td>
<td>--</td>
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<td>--</td>
<td>189</td>
</tr>
<tr>
<td>1910</td>
<td>106</td>
<td>79</td>
<td>--</td>
<td>38</td>
<td>--</td>
<td>10</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>233</td>
</tr>
<tr>
<td>1911</td>
<td>114</td>
<td>79</td>
<td>10</td>
<td>38</td>
<td>--</td>
<td>8</td>
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<td>--</td>
<td>249</td>
</tr>
<tr>
<td>1915</td>
<td>152</td>
<td>89</td>
<td>25</td>
<td>44</td>
<td>23</td>
<td>14</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>347</td>
</tr>
<tr>
<td>1920</td>
<td>165</td>
<td>99</td>
<td>28</td>
<td>87</td>
<td>29</td>
<td>23</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>431</td>
</tr>
<tr>
<td>1921</td>
<td>202</td>
<td>99</td>
<td>25</td>
<td>107</td>
<td>30</td>
<td>19</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>542</td>
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<tr>
<td>1925</td>
<td>231</td>
<td>169</td>
<td>34</td>
<td>132</td>
<td>41</td>
<td>27</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>623</td>
</tr>
<tr>
<td>1930</td>
<td>219</td>
<td>195</td>
<td>53</td>
<td>126</td>
<td>53</td>
<td>29</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>676</td>
</tr>
<tr>
<td>1933</td>
<td>222</td>
<td>177</td>
<td>61</td>
<td>124</td>
<td>32</td>
<td>27</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>643</td>
</tr>
<tr>
<td>1935</td>
<td>273</td>
<td>230</td>
<td>89</td>
<td>123</td>
<td>47</td>
<td>31</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>793</td>
</tr>
<tr>
<td>1939</td>
<td>266</td>
<td>229</td>
<td>143</td>
<td>148</td>
<td>70</td>
<td>30</td>
<td>--</td>
<td>12</td>
<td>--</td>
<td>17</td>
<td>915</td>
</tr>
<tr>
<td>1946</td>
<td>465</td>
<td>315</td>
<td>202</td>
<td>178</td>
<td>81</td>
<td>51</td>
<td>--</td>
<td>24</td>
<td>--</td>
<td>17</td>
<td>1333</td>
</tr>
<tr>
<td>1948</td>
<td>614</td>
<td>385</td>
<td>225</td>
<td>175</td>
<td>111</td>
<td>64</td>
<td>--</td>
<td>32</td>
<td>3</td>
<td>26</td>
<td>1635</td>
</tr>
<tr>
<td>1950</td>
<td>(329)</td>
<td>(257)</td>
<td>(128)</td>
<td>(122)</td>
<td>(77)</td>
<td>(57)</td>
<td>(9)</td>
<td>(35)</td>
<td>(27)</td>
<td>(19)</td>
<td>(10060)</td>
</tr>
<tr>
<td>1953</td>
<td>(368)</td>
<td>(294)</td>
<td>(193)</td>
<td>(150)</td>
<td>(95)</td>
<td>(64)</td>
<td>(232)</td>
<td>(84)</td>
<td>(24)</td>
<td>(28)</td>
<td>(1548)</td>
</tr>
<tr>
<td>1955</td>
<td>(386)</td>
<td>(302)</td>
<td>(198)</td>
<td>(175)</td>
<td>(103)</td>
<td>(70)</td>
<td>(300)</td>
<td>(61)</td>
<td>(92)</td>
<td>(28)</td>
<td>(1715)</td>
</tr>
</tbody>
</table>

Notes:  
(2) 1906 - 1915, inclusive: Professors and lecturers.  
1920 - 1935, inclusive: Professors, lecturers, and demonstrators.  
1939 - 1948, inclusive: Professors, lecturers, and assistant lecturers (full and part-time members).  
1950 to date: Professors, lecturers, and assistant lecturers (full-time members only), or research fellows in the Australian National University.  
(3) The University of New England was a branch of the University of Sydney from 1938 until 1953 when it was given the present name.  
(4) Canberra University College has yet to attain full university status.
Excluding the University of Sydney and the University of Melbourne, there are about 700 holders of teaching posts in other senior universities. Little is available at the present to permit comparisons between these 700 persons and their academic colleagues at the two universities named. However, one of the findings of the present study indicates a very strong likelihood that each of the older universities draws a high proportion of its teaching personnel from within the city in which it is situated. This being so, these 700 persons are expected to differ at least in geographical origin from those teaching in Sydney and Melbourne.

The point to be borne in mind here is that the study does not embrace the whole university teaching profession in Australia. Rather, it is based on information furnished by a segment of the profession. Only further investigations covering the entire profession may make it possible to know in what way, if any, those teachers at Sydney and Melbourne differ, in terms of various social and demographic characteristics, from their professional colleagues in other universities.
Male Respondents

Of the 479 persons who answered the questionnaire fully, 434 were males. The following tables give a profile of the 434 male respondents whose social origins and patterns of family building will be analyzed in later chapters.

**TABLE V**

MALE RESPONDENTS BY AGE AND ACADEMIC POSITION

<table>
<thead>
<tr>
<th>Age*</th>
<th>Full and associated professors</th>
<th>Senior lecturers</th>
<th>Readers</th>
<th>Lecturers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30 - 34</td>
<td>35 - 39</td>
<td>40 - 44</td>
<td>45 - 49</td>
<td>50 - 54</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>5</td>
<td>9</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>3</td>
</tr>
</tbody>
</table>

*In this and subsequent tables, age refers to the age at last birthday.

Table V presents data on the age distribution of the males by their academic position. For the group as a whole,
the median age is 39.2 years. There are considerable differences, as is expected, between the median ages of the four sub-groups. The full and associate professors lead all others and have a median age of 48.4 years. Readers with a median age of 44.1 years rank second followed by senior lecturers (38.9 years) and lecturers (33.3 years).

There is also some difference between the median ages of Australian-born respondents and foreign-born respondents. As shown in Table VI, 287 or 66.1% of the

<table>
<thead>
<tr>
<th>Age</th>
<th>Australian-born</th>
<th>Foreign-born</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 30</td>
<td>28</td>
<td>13</td>
<td>41</td>
</tr>
<tr>
<td>30 - 34</td>
<td>68</td>
<td>37</td>
<td>105</td>
</tr>
<tr>
<td>35 - 39</td>
<td>54</td>
<td>30</td>
<td>84</td>
</tr>
<tr>
<td>40 - 44</td>
<td>43</td>
<td>26</td>
<td>68</td>
</tr>
<tr>
<td>45 - 49</td>
<td>36</td>
<td>14</td>
<td>50</td>
</tr>
<tr>
<td>50 - 54</td>
<td>22</td>
<td>15</td>
<td>37</td>
</tr>
<tr>
<td>55 - 59</td>
<td>28</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td>60 - 64</td>
<td>5</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>65 +</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>287</td>
<td>147</td>
<td>434</td>
</tr>
</tbody>
</table>

Median age 39.2 36.9 39.2
434 male respondents were born in Australia. The number of foreign-born is 147, or 33.9% of the male group. The median age of the Australian-born is some 2.3 years greater than the foreign-born respondents.

### TABLE VII

MALE RESPONDENTS BY NATIVITY AND ACADEMIC POSITION

<table>
<thead>
<tr>
<th>Academic position</th>
<th>Australian-born</th>
<th>Foreign-born</th>
<th>Total</th>
<th>U. K.</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full and associate professors</td>
<td>24.4% (70)</td>
<td>25.2% (37)</td>
<td>33.3% (28)</td>
<td>14.3% (9)</td>
<td>24.7% (107)</td>
<td></td>
</tr>
<tr>
<td>Readers</td>
<td>5.9% (17)</td>
<td>6.8% (10)</td>
<td>8.3% (7)</td>
<td>4.8% (3)</td>
<td>6.2% (27)</td>
<td></td>
</tr>
<tr>
<td>Senior lecturers</td>
<td>35.9% (103)</td>
<td>33.3% (49)</td>
<td>28.6% (24)</td>
<td>39.7% (25)</td>
<td>35.0% (152)</td>
<td></td>
</tr>
<tr>
<td>Lecturers</td>
<td>33.8% (97)</td>
<td>34.7% (51)</td>
<td>29.8% (25)</td>
<td>41.2% (26)</td>
<td>34.1% (148)</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0% (287)</strong></td>
<td><strong>100.0% (147)</strong></td>
<td><strong>100.0% (84)</strong></td>
<td><strong>100.0% (63)</strong></td>
<td><strong>100.0% (434)</strong></td>
<td></td>
</tr>
</tbody>
</table>

A comparison by academic position of the Australian-born males with the foreign-born is given in Table VII. One of the unique features of Australian universities is clearly suggested by the figures in the above table.
The distributions by academic position show only minor discrepancies between the Australian-born and the foreign-born groups. But, a relatively larger proportion of U. K.-born persons than their Australian colleagues hold higher positions in the Australian academic profession. As the data show, 33.3% and 8.3% of the former are full and associate professors and readers, respectively, as compared with 24.4% and 5.9% of the Australian-born who occupy similar posts.

Persons born in foreign countries other than the United Kingdom tend to be concentrated at the bottom of the academic profession. Forty-one per cent of them are lecturers though a nearly equal proportion (39.7%) of such foreign-born males are senior lecturers.

The distribution of the 434 male respondents by their reported religious affiliation or preference is shown in Table VIII. Nearly three-quarters of both the Australian-born and those born in the United Kingdom are Protestants. In these two groups, the Catholics form only a small minority, and the proportion of the males born in Australia and the United Kingdom, who put down "atheist" and "no religion" as replies, is nearly one-fifth of the two groups combined.
TABLE VIII
MALE RESPONDENTS BY NATIVITY AND RELIGION

<table>
<thead>
<tr>
<th>Religion</th>
<th>Australian-born</th>
<th>U.K.-born</th>
<th>Other foreign</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Protestants</td>
<td>207</td>
<td>72.1</td>
<td>62</td>
<td>73.8</td>
</tr>
<tr>
<td>Catholic</td>
<td>23</td>
<td>8.0</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>Jewish</td>
<td>2</td>
<td>0.7</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Atheist</td>
<td>20</td>
<td>7.0</td>
<td>8</td>
<td>9.5</td>
</tr>
<tr>
<td>No religion</td>
<td>35</td>
<td>12.2</td>
<td>11</td>
<td>12.2</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>287</td>
<td>100.0</td>
<td>84</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In the other foreign-born group, the proportion of Protestants is much smaller than that of either the Australian-born or the U.K.-born. There is a distinctively large Jewish group among persons born in other foreign countries than the United Kingdom.

Female Respondents

There are only forty-five females among the university teachers who completed the questionnaires. It is sufficient to note in summary form such characteristics of the females as their academic positions, age, religion, and country and place of birth. In addition, their marital
status and the occupations of their fathers will also be mentioned.

One notable feature of these female university teachers is that they concentrate in the lower echelon of the profession. Thirty-four of the 45 respondents were lecturers at the time of the survey. Only 9 had attained the position of senior lecturer, and 2 had been named associate professors. This concentration implies, at least, that females compare unfavorably with the males in terms of upward mobility within the academic profession.

That upward mobility within the profession is not enjoyed to the same extent by the females is supported by the fact that some 27 of the female respondents are in the age groups 40-44 and over, and that only 6 of them are under 35 years of age.

The religious distribution of the females is similar to that of the males. Of the 45, 31 are Protestants. The number of Catholics is 7, and there is one each in the Jewish and atheist groups. The remaining 5 reported no religion.

Unlike the males, however, the great majority of the females are of Australian-birth. Only one each came from the United Kingdom, New Zealand, Germany, Italy, and "other
parts of Europe", that is, only 5 of the female respondents were born in foreign countries.

Of the 40 Australian-born females, 4 were born in Sydney, 17 in Melbourne, and one in "other capital cities." The remainder of the group, 18 to be exact, reported "small towns and rural places" as their place of birth.

In terms of the occupations of their fathers, these females came principally from families in the first and second occupational categories. The actual distribution is as follows: Category I, 13; II, 16; III, 3; IV, 4; V, 6; VI, 2; and VII, 1. This distribution may be due to the educational advantage enjoyed by female children born into the higher occupational categories, or to the desires or aspirations inculcated in them by parents in these categories to gain higher occupational status.

There is also a concentration of the females in the "never married" group: 34 of the 45 female respondents were "never married." Only 6 were once and still married, and the other 5 were widowed and divorced. Even if it does not mean that the academic profession (like other occupational groups in Australia) prefers single females.

\(^3\)This contrasts sharply with that of the males as the marital data for the Australian-born in the next chapter will show.
or excludes married ones, the predominance of unmarried females in the academic profession reflects the fact that they, to a much greater extent than the males, have to forego marriage in order to enter and remain in this profession.

Summary

(1) The median age of the males in the academic profession is 39.2 years. The Australian-born males also have a median age of 39.2 years. But, the foreign-born males as a group are slightly younger, with a median age of 36.9.

(2) Age is positively related to academic position. At the top of the profession, full and associate professors have a median age of 48.4. The lecturers at the other end of the occupational group have a median age of 33.3 while readers and senior lecturers fall on the intermediate points between professors and lecturers both in terms of age and academic rank.

(3) A relatively larger proportion of U.K.-born males than their Australian-born colleagues hold higher positions in the Australian academic profession.
(4) Protestants predominate in the academic profession, and the next major group is that of "no religion." Catholics are in the third position, followed by "atheists" and Jews in that order.

(5) Females in the academic profession are not numerous and tend to occupy positions at the lower grade of the occupation. Their religious preferences are the same as their male colleagues. Unlike the latter, however, the majority of the females are of Australian birth.

In terms of the occupations of their fathers, the female respondents came distinctly from families in the first and second occupational categories. Also, female holders of academic posts are mainly in the "never married" group.
CHAPTER V

THE AUSTRALIAN-BORN RESPONDENTS

A brief description of the 45 females was given in the last chapter. In view of the smallness of their numbers, they are excluded from further consideration in the present study. Moreover, only a few of them were married. This fact places them outside the arena of this inquiry into the interrelationship between mobility and fertility and fertility behavior.

In addition, the foreign-born respondents are also excluded because of their heterogeneity with respect to country of birth and year of arrival in Australia. Consequently, the analysis is limited to being an examination of the Australian-born respondents.

Geographical Origins

The urban background of the Australian-born respondents is shown in Table IX. Of the 287 Australian-born males, 203 or 70.7% were born in the six capital cities of the States. This proportion is significantly larger than that of the male population in these places of the total Australian male population in each census since 1911.1/

1/Proportion of male population in metropolitan areas: 35.2% in 1911; 40.3% in 1921; 43.8% in 1933, and 48.7% in 1947. Statistician's Report, Canberra, 1952, p. 44.
### TABLE IX

AUSTRALIAN-BORN MALES BY STATE AND PLACE OF BIRTH

<table>
<thead>
<tr>
<th>State of birth</th>
<th>Place of birth</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capital cities</td>
<td>Towns and rural area</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>N. S. W.</td>
<td>92*</td>
<td>28</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Victoria</td>
<td>83</td>
<td>35</td>
<td>118</td>
<td></td>
</tr>
<tr>
<td>Queensland</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>S. A.</td>
<td>11</td>
<td>3</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>W. A.</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Tasmania</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>N. Territory</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>203</strong></td>
<td><strong>84</strong></td>
<td><strong>287</strong></td>
<td></td>
</tr>
</tbody>
</table>

*One of whom was born in the Australian Capital Territory

It is not surprising that the number of males born in Sydney and Melbourne predominate in the groups of persons born in the urban places (i.e., the State capitals). The Universities in which the respondents teach are located in these two cities. Geographical proximity therefore favors persons born in these metropolitan areas. Those who were born outside these areas are not barred from entering the academic profession, but their share in the profession is much smaller than their numbers in the total population.
Family Background

In terms of the country of birth of their paternal grandfathers and fathers, the Australian-born respondents can be subdivided into three categories. (1) The "third generation" Australians account for one-third of them, or 96, (2) the second generation Australians total 122, and (3) the remaining 69 respondents constitute the first generation group.

The "third generation" Australians are those whose paternal grandfathers and fathers were also Australian-born. The second generation category refers to those Australian-born males of foreign- or non-Australian-born paternal grandfathers but Australian-born fathers. And, the first generation Australians are those of foreign parentage.

From Table X it can be seen that the second generation Australian respondents are, as expected almost exclusively of British origin: 107 of the 122 respondents in this group reported England, Wales, Scotland, and Ireland as the countries of birth of their paternal grandfathers. To these can be added another 9 respondents.

The term "third generation" is used here as a matter of convenience. It is quite possible that some of their great grandfathers were also of Australian birth. Their number, however, would be very small.
<table>
<thead>
<tr>
<th>Paternal grandfather's country of birth</th>
<th>Father's country of birth</th>
<th>England and Australia</th>
<th>Ire-Scotland</th>
<th>New Zealand</th>
<th>Germany</th>
<th>Italy</th>
<th>Scandinavia</th>
<th>N.W. Europe</th>
<th>S.E. Europe</th>
<th>Other</th>
<th>Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td></td>
<td>96</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>England &amp; Wales</td>
<td></td>
<td>64</td>
<td>27</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
<td>16</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td></td>
<td>27</td>
<td>0</td>
<td>11</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Scandinavia</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>N.W. Europe</td>
<td></td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>S.E. Europe</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>218</td>
<td>28</td>
<td>3</td>
<td>12</td>
<td>11</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>287</td>
<td></td>
</tr>
</tbody>
</table>
whose paternal grandfathers were also born in England and Wales, Scotland, and Ireland, but whose fathers were born in New Zealand. In addition, there are 42 respondents whose paternal grandfathers and fathers were born in England and Wales, Scotland, and Ireland.

There is every reason to believe that the 96 "third generation" respondents are all descendants of persons of British origin. Thus, it becomes clear that the great majority of the Australian-born members of the academic elite belong to the dominant stock of the Australian population. That is, some 25% of the 287 Australian-born respondents employed by the two universities can be so identified when the country of birth of their paternal grandfather and father is used as the criterion.

Excluding the 7 respondents who could not recall the country of birth of either their paternal grandfather or father or both, only 24 of the 287 Australian-born university teachers are the descendants of migrants to Australia from Germany, Italy, or other European countries.

In the previous chapter, it was shown that 84 of the 147 foreign-born were born in the United Kingdom.
The total number of respondents of British origin is then 338 and constitutes 77.9% of the respondents enumerated. The conclusion is inevitable that persons of British origin predominate in the academic profession.

The 96 "third generation" Australian-born respondents probably all came from families which have long been established in Australia. Most of their great grandfathers are likely to have migrated to Australia before 1860. Indirect proof of this lies in the distribution of the foreign-born paternal grandfathers of the second generation Australian-born respondents by decade of arrival in Australia.

As the next table shows (Table XI), of the Australian-born respondents, 41 of their paternal grandfathers came to settle in Australia before 1860, and more than half of them migrated before 1870. Such figures give credence to the belief that the great grandfathers of the 96 "third generation" Australian-born respondents had settled in Australia before 1860.

Data in Table XI also make clear that the Australian-born group is not homogeneous with respect to the length of familial settlement in Australia. A sizable number of the respondents came from families which have been
### TABLE XI

**FOREIGN-BORN GRANDFATHERS OF AUSTRALIAN-BORN RESPONDENTS:**

**BY COUNTRY OF BIRTH AND DECADE OF ARRIVAL**

<table>
<thead>
<tr>
<th>Country of birth</th>
<th>Never migrated to Australia</th>
<th>Before 1860</th>
<th>1860-1869</th>
<th>1870-1879</th>
<th>1880-1889</th>
<th>1890</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>England &amp; Wales</td>
<td>22</td>
<td>21</td>
<td>11</td>
<td>16</td>
<td>13</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Ireland</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Scotland</td>
<td>13</td>
<td>7</td>
<td>10</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Germany</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Italy</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Scandinavia</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N.W. Europe</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>S.E. Europe</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>49</strong></td>
<td><strong>41</strong></td>
<td><strong>25</strong></td>
<td><strong>27</strong></td>
<td><strong>21</strong></td>
<td><strong>12</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>
### TABLE XII

FOREIGN-BORN FATHERS OF AUSTRALIAN-BORN RESPONDENTS: 
BY COUNTRY OF BIRTH AND DECADE OF ARRIVAL

<table>
<thead>
<tr>
<th>Country of birth</th>
<th>Never migrated to Australia</th>
<th>Before 1880</th>
<th>1880-1889</th>
<th>1890-1899</th>
<th>1900-1909</th>
<th>1910</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>England &amp; Wales</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>8</td>
<td>4</td>
<td>9</td>
<td>28</td>
</tr>
<tr>
<td>Ireland</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Scotland</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Germany</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Italy</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Scandinavia</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>N.W. Europe</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>S.E. Europe</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2</strong></td>
<td><strong>7</strong></td>
<td><strong>11</strong></td>
<td><strong>14</strong></td>
<td><strong>19</strong></td>
<td><strong>15</strong></td>
<td><strong>69</strong></td>
</tr>
</tbody>
</table>
here for nearly a century. But, others belonged to families of relatively shorter durations of residence in this country. And, those Australian-born respondents of foreign-born parentage had on the average the shortest residential history. As shown in Table XII, 34 of the 69 foreign-born fathers came to Australia after the turn of the century, and nearly three-quarters of them settled here within the last 60 years.

As has been shown, considerable differences exist among the three sub-groups of the Australian-born respondents classified by the country of birth of paternal grandparents and fathers. The next table (Table XIII) indicates that the three sub-groups also differ in their median ages.

The second- and first-generation Australian-born respondents are on the whole older than the "third generation", the difference in their median ages being 6 years. The median age of the Australian-born respondents as a whole is 39.2 years, which exceeds that of the "third generation" respondents by 3 years.

Some features of the age distribution by generation status of the respondents are of interest. In the "third generation" group, for example, the number of respondents
### TABLE XIII

AGE DISTRIBUTION OF THE AUSTRALIAN-BORN, BY GENERATION STATUS

<table>
<thead>
<tr>
<th>Age</th>
<th>Third</th>
<th>Second</th>
<th>First</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 30</td>
<td>12</td>
<td>10</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>30 - 34</td>
<td>30</td>
<td>22</td>
<td>12</td>
<td>67</td>
</tr>
<tr>
<td>35 - 39</td>
<td>23</td>
<td>19</td>
<td>12</td>
<td>54</td>
</tr>
<tr>
<td>40 - 44</td>
<td>14</td>
<td>20</td>
<td>9</td>
<td>43</td>
</tr>
<tr>
<td>45 - 49</td>
<td>11</td>
<td>17</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>50 - 54</td>
<td>3</td>
<td>14</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>55 - 59</td>
<td>2</td>
<td>12</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>60 +</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>119</td>
<td>66</td>
<td>280</td>
</tr>
</tbody>
</table>

Median age: 36.2  42.2  42.1

Note: The discrepancies in the totals between this and previous tables are due to the exclusion of persons who failed to report the country of birth of either paternal grandfather or father or both.

In the age-groups 50-54 and over is small, reflecting the recent settlement of the Australian continent. To put it in another way, between the years of 1890 and 1907 when these few respondents were born, the great majority of the second generation Australian-born persons in the total population probably were still too young to contribute to the natural increase of the population.

In the Commonwealth Census of 1911, native-born persons numbered 3.5 millions, constituting 83.5% of the
total population. Two-thirds of them were under the age of 25, and more than 75% of the native-born persons were in the age-groups 30-34 and below. This concentration of native-born in these young age-groups in 1911 means that their corresponding proportion in the total native-born population during the two decades 1890-1899 and 1900-1909 must have been smaller. Though it is impossible to know how many of the native-born in those years were first- or second-generation Australian born, it seems reasonable to think that the second generation Australian-born could have been below the reproductive age. Thus, the insignificant number of persons aged 50-54 and over in the "third generation" group in the academic profession becomes explicable. The relatively larger numbers of the second- and first-generation respondents in the same age groups can be similarly explained and are consistent with the above reasoning.

To some extent it seems that the age-distribution of the first-generation Australian-born respondents reflects the successive waves of immigration to this country during the last 60 years. The trough embracing the age-groups 40-44, 45-49, and 50-54 corresponds with the years (1892-1918) when the volume of immigration was low relative to the influx of the previous years.
The decade beginning in 1919 saw a greater flow of immigration which probably accounts for the slightly bigger numbers of the first-generation respondents in the age-groups 30-34 and 35-39.3/

The preceding paragraphs point to a plausible explanation of the observed differences in the median ages of the Australian-born respondents classified by generation status. These differences could have been due to the recent settlement of Australia and the pattern of immigration flow into the country.

The evidence in the last table also indicates that the academic profession will probably consist of greater and greater proportions of "third generation" Australian-born in the years to come as their proportion in the total population can naturally be expected to increase. Data in the table show that there are proportionately more persons in this group, who are in the age-groups 35-39 and under. But, as things stood in 1957 when the survey was made, it seems safe to venture the guess that the length of familial settlement in Australia is not a factor affecting the chance of the Australian-born to enter the academic profession.

3/For appropriate immigration figures for the years mentioned, see H. Burton, op. cit., pp. 39-40.
The distribution of the respondents by the occupations of their paternal grandfathers and fathers is given in Table XIV. For the sake of convenience, the occupational categories listed previously in Chapter III are reproduced below:

A. Non-manual:
   I. Professional, semi-professional
   II. High official, managerial
   III. Low official, managerial
   IV. Sales, clerical

B. Manual:
   V. Skilled
   VI. Semi-skilled, unskilled

VII. Rural occupations.

Looking first at the column on the extreme right in Table XIV, one can see that the paternal grandfathers of the Australian-born respondents are well distributed in 5 of the seven categories, ranging from 11.8% to 16.7%. In the other two (i.e., the fourth and the sixth), however, relatively smaller proportions of them are found.

In contrast, the distribution of the respondents by the occupation of their fathers is much less dispersed. The relevant figures are at the bottom of the table. Thus, 27.5% of the respondents were born to families in the first occupational category, and another 23.9% in the
### TABLE XIV

**DISTRIBUTION OF THE AUSTRALIAN-BORN RESPONDENTS BY OCCUPATIONS OF PATERNAL GRANDFATHER AND FATHER**

<table>
<thead>
<tr>
<th>Paternal grandfather's occupation</th>
<th>Father's occupation</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
</tr>
<tr>
<td>I</td>
<td>29</td>
<td>9</td>
</tr>
<tr>
<td>II</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>III</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>IV</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>V</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>VI</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>VII</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Unknown</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>68</td>
</tr>
<tr>
<td>(%)</td>
<td>(27.5)</td>
<td>(23.9)</td>
</tr>
</tbody>
</table>
second category. The proportions of them in the other five categories amount to from less than one-tenth to about two-thirds of those in each of the first two categories.

If the two distributions are placed side by side as in the next table (Table XV), the contrast is more sharply focussed.

**TABLE XV**

**OCCUPATIONAL DISTRIBUTIONS OF THE PATERNAL GRANDFATHERS AND FATHERS OF AUSTRALIAN-BORN RESPONDENTS**

<table>
<thead>
<tr>
<th>Occupational category</th>
<th>Paternal grandfathers</th>
<th>Fathers</th>
<th>% of col. 3 over col. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>19.3 (48)</td>
<td>28.0 (79)</td>
<td>1.45</td>
</tr>
<tr>
<td>II</td>
<td>13.7 (34)</td>
<td>24.1 (68)</td>
<td>1.76</td>
</tr>
<tr>
<td>III</td>
<td>18.5 (46)</td>
<td>15.6 (44)</td>
<td>0.84</td>
</tr>
<tr>
<td>IV</td>
<td>8.0 (20)</td>
<td>12.1 (34)</td>
<td>1.51</td>
</tr>
<tr>
<td>V</td>
<td>14.9 (37)</td>
<td>11.3 (32)</td>
<td>0.76</td>
</tr>
<tr>
<td>VI</td>
<td>7.6 (19)</td>
<td>2.1 ( 6)</td>
<td>0.28</td>
</tr>
<tr>
<td>VII</td>
<td>18.1 (45)</td>
<td>6.7 (19)</td>
<td>0.37</td>
</tr>
<tr>
<td>Total</td>
<td>100.1 (249)</td>
<td>99.9 (282)</td>
<td>--</td>
</tr>
</tbody>
</table>

Note: Excluding "unknowns".

Occupational mobility is evident between the two generations. The shift was principally out of the skilled
unskilled, and pastoral and agricultural occupations into the first, second, and fourth categories. In addition, there was a small decline in the third occupational category.

These changes between the two generations reflect, to some extent, modifications in the Australian occupational structure generally. During the years in which the fathers of the respondents lived and worked, there were rapid changes in the various segments of the Australian occupational structure, such as the enlargement of the professions and white-collar occupations and the decline in the proportion of persons in pastoral and agricultural pursuits.\(^4\)

However, as occupational mobility of the parental generation (i.e., compared with the grandfathers) is beyond the scope of the present study, further analysis of the data along this line will not be undertaken.

Clearly shown in the last table is the fact that the Australian-born members of the academic elite came predominantly from the first four occupational categories:

28.0% of them originated from the first category, 24.1% from the second, 15.6% from the third, and 12.1% from the fourth. In other words, four-fifths (80.8%) of the respondents whose fathers' occupations are known came from families in non-manual occupations. Only slightly over one-eighth (13.4%) were of manual origin, and a little more than one-sixteenth (6.7%) of them were from families in the occupational category made up of farmers, graziers, etc..

It is sufficient, for the present purpose, to note that, as far as the academic profession is concerned, the opportunities are more "open" to individuals from non-manual families than those of manual origin. The inference, then, is that in Australia as in other countries an individual's achieved occupational status is partly related to his ascribed status within the occupational structure.

Of the 287 Australian-born respondents, the fathers of 49 of them were born before 1870, 150 between 1870 and 1899, and the other 78 after 1890. As is shown in the next table (Table XVI), the average size of parental families from which the respondents came is the largest among those whose fathers were born before 1870. The
TABLE XVI
DISTRIBUTION OF THE FATHERS OF AUSTRALIAN-BORN RESPONDENTS
BY YEAR OF BIRTH AND NUMBER OF CHILDREN

<table>
<thead>
<tr>
<th>Number of children</th>
<th>Year of birth Before 1870</th>
<th>1870-1899</th>
<th>1890 &amp; after</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>14</td>
<td>21</td>
<td>41</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>44</td>
<td>20</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
<td>41</td>
<td>28</td>
<td>82</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>22</td>
<td>9</td>
<td>38</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>12</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>6+</td>
<td>10</td>
<td>17</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>150</td>
<td>78</td>
<td>287</td>
</tr>
<tr>
<td>Average size</td>
<td>3.7</td>
<td>3.2</td>
<td>2.3</td>
<td>--</td>
</tr>
</tbody>
</table>

Test of significance: \( \chi^2 = 32.8; \) d.f. = 10; \( P < .001. \)

smallest average is found among the fathers who were born after 1890, and the fathers born between 1870 and 1899 had an average intermediate between the two other groups. A statistical test of the data indicates that the difference is significant.

This reduction in the average size of parental family clearly means that contraceptive practices began at least a generation back in Australia. Many of the parents of the respondents now in the academic profession succeeded
in avoiding excessive fertility by modern standards.\textsuperscript{5} As a return to excessive fertility appears improbable, the implication is that, for the respondents whose fathers were born after 1890, average family size would resemble that of their parents. In other words, further reduction in family size seems unlikely except through a complete cessation of reproduction on the part of a majority of these respondents.\textsuperscript{6}

**Marital Status**

As the next table (Table XVII) shows, nearly eighty per cent of the Australian-born males were once married. The proportion of the males "never married" is 13.2\%. The remaining 7\% of the males are equally divided among those married more than than once and those whose marriages were broken either by the death of their spouses or by domestic discords.

Noting that 21 of the 38 "never married" males are under the age of 35 years, the chance is good that many of them will eventually marry. Life-long bachelors in

\textsuperscript{5}For an overall view of the Australian fertility trend over the last four decades, see Louis Henry, "Fertility according to Size of Family: Application to Australia," United Nations, Population Bulletin, No. 4, December, 1954, pp. 8-20.

\textsuperscript{6}For further discussion, see Chapter VI.
### TABLE XVII

DISTRIBUTION OF AUSTRALIAN-BORN RESPONDENTS
BY AGE AND MARITAL STATUS

<table>
<thead>
<tr>
<th>Age</th>
<th>Never married</th>
<th>Once married</th>
<th>Married more than once</th>
<th>Widowed, separated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 30</td>
<td>10</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td>30 - 34</td>
<td>11</td>
<td>54</td>
<td>3</td>
<td>0</td>
<td>68</td>
</tr>
<tr>
<td>35 - 39</td>
<td>6</td>
<td>45</td>
<td>0</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>40 - 44</td>
<td>1</td>
<td>37</td>
<td>4</td>
<td>1</td>
<td>43</td>
</tr>
<tr>
<td>45 - 49</td>
<td>3</td>
<td>29</td>
<td>0</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>50 - 54</td>
<td>2</td>
<td>18</td>
<td>1</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>55 - 59</td>
<td>4</td>
<td>21</td>
<td>2</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>60 - 64</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>65 +</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>229</td>
<td>10</td>
<td>10</td>
<td>287</td>
</tr>
</tbody>
</table>

*(%)* 13.2 79.8 3.5 3.5 100.0

*Including 3 married males about whose wives no information is available.*

The academic profession will probably be considerably fewer than the present data indicate. However, these "never married" males, along with the 20 respondents who were married more than once, widowed, divorced, and separated, will be excluded from consideration in the next section which examines when and whom the 226 respondents married.
Marital Choice

There are 229 once-married respondents, but three of their wives failed to supply any information. Consequently, their number is reduced to 226. In the next table (Table XVIII), these 226 respondents are classified according to their present age and age at marriage.

TABLE XVIII
AUSTRALIAN-BORN RESPONDENTS BY PRESENT AGE AND AGE AT MARRIAGE ONCE MARRIED

<table>
<thead>
<tr>
<th>Present age</th>
<th>Age at marriage</th>
<th>Under 25</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>40 &amp; over</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 30</td>
<td></td>
<td>6</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>30 - 34</td>
<td></td>
<td>12</td>
<td>24</td>
<td>23</td>
<td>7</td>
<td>0</td>
<td>54</td>
</tr>
<tr>
<td>35 - 39</td>
<td></td>
<td>12</td>
<td>19</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>40 - 44</td>
<td></td>
<td>9</td>
<td>20</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td>45 - 49</td>
<td></td>
<td>3</td>
<td>18</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>50 - 54</td>
<td></td>
<td>2</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>55 +</td>
<td></td>
<td>4</td>
<td>12</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>60</td>
<td>114</td>
<td>45</td>
<td>5</td>
<td>2</td>
<td><strong>226</strong></td>
</tr>
</tbody>
</table>

For the group as a whole, the median age at marriage was 27.3 years. This is about the same as the
average age at first marriage for Australian generally during the last four decades.2/

Since the 1920's, as the data given in the footnote show, there has been a very gradual reduction in the age at first marriage for the general male population. The data in the last table indicate that there is a slight positive relationship (r = +.27) between the present age of the respondents and age at marriage. It appears, therefore, that university teachers behaved about the same way as the males in the general population, with respect to age at marriage. The younger respondents are shown to have entered into matrimony somewhat earlier in life than their older colleagues.

But, little difference exists among the respondents classified by occupational origins in their ages at marriage. The proportion of the respondents in each occupational

---

2/Average age at first marriage for the males in the general population since the early 1920's:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1921:</td>
<td>28.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1923:</td>
<td>28.0</td>
<td></td>
<td></td>
<td></td>
<td>1925:</td>
<td>28.1</td>
<td></td>
<td></td>
<td></td>
<td>1927:</td>
<td>27.9</td>
<td></td>
</tr>
<tr>
<td>1923:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1925:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1927:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1929:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1925:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1927:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1929:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1921:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1927:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1929:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1921:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1923:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1929:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1921:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1923:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1925:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Demography Bulletin, Canberra, Nos. 55, 66, and 74.
TABLE XIX
AUSTRALIAN-BORN RESPONDENTS BY AGE AT MARRIAGE
AND OCCUPATION OF THEIR FATHERS, ONCE MARRIED

<table>
<thead>
<tr>
<th>Age at marriage</th>
<th>Father's occupation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
</tr>
<tr>
<td>- 25</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>25 - 29</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>30 - 34</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>35 +</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>50</td>
</tr>
</tbody>
</table>

Statistical test: $\chi^2 = 5.68; \text{ d.f.} = 10; P > .80$

Note: In the computation of the Chi-square, the last three columns and the last two rows, respectively, were collapsed.

category who were married before the age of 30 is as follows: I, 75.0%; II, 80.0%; III, 74.2%; IV, 72.4%; V, 74.1%; and the last three groups combined, 88.0%. Excluding the last proportion mentioned, none of the others deviates by more than 3% from that of the group as a whole (76.9%). Thus, for university teachers, age at marriage is seen to be independent of occupational origins.

The wives' median age at marriage was 25.3, which is lower than their husbands' median age of 27.3 years.
TABLE XX
AGES AT MARRIAGE - AUSTRALIAN-BORN RESPONDENTS AND THEIR WIVES, ONCE MARRIED

<table>
<thead>
<tr>
<th>Respondents' age at marriage</th>
<th>Wife's age at marriage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under 20-</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>25- 29</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>30- 34</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>35- 39</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>40 &amp; over</td>
<td>1</td>
</tr>
</tbody>
</table>

|                | 25               | 49    |
|                | 13               | 55    |
|                | 1                | 7     |
|                | 0                | 13    |
|                | 0                | 2     |
|                | 0                | 0     |
|                | 4                | 103   |
|                | 90               | 23    |
|                | 6                | 1     |
|                | 226              |       |

There is also a moderately positive relationship between respondents' and wives' age at marriage (+.35), probably because many of the respondents married wives of the same age and others married wives younger than themselves.

The distribution of the 226 once married respondents by place of birth and by their wives' places of birth is shown in the next table (Table XXI). There are a number of interesting features of the data.

Clearly, residential propinquity is an important factor affecting marital choice. Substantially more than half of the respondents who were born in Sydene and
### TABLE XXI

**DISTRIBUTION OF AUSTRALIAN-BORN RESPONDENTS AND THEIR WIVES BY THEIR RESPECTIVE PLACE OF BIRTH, ONCE MARRIED**

<table>
<thead>
<tr>
<th>Respondents' place of birth</th>
<th>Wives' place of birth</th>
<th>Towns &amp; rural places</th>
<th>Foreign</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sydney &amp; Melbourne</td>
<td>Other capital cities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sydney &amp; Melbourne</td>
<td>52.3%</td>
<td>6.8%</td>
<td>24.2%</td>
<td>16.7%</td>
</tr>
<tr>
<td>(69)</td>
<td>(9)</td>
<td>(32)</td>
<td>(22)</td>
<td></td>
</tr>
<tr>
<td>Other capital cities</td>
<td>40.0%</td>
<td>16.0%</td>
<td>24.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>(10)</td>
<td>(4)</td>
<td>(6)</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>Towns &amp; rural places</td>
<td>47.8%</td>
<td>7.2%</td>
<td>31.9%</td>
<td>13.0%</td>
</tr>
<tr>
<td>(33)</td>
<td>(5)</td>
<td>(22)</td>
<td>(9)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>49.6%</td>
<td>8.0%</td>
<td>26.5%</td>
<td>15.9%</td>
</tr>
<tr>
<td>(112)</td>
<td>(18)</td>
<td>(60)</td>
<td>(36)</td>
<td></td>
</tr>
</tbody>
</table>
Melbourne were married to wives born in Sydney and Melbourne. Furthermore, as the universities are located in these two cities, it is not surprising that many of the respondents who were born in either "other capital cities" or "towns and rural places" did likewise.

It is known that nearly all of the respondents in the last place of birth group attended the University of Sydney and the University of Melbourne. Presumably, then, they were married after they moved to Sydney and Melbourne. Yet, one-third of them married wives also born in "towns and rural places."

A somewhat smaller proportion of the respondents born in the two cities mentioned also married wives from "towns and rural places." Judging from general conditions in Australia, it is most improbable that these respondents had migrated to and married their wives in such places. The obvious inference is, therefore, that the females have contributed their share to the cityward migration in Australia.

The proportion of respondents who were married to foreign-born wives varies from one group to another, but only differs slightly from that of the total group (15.9%).


TABLE XXII

DISTRIBUTION OF AUSTRALIAN-BORN RESPONDENTS BY OCCUPATION OF THEIR FATHERS AND THEIR WIVES' FATHERS, ONCE MARRIED

<table>
<thead>
<tr>
<th>Respondents' fathers' occupation</th>
<th>Wives' fathers' occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td>I</td>
<td>22(36%)</td>
</tr>
<tr>
<td>II</td>
<td>14</td>
</tr>
<tr>
<td>III</td>
<td>7</td>
</tr>
<tr>
<td>IV</td>
<td>8</td>
</tr>
<tr>
<td>V</td>
<td>5</td>
</tr>
<tr>
<td>VI</td>
<td>2</td>
</tr>
<tr>
<td>VII</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
</tr>
</tbody>
</table>

Note: Discrepancy between this and previous tables is due to the elimination of respondents whose fathers' or fathers-in-law's occupations are not known.
Looking diagonally at the figures from the upper left to the lower right, it can be seen in the last table (Table XXII) that slightly over one-third of the respondents in the first two occupational categories were married to wives of the same occupational origins. None of the other proportions is as high as the first two, except in the case of the respondents in the fifth category.

In order to further explore the association between the occupational origins of the respondents and their wives, the data given in the above table have been re-arranged, showing the proportions of respondents in each occupational category who were married to wives in the identical and contiguous categories, non-contiguous higher categories, and non-contiguous lower categories.

As is shown in Table XXIII, nearly three-fifths of the respondents chose their wives from either identical or contiguous occupational categories. The proportion of respondents whose wives originated from non-contiguous higher categories is the same as that of respondents whose spouses were of non-contiguous lower occupational origins.
TABLE XXIII

RELATIVE OCCUPATIONAL ORIGIN OF AUSTRALIAN-BORN RESPONDENTS AND THEIR WIVES

<table>
<thead>
<tr>
<th>Respondents' occupational origin</th>
<th>Wives' occupational origin</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-contiguous (Higher)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identical and contiguous</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-contiguous (Lower)</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>N 42 (67.7)</td>
<td>N 20 (32.3)</td>
</tr>
<tr>
<td>II</td>
<td>N 38 (76.0)</td>
<td>N 12 (24.0)</td>
</tr>
<tr>
<td>III</td>
<td>N 7 (22.6)</td>
<td>N 19 (61.3)</td>
</tr>
<tr>
<td>IV-VII</td>
<td>N 39 (52.7)</td>
<td>N 26 (35.1)</td>
</tr>
<tr>
<td>Total</td>
<td>N 46 (21.2)</td>
<td>N 125 (57.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N 217 (100)</td>
</tr>
</tbody>
</table>

There are a number of artificial elements in this data arrangement. By definition, respondents in the first two occupational categories cannot marry wives in non-contiguous higher categories, for none exists. It is likewise impossible for respondents on the other end of the occupational classification to marry persons from non-contiguous lower categories. Thus, the amount of either downward or upward marital mobility is exaggerated.8/

The proportion of respondents in the first occupational category who were married to wives in non-contiguous lower categories (32.3%) is higher than that of the total group (21.3%) of respondents. The difference is, however, not as great as that between the proportion of respondents in the last broad occupational group whose wives originated from non-contiguous higher categories (52.7%) as compared with the total group (21.2%).

Thus, while a strong preference for marital partners to be of fairly similar occupational origins exists (particularly in the first two occupational categories), marriages involving persons of dissimilar backgrounds are not infrequent. As a matter of fact, more than half of the respondents in the last broad occupational group married wives born to families in non-contiguous higher categories. Probably, these marriages were the result of upward mobility on the part of the respondents involved, -- which suggests that the boundary between occupational groups is somewhat blurred in urban communities.

From the data on their relative religious affiliations (Table XXIV), it emerges that marriages across religious lines are exceptions. The Jewish group is too small to
TABLE XXIV

RELIGIOUS AFFILIATION OF AUSTRALIAN-BORN RESPONDENTS AND THEIR WIVES, ONCE MARRIED

<table>
<thead>
<tr>
<th>Respondents' religion</th>
<th>Wives' religion</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Protestant</td>
<td>Catholic</td>
</tr>
<tr>
<td></td>
<td>149</td>
<td>4</td>
</tr>
<tr>
<td>Catholic</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Jewish</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Atheist</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>No religion</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>174</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

Note: Excluding two respondents who declared themselves as being affiliated with "other" religions.

TABLE XXV

AUSTRALIAN-BORN RESPONDENTS BY AGE AND BY WIVES' HIGHEST EDUCATION ATTAINED, ONCE MARRIED

<table>
<thead>
<tr>
<th>Respondents' age</th>
<th>Wives' highest education</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Some university or professional qualifications</td>
<td>University</td>
</tr>
<tr>
<td></td>
<td>valid or</td>
<td>qualification</td>
</tr>
<tr>
<td></td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>Re-</td>
<td>Prima-</td>
<td>Secondary</td>
</tr>
<tr>
<td>spondents' age</td>
<td>ary</td>
<td>ary</td>
</tr>
<tr>
<td>35 - 44</td>
<td>1</td>
<td>39</td>
</tr>
<tr>
<td>45 +</td>
<td>2</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3</td>
<td>94</td>
</tr>
</tbody>
</table>
require comment. Though the Catholic group is not much larger, the tendency for both marriage partners to be of the same religion is clearly indicated. And, nearly all of the respondents who classified themselves as Protestants were married to Protestant wives.

Also if one of the marriage partners is an "atheist" or has no religion, the other tends to be of similar outlook. Nevertheless, the number of wives in these categories is smaller (27) than the number of respondents (47).

It appears (Table XXV) that slightly larger proportions of respondents aged 35-44 and 45+ were married to wives with only primary and secondary education. Conversely, more of the younger respondents married wives whose educational attainment was comparable to their own. This is obviously related to the improved educational condition of Australian females in general.

Summary

(1) Of the 287 Australian-born respondents, more than two-thirds were born in the six State Capitals of Australia. The number of respondents born in Sydney and Melbourne is 91 and 83, respectively. Those who
were born outside the capital cities numbered 84. Persons born in the urban places, therefore, predominate in the academic profession.

(2) A few of the Australian-born university teachers were the descendants of migrants from Germany, Italy, etc., but a great majority of them were of British origin.

(3) Only about a quarter of the respondents were first-generation Australians or of foreign parentage. The second generation Australian-born formed the largest group in the profession (119), and the paternal grandfathers and fathers of 95 respondents were also of Australian-birth.

(4) About twenty-eight per cent of the respondents were born to families in the first occupational category, and some 24% in the second category. The proportions of respondents in the other 5 categories amount to from less than one-tenth to about two-thirds of those in each of the first two categories. In total, 80.8% of them were of non-manual origin, 13.4% of manual origin, and the rest were from families in the occupational category made up of persons engaged in rural occupations.
(5) Nearly 80% of the Australian-born respondents were once married. Another 7% of them were married more than once, widowed, divorced, or separated. The chance is good that many of the "never married" respondents will eventually marry as they are still young. Therefore, life-long bachelors will probably be fewer than the present data indicate.

(6) The median age at marriage of the respondents was 27.3. The younger respondents entered into matrimony somewhat earlier in life than their older colleagues. But, little differences exists among the respondents classified by occupational origins in their age at marriage.

The wives' median age at marriage was 25.3.

(7) Residential propinquity was an important factor affecting marital choice. Substantially more than half of the respondents who were born in Sydney and Melbourne were married to wives born in Sydney and Melbourne. Many of the respondents who were born in either other capital cities or other places did likewise.

(8) Nearly three-fifths of the respondents chose their wives from either identical or contiguous occupational categories. Despite this preference for marital
partners to be of fairly similar occupational origins, marriages involving persons of dissimilar backgrounds were not infrequent. The proportion of respondents who married wives in non-contiguous higher categories is much higher than that of respondents whose wives originated from non-contiguous lower occupational origins.

(9) Marriages across religious lines were exceptions. Catholics tended to marry Catholics, and Protestants to marry Protestants. Also if one of the marriage partners was an "atheist" or had no religion, the other tended to be of similar outlook.

(10) Owing to the improved educational condition of Australian females in general, more of the younger respondents married wives whose educational attainments were comparable to their own. And, slightly larger proportions of older respondents were married to wives with only primary and secondary education.
General Remarks

Of the 287 Australian-born respondents, two hundred and twenty-nine were once and still are married. But, in addition to the three respondents who, as previously mentioned, gave no information about their wives, eight others failed to supply the dates of their marriages and/or the birth dates of their children. Consequently, the number of useful questionnaires is reduced to 216.

One of the procedures commonly followed in fertility analyses is to include only the couples who have passed or completed the reproductive period, e.g., the wives have reached their forty-fifth birthday. This procedure is not adhered to because it would eliminate a large number of the 216 respondents. Instead, all respondents who have been married for ten or more years are included in the present analysis irrespective of the ages of their wives.

A number of studies have shown that, at the end of the 10th year of marriage, the achieved fertility is about 85% of what the couples in each cohort have finally
attained. As is shown in Table XXVI, this is evidently also the case among the Australian-born university teachers.

Therefore, the inclusion of all the respondents whose marriages have lasted ten or more years is justified since their fertility may, for practical purposes, be regarded as "complete". With reference to mobility, moreover, it can be argued that the first ten years of marriage are probably the most crucial.

The number of respondents who were married ten years or more is 126, including all marriages contracted in and prior to 1947. Only one marriage took place before 1920. Thus, it is possible to divide the 126 respondents into two groups, the first of which consists of the respondents who were married between 1920 and 1939, and the second of marriages which took place between 1940 and 1947. The two groups are about equal in size, but significantly different, of course, in terms of the age distribution of the respondents. In the first marriage cohort, the respondents have a median age of 52.7. The median age of the respondents in the second cohort is 41.1 (See Table XXVII).


2/ See Ch.VIII. The life-histories of some of the respondents bear out this assertion.
TABLE XXVI
AVERAGE NUMBER OF CHILDREN PER RESPONDENT BY YEAR OF MARRIAGE
AND FOR SPECIFIC DURATION OF MARRIAGE

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1.4</td>
<td>0.9</td>
<td>1.2</td>
<td>1.4</td>
<td>1.4</td>
<td>1.2</td>
<td>1.34</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>1.6</td>
<td>1.2</td>
<td>1.4</td>
<td>1.6</td>
<td>1.6</td>
<td>1.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>1.7</td>
<td>1.5</td>
<td>1.7</td>
<td>1.8</td>
<td>1.9</td>
<td>1.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>1.7</td>
<td>1.8</td>
<td>1.9</td>
<td>2.0</td>
<td>2.3</td>
<td>2.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>1.8</td>
<td>1.9</td>
<td>2.1</td>
<td>2.2</td>
<td>2.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>1.9</td>
<td>2.0</td>
<td>2.1</td>
<td>2.3</td>
<td>2.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>In 1957</td>
<td>2.2</td>
<td>2.3</td>
<td>2.5</td>
<td>2.7</td>
<td>2.9</td>
<td>2.0</td>
<td>1.6</td>
<td>0.6</td>
</tr>
</tbody>
</table>

% of achieved fertility at the end of 10th year of marriage x

|       | 85.1 | 87.7 | 85.2 | 84.3 | 91.6 | -     | -     | -     |

| Number of Respondents | 18 | 18 | 30 | 39 | 21 | 19 | 29 | 44 |

x Using the fertility averages for 1957 as the base.
### TABLE XXVII

**AGE DISTRIBUTION OF THE RESPONDENTS MARRIED BEFORE 1947 BY YEAR OF MARRIAGE**

<table>
<thead>
<tr>
<th>Age</th>
<th>1920-39</th>
<th>1940-47</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>35 - 39</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>40 - 44</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>45 - 49</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>50 - 54</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>55 - 59</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>60 &amp; over</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>66</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

Median age: 52.7 (1920-39) 41.1 (1940-47)

* Including one marriage before 1920.

Admittedly, the present treatment of the data is not beyond reproach on methodological grounds as it does not divide the respondents into two entirely discrete groups with reference to the economic conditions under which they conducted their married life. Some respondents in each of the two groups, for instance, undoubtedly experienced similar anxieties and temporary separation from their wives during the Second World War.

But, the present arrangement of the data is quite satisfactory in a major way. Whereas the respondents in the first marriage cohort were affected by the depression of the 1930's, the respondents in the second marriage cohort not only escaped its direct impact, but also actually enjoyed
relative prosperity in the first ten years of their married life. The present division of the respondents into two groups gives, therefore, a roughly realistic basis from which to assess the relationship between fertility and mobility. It permits, among other things, a test of whether mobility is a transcendental factor affecting fertility, or whether it is significantly related to fertility under different socio-economic conditions.

Age at marriage and Fertility

That changes in the socio-economic environment do affect fertility behavior is again demonstrated by the data for the limited population in this study. In the previous table (Table XXVI), the figures show that since the marriages of 1930-34, there has been a progressive rise in fertility, as measured in terms of the average number of children per respondent. The respondents in the marriage cohort 1945-47 have on the average more children at the end of their tenth year of marriage as well as at prior specified durations of marriage than the respondents in the 1940-44 cohort and all other cohorts.

In previous studies of the interrelationship between mobility and fertility, their analyses were based on marriages contracted under unfavorable economic circumstances, or marriages which were affected by such adverse conditions during their initial years. Their findings do not, therefore, preclude the possibility that mobility may not be related to fertility if relatively favorable conditions are present. Boggs and others have, in fact, demonstrated this possibility. Cf. Riemer and Kiser, op.cit.,p.1072.
The respondents in the 1940-44 cohort have, in turn, an average number of children greater than that of those married in 1935-39, at all specified durations of marriage. So it is in the case of the respondents in the 1935-39 cohort when their fertility is compared with that of those in the 1930-34 cohort. But, even though the respondents in this last cohort mentioned have by the end of tenth year of marriage approximately the same average number of children as that of those married before 1930, their fertility is markedly smaller at lower durations, - a fact which is strongly indicative of the effect of the depression.

It appears that university teachers are just as sensitive, if not more so, to temporary economic fluctuations as persons in the community at large. The observations regarding changes in Australian fertility generally are equally applicable to this occupational segment: "During the depression of the thirties there was some tendency to delay marriage but a more marked tendency to delay birth. ... A close examination of the cohorts of (men) married during the thirties suggests that while they tended to postpone births during the worse years of the economic recession many of these 'delayed' births were eventually made up at higher durations of marriage during and after
The sensitivity of university teachers to economic changes is also reflected in the gradual rise in the average number of children at specified durations of marriage. This increase is consistent with the observed fertility trend in Australia. That is, more children are born during the early years of marriage of recent cohorts than was the case in the 1930's, though it is not clear whether the size of completed family is any larger than before.

As regards the university teachers themselves, however, the data seem to indicate that the size of the completed families of the recently married respondents (i.e., those in the 1940-44 and 1945-47 cohorts) will ultimately be somewhat larger than that of their colleagues who were married in the 1920's and 1930's. This is brought more clearly by a consolidation of the data in the previous table, the result of which is given below in Table XXVIII. It can be seen that, as of 1957, the mean number of children born to the respondents in the 1920-39 cohort is 2.4, and that the respondents in the 1940-47 cohort have a mean number of 2.9.

### TABLE XXVIII
AVERAGE NUMBER OF CHILDREN PER RESPONDENT, MARRIAGE COHORTS, 1920-39 and 1940-47

<table>
<thead>
<tr>
<th>Duration of marriage</th>
<th>1920-39</th>
<th>1940-47</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>6</td>
<td>1.4</td>
<td>1.6</td>
</tr>
<tr>
<td>7</td>
<td>1.6</td>
<td>1.9</td>
</tr>
<tr>
<td>8</td>
<td>1.8</td>
<td>2.2</td>
</tr>
<tr>
<td>9</td>
<td>1.9</td>
<td>2.4</td>
</tr>
<tr>
<td>10</td>
<td>2.1</td>
<td>2.5</td>
</tr>
<tr>
<td>In 1957</td>
<td>2.4</td>
<td>2.9</td>
</tr>
<tr>
<td>$\bar{m}$</td>
<td>1.3</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Taking into account the fact that many of the respondents in the 1940-47 cohort have only been married ten years, the likelihood is very great that the average number of children of this cohort may eventually be larger than that attained in 1957. The conclusion therefore seems to follow that there has been a real increase in the fertility of the university teachers over the years in question.

This conclusion must be accepted with reservation, however. The respondents in the 1920-39 cohort are, as previously shown, older than the respondents in the 1940-47 cohort. This means that the average number of children shown for the 1920-39 cohort is based on fragmental fertility.
information as these respondents are the survivors of university teachers who ever served and who were married in the same years. The fertility of the teachers who were not included because of deaths, is unknown, - a fact which makes somewhat inappropriate the use of the present data to determine whether a change has taken place in the fertility of university teachers since the 1930's.

A test of the significance of the difference between the mean number of children of the 1920-39 cohort and the mean number of children of the 1940-47 cohort at the end of the 10th year of marriage yielded a $t = .60$, and $P < .50$. Thus, the observed difference between the average numbers of children of the two cohorts can be attributed to chance. One plausible explanation may be that the discrepancy is attributable to differences between the respondents in these cohorts in their age at marriage and/or pattern of family building.

The figures in Table XXIX indicate that there has been a reduction of age at marriage among the university teachers. The median age at marriage of the respondents in the 1920-39 cohort is 27.8 years, and of the respondents in the 1940-47 cohort 26.1 years. The difference is statistically

\[6/\text{See Chapter V, Table XVIII.}\]
significant at the 1 per cent level.

TABLE XXIX

AGE AT MARRIAGE, BY YEAR OF MARRIAGE AND FOR THE RESPONDENTS AND THEIR WIVES

<table>
<thead>
<tr>
<th>Age at marriage</th>
<th>Respondents 1920-39</th>
<th>1940-47</th>
<th>Wives 1920-39</th>
<th>1940-47</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>20 - 24</td>
<td>11</td>
<td>24</td>
<td>22</td>
<td>36</td>
</tr>
<tr>
<td>25 - 29</td>
<td>40</td>
<td>28</td>
<td>32</td>
<td>19</td>
</tr>
<tr>
<td>30 - 34</td>
<td>14</td>
<td>7</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>35 +</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Median</td>
<td>27.8</td>
<td>26.1</td>
<td>26.7</td>
<td>23.9</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
<td>60</td>
<td>66</td>
<td>60</td>
</tr>
</tbody>
</table>

Test of Significance: $\chi^2$

(1) Respondents $\chi^2 = 8.11; \text{d.f.} = 2; .02 > P > .01.$
   The last two age groups were collapsed in the computation of the chi-square.

(2) Wives: $\chi^2 = 10.32; \text{d.f.} = 1; .01 > P > .001.$
   The first two and the last three age groups were collapsed in the computation of the chi-square.

In view of this change in the median age at marriage, a question arises concerning its relation to the observed fertility differences between the two cohorts. In other words, if age at marriage is held constant, does the observed difference in the fertility of the two cohorts still persist?
### TABLE XXX

**AVERAGE NUMBER OF CHILDREN BY YEAR OF MARRIAGE AND WIVES' AGE AT MARRIAGE**

<table>
<thead>
<tr>
<th>No. of marriage cohort</th>
<th>1920 - 39</th>
<th>1940 - 47</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under 25</td>
<td>25 &amp; over</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>44</td>
</tr>
</tbody>
</table>

Tests of Significance between Columns:

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$</th>
<th>d.f.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>II and III</td>
<td>4.51</td>
<td>2</td>
<td>&lt; .20</td>
</tr>
<tr>
<td>IV and V</td>
<td>0.35</td>
<td>3</td>
<td>&lt; .98</td>
</tr>
<tr>
<td>II and V</td>
<td>4.38</td>
<td>2</td>
<td>&lt; .20</td>
</tr>
<tr>
<td>III and IV</td>
<td>1.38</td>
<td>2</td>
<td>&lt; .70</td>
</tr>
<tr>
<td>III and V</td>
<td>0.16</td>
<td>2</td>
<td>&lt; .98</td>
</tr>
<tr>
<td>II and IV</td>
<td>6.25</td>
<td>2</td>
<td>&lt; .05</td>
</tr>
</tbody>
</table>

Given in the above table (Table XXX) is the distribution of the respondents by the number of children at the end of 10th year of marriage and their wives' age at marriage. In view of the smallness of the sample, the wives in each cohort are divided into two groups: (1) wives who were married before their 25th birthday and (2) wives who were married on and after their 25th birthday.
Statistical tests of the data in Table XXX show that age at marriage is not associated with the number of children born at the end of 10th year of marriage. This is true both with respect to the respondents in the 1920-39 cohort ($P < 0.20$) and the respondents in the 1940-47 cohort ($P < 0.98$). Nor is age at marriage associated with the number of children born to the wives in different cohorts in different cohort ($P < 0.20$ and $P < 0.70$).

These findings are consistent with what has become one of the salient features of modern parenthood. They point to the role of deliberate family planning or limitation in the population delimited for study. In times of unfavorable socio-economic circumstances, there is a choice between the postponement of marriage and the postponement of parenthood, depending upon personal inclination or, perhaps, "psychology". The finding, for instance, that age at marriage is not associated with the size of family among the wives in the 1920-39 cohort becomes explicable in these terms. For those who chose to marry young (under 25 years of age), the tendency is to refrain from becoming parents for some time after marriage and to have no more children than those who postponed their marriage.
Presumably also, delay of marriage permits the attainment of greater economic security, a circumstance which probably accounts for the other finding that age at marriage is not associated with family size among the wives in different cohorts. This same argument probably applies when consideration is given to the wives in the two cohorts who were married after their 25th birthday. The data indicate that, although the wives in the 1940-47 cohort have a slightly larger average number of children at the end of their 10th year of marriage than the wives in the 1920-39 cohort, no statistically significant difference exists between them with respect to family size ($P<.98$).

On the other hand, there is a significant difference in the number of children between the wives in the two cohorts who were married prior to their 25th birthday ($P<.05$).

Because of the limitation of the data, it does not seem appropriate, as previously noted, to form any generalization concerning the fertility of the university teachers over time, particularly in view of the fact that this marriage cohort analysis of the number of children according to age at marriage is based on incomplete fertility information (i.e., the number of children at the end of
10th year of marriage.). The pertinent question is therefore not so much whether there has been an increase in fertility over the years, but rather whether the significant difference found with reference to family size of the wives in the two cohorts, who were married young, signifies a change in the pattern of family building. It may be true that some of such wives in the 1940-47 cohort will probably go on having a few more children subsequent to their tenth wedding anniversaries, but quien sabe? What can be ascertained for the moment is whether these wives commenced childbearing earlier than those in the 1920-39 cohort, who were married at comparable ages.

As has already been shown, age at marriage of the university teachers is appreciably lower for those in the 1940-47 cohort than those in the 1920-39 cohort. This is true with respect to either the respondents themselves or their wives. It was also found that only the young wives (i.e., those who were married before their 25th birthday) in the two cohorts differed significantly in the number of children born to them at the end of 10th year of marriage.

7/ In most of the tables, fertility data are given according to the wives' age at marriage. The averages would undoubtedly be somewhat different if they are calculated on the basis of the respondents' age at marriage. But, the pattern would unlikely be dissimilar as the wives' age at marriage is a function of the husbands' age at marriage. This appears to be true and is supported by figures in a few tables where fertility data, according to age at marriage of both, are presented. See Ch.VII.
In the next table (Table XXXI), the pattern of childbearing measured in terms of the average number of children born at specified durations up to the end of 10th year of marriage is shown for the two cohorts, separately, according to the wives' age at marriage.

<table>
<thead>
<tr>
<th>Duration in years</th>
<th>1920-39</th>
<th>1940-47</th>
<th>1920-39</th>
<th>1940-47</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0.9</td>
<td>1.5</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>6</td>
<td>1.2</td>
<td>1.7</td>
<td>1.5</td>
<td>1.6</td>
</tr>
<tr>
<td>7</td>
<td>1.4</td>
<td>1.9</td>
<td>1.7</td>
<td>1.9</td>
</tr>
<tr>
<td>8</td>
<td>1.6</td>
<td>2.2</td>
<td>1.9</td>
<td>2.2</td>
</tr>
<tr>
<td>9</td>
<td>1.8</td>
<td>2.5</td>
<td>2.1</td>
<td>2.3</td>
</tr>
<tr>
<td>10</td>
<td>2.1</td>
<td>2.5</td>
<td>2.1</td>
<td>2.4</td>
</tr>
</tbody>
</table>

It can be seen that the pattern of family building is nearly identical for the wives in the two cohorts who entered into marriage on and after their 25th birthday. Though slightly larger averages are shown for the wives in the 1940-47 cohort, the differences are not statistically significant as already stated in connection with the statistical tests of the data in Table XXX.
As for the wives who were married prior to their 25th birthday, however, those in the 1940-47 cohort appear to have commenced childbearing sooner than the wives in the 1920-39 cohort, resulting in a larger average number of children at each of the specified durations of marriage. A more remarkable feature of the pattern of family building of these wives in the 1940-47 cohort is its strikingly close resemblance to that of the wives in the same cohort who were married at older ages.

To account for this alteration in the pattern of family building, one is apt to emphasize the changes in the economic situation, which have, so to speak, blessed marriages in the 1940's. Important as these favorable changes certainly are to early parenthood, they probably explain only part of the new fertility phenomenon.

There are no existing data with which to make a comparison between the patterns of family building, say, of a skilled occupational group and of the university teachers during the years in question, with the focus on their relative economic gains and respective childbearing.

8/ Coincidentally, there came the institution of the child endowment scheme and the repeal of the means test provisions in the Commonwealth Maternity Allowance acts. But, their immediate effect on childbearing should probably not be stressed as cash payments under these schemes were not large. They did not, of course, cover the actual costs involved in both childrearing and childbearing. In the latter connection, see W.D. Borrie, Population Trends and Policies, pp.212-215.
If there were such data, the conclusion that might emerge might prove to be not dissimilar to an estimation of the American experience:

The demographic history of the last twenty-five years, with very low birth rates in the 1930's and very high birth rates in the 1940's and early 1950's, lends credence to the idea that a majority of Americans have children when they feel that they can afford them and vice versa. But this bit of economic history does not explain the paradoxical fact that the tendency toward early parenthood has been greatest in certain groups whose economic gains have been relatively less than those of others. Consider for example the comparative wages of carpenters and of college professors in 1930 and in 1950. Recent economic changes, then, must be regarded as merely removing obstacles to early childbearing rather than providing positive incentives to fertility. The incentives affecting the upper socio-economic strata of the population must be sought elsewhere than in economic changes which have affected the rest of the population to an equal or even greater degree. 9/

Thus, it may well be that university teachers have reacted positively to the clamor against what has been regarded by many as one undesirable feature of differential fertility, viz., the relatively low fertility of the educated. It may also be because of some other factors yet to be detected, but the cardinal point is that, whatever these factors may be, a significant change has taken place with respect to the pattern of family building.

Social Mobility and Fertility

It is axiomatic that fertility can be affected by hosts of factors: socio-economic, psychological, and physiological. Contraception of some sort, however crude and ineffective according to modern standards, has always existed in different societies. However, in the past, the physiological capacity to reproduce or fecundity was probably the leading factor limiting individuals' fertility, the actual number of children ever born. There is no direct means by which to measure the fecundity of a population, but some recent studies of populations in which contraception is known to be absent indicate that the proportion of childless women beyond the reproductive period varies from slightly over 2% to 4%.

The evidence strongly suggests that fecundity is absent in only a small proportion of the persons in a population. The physiological capacity to reproduce, as exemplified by the actual number of children born, persists in some beyond the birth of a 15th child.


11/ As for Australia itself, no useful figures are available in this connection. See W.D. Borrie, op.cit., p.90.

12/ Eaton and Mayer, loc.cit.
It has been shown previously (Table XXX) that only four couples in the 1920-39 cohort and 3 couples in the 1940-47 cohort had not a single child at the end of the 10th year of marriage. But, while the four couples in the first cohort remained childless at the time of the survey in 1957, only one of the three couples in the 1940-47 cohort still had no children. Thus, apart from the few exceptions, all the couples included in the study were physiologically capable of having children at the time of marriage.

Of course, an impairment of fecundity can conceivably occur subsequent to marriage and prevent an enlargement of family size after the first or second birth. While this is recognized, its effect on the fertility of some of the couples cannot be even roughly estimated for lack of direct information. The explicit assumption is therefore that, for this limited population, variations in the actual number of children ever born result from deliberate choices rather than involuntary disablement.

For the first ten years of marriage, the number of children born to the couples in the two cohorts are shown to be independent of age at marriage. The implication is that childbearing can hardly be regarded as a simple biological process. As age at marriage may and does
fluctuate under the impact of changes in the socio-economic environment and accompanying psychological moods, so with the advances of both contraceptive ideology and technique fertility behavior likewise becomes variable.

Variations in both fertility and fertility behavior, while assumed to represent deliberate choices, are to be treated as dependent variables within the framework of the present study. Their variability is to be accounted for in terms of socio-economic and psychological factors. Psychological factors affecting fertility and fertility behavior are explicitly excluded from the present consideration. The present examination selects, from among all socio-economic factors, "social mobility" as the independent variable.

In the next chapter, an examination will be made of mobility in relation to fertility behavior, or the timing of births within marriage. The present analysis deals only with the relationship between mobility and fertility, or the number of children, and tests the three following propositions:

(1) Immobility is associated with larger families.

(2) Upward mobility or social promotion is associated with smaller families.

(3) Fertility behavior is influenced by both the present social status and social origin.
By definition, the respondents whose fathers are reported to belong to the first two occupational categories are non-mobile. Their fertility should therefore be greater than that of the respondents who originated from the other occupation groups. Table XXXII gives the relevant data without regard to the age at marriage of either the respondents or their wives.

The fertility averages in this table are based on the reproductive performance of the respondents during the first 10 years of marriage. As has been previously stated, they should suffice for a test of the relationship between social mobility and fertility.

**TABLE XXXII**

AVERAGE NUMBER OF CHILDREN BY MARRIAGE COHORT AND BY OCCUPATIONAL CATEGORY OF FATHERS *

<table>
<thead>
<tr>
<th>Fathers' occupation</th>
<th>1920-39</th>
<th>1940-47</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>2.2</td>
<td>2.6</td>
</tr>
<tr>
<td>II</td>
<td>2.0</td>
<td>2.3</td>
</tr>
<tr>
<td>III</td>
<td>2.0</td>
<td>2.3</td>
</tr>
<tr>
<td>IV</td>
<td>1.8</td>
<td>3.0</td>
</tr>
<tr>
<td>V</td>
<td>2.4</td>
<td>2.5</td>
</tr>
<tr>
<td>VI</td>
<td>-</td>
<td>2.4</td>
</tr>
<tr>
<td>VII</td>
<td>2.3</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>63</td>
<td>59</td>
</tr>
</tbody>
</table>

* Three of the respondents in the 1920-39 cohort and one respondent in the 1940-47 cohort gave no information on their fathers' occupation.
However, as the respondents in the 1920-39 cohort have been married for 18 years or more, it can be assumed that they have completed their childbearing. For these respondents, therefore, fertility averages on the basis of completed fertility were also calculated. They are given in the next table (Table XXXIII) together with the actual distribution of these respondents by the number of children ever born and by mobility status and age at marriage.

In the table that follows, (Table XXXIV), similar details are shown for the respondents in the 1940-47 cohort, except that the data refer to their fertility at the end of 10th year of marriage.

Fertility averages in the two preceding tables are, as is expected, somewhat larger than those shown in Table XXXII. First of all, they represent the fertility performances of the respondents in the 1920-39 cohort at the conclusion of the reproductive period. Secondly, unlike those given in Table XXXII, childless couples were excluded from the computation. Another set of fertility averages including the childless couples is given at the bottom of each table.

There were several reasons for excluding childless couples. On the one hand, as it happens that all except one are mobile respondents, it can be argued that this
### TABLE XXXIII

**DISTRIBUTION OF RESPONDENTS BY NUMBER OF CHILDREN AT THE END OF 18 OR MORE YEARS OF MARRIAGE BY MOBILITY STATUS AND AGE AT MARRIAGE, 1920-39 COHORT**

<table>
<thead>
<tr>
<th>Mobility status</th>
<th>Number of Children</th>
<th>Totals</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 1 2 3 4+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Non-mobile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0 0 1 1 0</td>
<td>2</td>
<td>(2.5)*</td>
</tr>
<tr>
<td>25 - 29</td>
<td>0 2 5 4 3</td>
<td>14</td>
<td>2.6</td>
</tr>
<tr>
<td>30 +</td>
<td>0 2 1 3 0</td>
<td>6</td>
<td>2.2</td>
</tr>
<tr>
<td>Subtotal</td>
<td>0 4 7 8 3</td>
<td>22</td>
<td>2.5</td>
</tr>
<tr>
<td>(2) Non-mobile**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0 0 0 0 0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>25 - 29</td>
<td>0 2 4 1 1</td>
<td>8</td>
<td>2.1</td>
</tr>
<tr>
<td>30 +</td>
<td>0 0 0 1 1</td>
<td>2</td>
<td>(4.5)*</td>
</tr>
<tr>
<td>Subtotal</td>
<td>0 2 4 2 2</td>
<td>10</td>
<td>2.6</td>
</tr>
<tr>
<td>(3) Mobile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0 0 5 2 1</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td>25 - 29</td>
<td>2 3 5 4 2</td>
<td>16</td>
<td>2.4</td>
</tr>
<tr>
<td>30 +</td>
<td>2 0 0 5 0</td>
<td>7</td>
<td>3.0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>4 3 10 11 3</td>
<td>31</td>
<td>2.5</td>
</tr>
<tr>
<td>Grand Total</td>
<td>4 9 21 21 8</td>
<td>63</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Notes:**
- * Averages in the brackets are based on 5 or fewer respondents
- ** Respondents in the second occupational category
- *** Childless respondents excluded. When they are included, the respective averages are: a) 2.1, b) 2.4, c) 2.2, and d) 2.4.
### TABLE XXXIV

**DISTRIBUTION OF RESPONDENTS BY NUMBER OF CHILDREN AT THE END OF 10TH YEAR OF MARRIAGE BY MOBILITY STATUS AND AGE AT MARRIAGE, 1940-47 COHORT**

<table>
<thead>
<tr>
<th>Mobility Status</th>
<th>Number of Children</th>
<th>Totals</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 1 2 3 4+</td>
<td>0 2 3 2 1</td>
<td>8 2.3</td>
</tr>
<tr>
<td>(1) Non-mobile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0 2 3 2 1</td>
<td>8 2.3</td>
<td></td>
</tr>
<tr>
<td>25 - 29</td>
<td>0 0 4 3 0</td>
<td>7 2.4</td>
<td></td>
</tr>
<tr>
<td>30 +</td>
<td>0 0 0 0 3</td>
<td>3 (4.0)*</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>0 2 7 5 4</td>
<td>18 2.6</td>
<td></td>
</tr>
<tr>
<td>(2) Non-mobile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0 0 2 0 1</td>
<td>3 (2.7)*</td>
<td></td>
</tr>
<tr>
<td>25 - 29</td>
<td>1 2 2 2 1</td>
<td>8 2.3</td>
<td></td>
</tr>
<tr>
<td>30 +</td>
<td>0 0 0 0 0</td>
<td>0 -</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>1 2 4 2 2</td>
<td>11 2.4</td>
<td></td>
</tr>
<tr>
<td>(3) Mobile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0 3 1 6 2</td>
<td>12 2.6</td>
<td></td>
</tr>
<tr>
<td>25 - 29</td>
<td>2 1 5 1 4</td>
<td>13 2.8</td>
<td></td>
</tr>
<tr>
<td>30 +</td>
<td>0 2 2 0 1</td>
<td>5 (2.0)*</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>2 6 8 7 7</td>
<td>30 2.6</td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td>3 10 19 14 13</td>
<td>59 2.6</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

* Averages in the bracket are based on 5 or fewer respondents.

** Respondents in the second occupational category.

*** Childless respondents excluded. When they are included, the respective averages are: a) 2.0, b) 2.2, c) 2.4, d) 2.4, and e) 2.4.
extreme form of family limitation is consistent with the hypothesis. On the other hand, only one of the three childless respondents in the 1940-47 cohort remained childless after their tenth year of marriage. As it also happens that this childless respondent is in the non-mobile group, it follows that mobility per se may not account for sterility during the first ten years of marriage.

Moreover, almost all the mobile respondents did have children. Childlessness is, therefore, very exceptional and could have been due to physiological factors, particularly in view of the fact that two of the wives of the childless respondents in the 1920-39 cohort were married after their 35th birthday. It seems sound therefore to compare only the fertility performances of respondents which actually took place. Only thus can a more definite inference be made concerning whether children and mobility are incompatible.

Returning to the fertility averages, it may first be said that a few of them cannot be re-computed from the actual distribution of respondents by family size. Two respondents in the 1920-39 cohort had more than 4 children at the end of the reproductive period, and one respondent in the 1940-47 cohort had 5 children during his first ten years of marriage. Except for these three exceptions, all
other averages summarize the achieved fertility of the respondents. Incidentally, these few exceptions make the fact clearer that university teachers are fertile but not prolific, at least not as prolific as some of their parents (See Chapter V, Table XVI).

Some of the fertility averages in the last two tables are based on 5 or fewer respondents and may be disregarded. The overall pattern is clear as most of the averages are within the range of 2.4 to 2.6. The largest one (2.8) is found among the mobile respondents in the 1940-47 cohort who were married between the ages of 25 and 29. It can be said that, irrespective of age at marriage and mobility status, fertility performances are about the same for all respondents.

Some of the figures in the last two tables are transferred to the next table (Table XXXV, to show the distribution of respondents by number of children and mobility status only. These summary averages are amazingly uniform, and no statistical tests are really required to emphasize the fact that there is no difference among the respondents by occupational origin in their fertility performance.
### TABLE XXXV

**DISTRIBUTION OF RESPONDENTS BY NUMBER OF CHILDREN AND BY MOBILITY STATUS 1920-39 AND 1940-47 COHORTS, (SUMMARY)**

<table>
<thead>
<tr>
<th>Mobility status</th>
<th>Number of children</th>
<th>Totals</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>1920-39:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-mobile</td>
<td>0</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Non-mobile**</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Mobile</td>
<td>4</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td><strong>1940-47:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-mobile</td>
<td>0</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Non-mobile**</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Mobile</td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3</td>
<td>10</td>
<td>19</td>
</tr>
</tbody>
</table>

**Notes:**

- Respondents in the second occupational category.
- Childless respondents excluded. When they are included, the respective averages are:
  - a) 2.2, b) 2.4, c) 2.2, d) 2.4, and e) 2.4.

**Test of significance:** In the computation of the chi-square, the first and last two columns, respectively, were collapsed.

- 1920-39 \( \chi^2 = 0.38; \ d.f. = 4; \ p > .98 \)
- 1940-47 \( \chi^2 = 2.36; \ d.f. = 4; \ p > .50 \)

Nevertheless, the Chi-square was used to test the null hypothesis that mobility status is not related to family size. The childless respondents are included in the computation of the Chi-square, a step which favors the proposition that mobility is associated with smaller families.
as they are in the mobile group. The results (which are given at the bottom of Table XXXV are such that the null hypothesis cannot be rejected.

For the respondents in the 1920-39 cohort, therefore, fertility performance at the end of reproduction bears no relationship to mobility status as defined in terms of the occupations of their fathers.

Nor is there any difference between family size by mobility status when fertility averages based on reproductive performance during the first ten years of marriage are employed. In the last table, such averages are given for the respondents in the 1940-47 cohort together with result of the test of significance. For the respondents in the 1920-39 cohort, fertility averages at the end of the first ten years of marriage are presented in the next table (Table XXXVI). Again, it can be stressed that family size is definitely not associated with mobility status.

It may be added that, at the end of the 10th year of marriage, (Table XXXV) the fertility averages of the respondents in the 1940-47 cohort are of the same magnitude as those of the respondents in the 1920-39 cohort at the end of the reproductive period. As was demonstrated previously, this inter-cohort shift in fertility is attributable to a change in the pattern of family building on the part of the wives who were married before their 25th birthday.
TABLE XXXVI

DISTRIBUTION OF RESPONDENTS BY NUMBER OF CHILDREN AT THE END OF 10TH YEAR OF MARRIAGE AND BY MOBILITY STATUS
1920-39 COHORT

<table>
<thead>
<tr>
<th>Mobility status</th>
<th>Number of children</th>
<th>Totals</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>Non-mobile</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Non-mobile</td>
<td>2</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Non-mobile</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Non-mobile</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>0</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>1</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>2</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>63</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Notes: ** Respondents in the second occupational category. Childless respondents excluded. When they are included, the respective averages are:

a) 2.0, and b) 2.1.

Test of significance: In the computation of the Chi-square, the first and last two columns, respectively, were collapsed.

$$\chi^2 = 2.03; \text{ d.f.} = 4; \text{ } p > .70.$$  

Even if this change in the pattern of family building cannot be entirely accounted for by the relatively prosperous conditions under which the respondents in the 1940-47 cohort began their married life and occupational career, it can be said that the lower fertility averages for the respondents in the 1920-39 cohort at the end of the 10th year of marriage reflect, in part, the immediate impact of the depression.

Thus, the present findings permit the inference that among persons in the academic profession, mobility is not
related to their fertility under different socio-economic conditions, at least as different as those which the respondents in the two cohorts are presumed to have experienced since marriage.

The present data do not support, therefore, Berent's observation that, for persons with identical present social status, those who have moved up have larger families than those who remained static. Nor are they in line with Baltzell's observation that persons who achieved their status have, on the average, fewer children than those who were non-mobile or "less mobile" relative to their ascribed status.

Rather they agree with Scott's findings that the social origins of the teachers in his sample were not associated with subsequent family size.

In other words, notwithstanding differences in their occupational origins, the respondents are shown to have behaved quite uniformly in regard to fertility performance. This uniformity is substantially indicated by the fertility averages of the respondents. Life style, the prevalent ideology regarding the "ideal family size", and other behaviour patterns probably all militate against excessive fertility and, at the same time, operate to produce this uniformity in family size. Could this then be because, as
Scott pointed out, their early mobility and common educational experiences and occupational careers tend to eliminate whatever social distinctions there were? The answer to this question seems to be positive. But, it cannot be definitely concluded until an examination of the career patterns of the respondents has been made. This will be undertaken in Chapter VIII.

Shifting now to the proposition that fertility is influenced by both the present social status and social origin, it may be said that the data for the limited population in this study do not appear to support it.

**TABLE XXXVII**

AVERAGE FAMILY SIZE OF THE PARENTAL GENERATION AND THE RESPONDENTS, BY YEAR OF MARRIAGE AND OCCUPATION OF FATHERS

<table>
<thead>
<tr>
<th>Father's occupation</th>
<th>Parental Family</th>
<th>Respon-</th>
<th>% of</th>
<th>Parental Family</th>
<th>Respon-</th>
<th>% of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(i)</td>
<td>(ii)</td>
<td>(iii)</td>
<td>(iv)</td>
<td>(v)</td>
<td>(vi)</td>
</tr>
<tr>
<td>I</td>
<td>3.9</td>
<td>2.6</td>
<td>65.2</td>
<td>2.7</td>
<td>2.6</td>
<td>95.9</td>
</tr>
<tr>
<td>II</td>
<td>3.5</td>
<td>2.6</td>
<td>74.3</td>
<td>2.9</td>
<td>2.3</td>
<td>78.0</td>
</tr>
<tr>
<td>III</td>
<td>3.9</td>
<td>2.4</td>
<td>61.1</td>
<td>2.8</td>
<td>2.3</td>
<td>82.3</td>
</tr>
<tr>
<td>IV</td>
<td>3.3</td>
<td>1.8</td>
<td>58.8</td>
<td>3.2</td>
<td>3.0</td>
<td>94.6</td>
</tr>
<tr>
<td>V</td>
<td>5.4</td>
<td>2.4</td>
<td>44.4</td>
<td>3.2</td>
<td>2.5</td>
<td>78.9</td>
</tr>
<tr>
<td>VI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.2</td>
<td>2.4</td>
<td>75.0</td>
</tr>
<tr>
<td>VII</td>
<td>4.7</td>
<td>2.3</td>
<td>49.9</td>
<td>3.0</td>
<td>2.4</td>
<td>81.0</td>
</tr>
</tbody>
</table>

* Fertility averages for the respondents refer to their completed fertility.

** Fertility averages for the respondents are based on their fertility performance up to the end of the 10th year of marriage.
The data in Table XXXVII clearly reveal that, from whatever occupational origins they come, the respondents in both of the two cohorts exhibit a lower, and in some cases much lower, fertility than their parents. It should be pointed out that fertility averages for the parental generation are biased in the direction tending to overstate intergenerational fertility differences. The parents are selected because of the fact that they had at least one offspring in the university profession. The effect of this bias is, however, not great enough to negate the meaning which the figures in Table XXXVII convey.

The other significant feature of the data in the same table is that, while the reduction in fertility ranges from one-quarter to more than one-half for the respondents in the 1920-39 cohort, the differences in fertility between the respondents in the 1940-47 cohort and their parents are much less marked.

Aside from the consideration that the greater reduction in fertility evident in the 1920-39 cohort is in part of a function of the largeness of parental families, the depression of the 1930's undoubtedly played an important part in this regard.

Distribution of the respondents by parental family size and their own family size is given in Appendix D.
The average sizes of parental families from which the respondents in the 1940-47 cohort came show much less dispersion and are considerably smaller than those of the parents of the respondents in the 1920-39 cohort. In fact, they are not much larger than the fertility averages of the respondents themselves in that cohort. The probable meaning of this latter fact is that the parents of the respondents in the 1940-47 cohort, like the respondents in the 1920-39 cohort, had curtailed their reproduction. Thus a moderately reduced fertility is manifested by the respondents in the 1940-47 cohort as compared with the respondents in the 1920-39 cohort.

Yet, there is a possibility that the respondents in the 1940-47 cohort may eventually have families as large as their parents. In Table XXV, the fertility averages of these respondents are based on their reproductive performance up to the end of the 10th year of marriage. Whereas their parents have passed the reproductive period, the respondents are still capable of having additional children. Probably some of them are willing to do so. The result would be to wipe out the small differences there were in 1957.

To sum up this discussion on the fertility differences between the generations, it seems appropriate to reiterate
two important points: (1) the more marked reduction in fertility in the 1920-39 cohort probably is a function of both the "largeness" of parental families and the depression, and (2) the parents of the respondents in the 1940-47 cohort had already limited the size of their families, a circumstance which makes further reduction impossible except through a complete cessation of reproduction on the part of a majority of the respondents.

As neither a total absence of births nor a return to excessive fertility by modern standards appears probable, it seems no longer very meaningful to speak of "traditional continuity" in family sizes between generations. With fertility already greatly reduced in the parental generation, and with the general acceptance of contraceptive practice, the possible variability in the number of children born to different couples has been tremendously minimized. Any resemblance between family sizes of different generations probably owes more to the prevalent ideology regarding the "ideal family size" than to "traditions" as such.

Except for the parents of the respondents in the 1920-39 cohort (whose fertility averages roughly conform to the well-known inverse pattern of reproduction by occupational

CHART I

AVERAGE FAMILY SIZE OF THE PARENTAL GENERATION AND THE RESPONDENTS' OWN, BY MARRIAGE COHORT AND OCCUPATION OF FATHERS OF THE RESPONDENTS

(Source: Table XXXVII)
status and cover a relatively wide range), the lines representing the fertility of the three other groups in Chart I, are rather devoid of crests and are indicative of the narrower limits within which family sizes of today may be expected to vary.

The lack of continuity in family sizes of the two generations emphasizes the individualistic character of modern parenthood. For this limited population, at least, reproduction is seen to be free from "traditions", and, at the same time, as regulated in accordance with temporal fluctuations of economic condition and, probably, behavior norms and conventions of the group with which they are affiliated.

Summary

1) There has been a significant reduction in age at marriage among the university teachers. The respondents who were married between 1920 and 1939 had a median age of 27.8, and those who were married between 1940 and 1947 a median age of 26.1.

15/ This should not be understood to mean that fertility differentials no longer exist in Australia. While no comprehensive studies of fertility differentials have been attempted during the last decade or so, available information indicates that they exist. See Census of the Commonwealth of Australia, 1947, Statistician's Report, Canberra, 1952, Chs.XXI and XXII. Also, in Demography Bulletins, data on average number of children are given for married males classified by occupation, who died in each year.
Likewise, age at marriage of the wives is lower in recent years. The median age at marriage of the wives in the 1920-39 cohort is 26.7, and of the wives in the 1940-47 cohort 23.9 years.

2) There has been a progressive rise in fertility as measured in terms of the average number of children per respondent at each specified duration of marriage. As of 1957 when this study was made, the mean number of children born to the respondents in the 1920-39 cohort was 2.4. The respondents in the 1940-47 cohort then had an average of 2.9 children.

However, this observed difference was not statistically significant.

3) In view of the lower age at marriage, the wives in each cohort were then divided into two groups; a) wives who were married before their 25th birthday, and b) wives who were married on and after their 25th birthday. It was found that age at marriage was independent of family size in 5 of the six intra and inter-cohort comparisons.

There was a significant difference in the number of children born at the end of the 10th year of marriage between the wives in the two cohorts who were married prior to their 25th birthday.
4) The wives in the 1940-47 cohort who were married before their 25th birthday appear to have commenced childbearing sooner than the wives in the 1920-39 cohort, resulting in a larger average number of children at each specified duration of marriage.

Also there is a close resemblance in the pattern of family building between the younger wives in the 1940-47 cohort and the wives in the same cohort who were married at older ages.

5) So that a realistic assessment of fertility in relation to mobility could be made, the respondents were divided into two cohorts. The association between family size and mobility was also examined on the basis of two sets of data.

As it was possible to obtain fertility averages for the respondents in the 1920-39 cohort at the end of the reproductive periods, these fertility averages were used as well as the fertility averages at the end of the 10th year of marriage.

The overall pattern is quite clear as most of the averages are within the range of 2.4 to 2.6. Fertility performances are about the same for all respondents, irrespective of age at marriage and mobility status.
University teachers are also fertile but not prolific, at least not as prolific as some of their parents. Both the number (5) of childless respondents and the number (3) of respondents with five or more children are indeed small.

6) The respondents in both of the two cohorts exhibited a lower, and in some cases much reduced, fertility than their parents, irrespective of their occupational origins. The more extreme reductions were among the respondents in the 1920-39 cohort. The differences in fertility between the respondents in the 1940-47 cohort and their parents were much less marked.

The sharper reduction in fertility evident in the 1920-39 cohort was probably a function of both the large size of parental families and the depression. As many of the parents of the respondents in the 1940-47 cohort had already curtailed their reproduction, moderately reduced fertility was, therefore, manifested by the respondents in the 1940-47 cohort as compared with the respondents in the 1920-39 cohort.

As neither a total absence of births nor a return to excessive fertility by modern standards appears probable, it does not seem meaningful to speak of "traditional continuity" in family size between two successive generations. The prevalent ideology regarding the "ideal family size" is likely to be an important factor affecting family size.
CHAPTER VII

INTERGENERATIONAL MOBILITY AND THE PATTERN
OF FAMILY BUILDING

General Remarks

Given the general diffusion of contraceptive knowledge and availability of contraceptive devices, family planning in its most sophisticated form embraces two identifiable components of fertility behavior. It combines both the limitation of the number of children and the regulation of reproduction at chosen intervals after marriage and subsequent to each birth. In practice, however, family planning probably is successful only in varying degrees with respect to either or both, -- a fact which has been recognized in a number of studies. The couples included in the Indianapolis Study, for example, were classified according to their degree of success in family planning, viz., number and spacing of pregnancies planned, number planned, quasi-planned, and excess fertility.¹

This classification serves a very useful purpose. As in the case of number and spacing of pregnancies planned, differences in family size among the couples

¹See Ch. II, footnote No. 25.
involved can be safely presumed to result from factors other than that of differential prevalence and effectiveness of contraceptive practice.2/

Nevertheless, in the Indianapolis Study as well as in other early investigations reviewed previously in Chapter II, the actual analyses were conducted exclusively on the basis of the number of children ever born to persons (or couples) who had completed their fertility or who had been married for 10, 15, or more years. The tacit assumption is, it may be reiterated, that the restriction of family size facilitates or permits greater ascendance. As Dumont put it, "a family must be small in order to rise in the social scale." Consequently, the other aspect of family planning with respect to the timing or spacing of births within marriage has heretofore not been examined in relation to social mobility.

The intervals at which births occur after marriage and between successive births are the function of physiological or socio-psychological factors or both. Granted a couple's desire and decision to have a child, its fulfillment depends upon their physiological ability to

conceive at the chosen moment. On the other hand, un­
anticipated pregnancies may take place through inad­
vertency.

Notwithstanding the fact that the timing of births
has not been given explicit consideration in early
investigations of social mobility and fertility, a number
of sociologists and demographers have approached the
subject in other connections. Some of the writers were
concerned with statistical aspects of this fertility
phenomenon and provided quantitative accounts of the
length of intervals between marriage and first birth
and between successive births for different population
segments and over time. 3/ Others utilized similar data

3/ Edgar Sydenstricker, "A Study of the Fertility of Native
White Women in a Rural Area of Western New York," 
Regine Stix and F. W. Notestein, Controlled Fertility,
Baltimore, Williams and Wilkins Co., 1940, Ch. VII.
Gilbert W. Beebe, Contraception and Fertility in the
Southern Appalachians, Baltimore, Williams and
Wilkins Co., 1942, Ch. III.
Harold T. Christensen, "The Time-Interval between Marri­
age of Parents and Birth of Their First Child in Utah
W. A. Anderson, Marriage and Families of University
Graduates, Ithaca, N. Y., Cornell University Press,
1950. Also, Statistical Supplement. 7Continued on the
next page.7
for the purpose of estimating the extent of premarital pregnancy and of testing the relationship between premarital pregnancy and the success or failure of marriage.¹/¹

The findings of studies concerned with premarital pregnancy are not germane to the present inquiry. But, from the various statistical studies of birth intervals a number of generalizations have emerged which are pertinent. Both Christensen and Anderson recognized that the interval between marriage and first birth is negatively associated with family size, though there are considerable differences between their population

See footnotes Nos. 7 and 8.

Some of the statistical studies were undertaken to examine the effect of contraceptive practice on fecundity. The relevant findings have been summarized in the Reports of the Biological and Medical Committee, Royal Commission on Population, London, 1950, pp. 29-34.

samples with respect to the length of interval between marriage and first birth. An explanation of the discrepancies found was offered by Christensen: his samples which had shorter interval between marriage and first birth consisted of cross-sections of the population universes, of which one was known to have high fertility. "In contrast to both of these, the Cornell University Alumni sample, studied by Anderson, was not a cross-section of any area, but instead was of a highly selected segment of the population (the educated) which is known to be disproportionately low in fertility."\footnote{Christensen and Bowden, \textit{op. cit.}, pp. 348-350.}

In other words, the discrepancies between the results of their studies actually reinforce, and are consistent, with, the observed negative association between family size and the interval between marriage and first birth.

Also consistent with this negative association is the finding that there is a positive relationship between occupational status and the interval between marriage and first child. Persons in the higher occupational positions (who generally have lower fertility) are shown to have longer average intervals, and those in lower occupational categories (whose fertility is high) have
their first child at significantly shorter intervals.6/

As regards the intervals between successive births, they are usually longer, on the average, than between first birth and marriage. This appears to be true in general as well as in families of a given size,7/ and this regular pattern also obtains whether or not the families deliberately attempted to space their children.8/

It is to be expected that family size varies inversely with the average length of the interval between marriage and first birth and also that the average intervals for successive births are longer than those or prior births. To the extent to which human reproduction is limited by the long period of gestation and by the presence of varying periods of infertility due to lactation and/or other physiological causes, the observed patterns of birth intervals can be accounted for in the case of couples who use no contraception.

6/Sydenstricker, op. cit., p. 28.
7/Sydenstricker, loc. cit.

But, as is probable, many couples may have begun to practice contraception only after they had one or more children. In such instances, the interval between marriage and first child can be expected to resemble that of non-contraceptive couples.\(^2\)

On the other hand, it is more unlikely that couples who employ contraception from the start of their married life and only interrupt it in order to become pregnant, plan large families. For them the average length of the interval between marriage and first birth is, in all probability, longer than that of either the couples who never use contraception or the couples who avail themselves of its assistance in the prevention or spacing pregnancies subsequent to the birth of one or more children.

The situation is much more complicated with respect to the intervals between successive births. One of the possible complications lies in the subjective nature of birth-spacing. Some couples may not prefer to have their children "too close together," and others may not

\(^2\) As the data given by Anderson show, the average intervals between marriage and first birth are about the same for couples who made "no effort to space any births," and couples who did so with respect to "some but not all" children. Anderson, op. cit., Rural Sociology, p. 311, Table IV.
desire to have their children "too far apart." To this particular complication should be added the possible altered outlook of couples who resort to contraceptive practice after the birth of their first child, and, also, the varying periods of infertility due to lactation, etc. Consequently, factors affecting the timing of second and subsequent births may, and can be expected to, differ from those affecting that of first birth.

For these reasons, the analysis which follows deals only with the relationship between mobility and the interval between marriage and first birth, but does not consider successive births.

It has been assumed in the preceding chapter that differences in the number of children ever born to the respondents classified by their occupational origins are the result of conscious limitation rather than variations in the respondents' physiological capacity to have children. Little doubt can be voiced concerning the validity of this assumption even though it may be true that some of the respondents made no use of contraception at all. The data on the number of children ever born to the respondents demonstrate that only a very few of them had 4 or more children.
As was stated at the beginning of this chapter, family planning refers to the limitation of the number of children as well as the regulation of reproduction at chosen intervals. The smallness of the average family sizes of the respondents, while clearly reflecting the prevalence of contraceptive practice, carries little more than the implication that they have employed contraceptive measures to restrict the size of their families. In other words, it is indicative of the negative aspect of family planning only.

Having obtained no information from the respondents selected for this study in regard to their contraceptive efforts, it has to be assumed in the present analysis that the interval between marriage and first birth is the result of conscious planning.

Notwithstanding the previous finding that mobility is not associated with family size among the respondents, mobility may nevertheless be related to the pattern of family building. The hypothesis to be tested in the present analysis is:

Immobility is associated with a shorter interval between marriage and first birth; or conversely,

Mobility is associated with a longer interval between marriage and first birth.
Mobility is defined, as before, in terms of the respondents' occupational origins.

**Mobility and the Pattern of Reproduction**

The determination of the interval between marriage and first birth for each respondent is made in the following manner: every year that lapses since the date of marriage is counted as 365 days, and each month 30 days. For example, if a respondent who was married on, say, 20th June, 1926, and whose first child was born on 5th April, 1929, the number of days between marriage and first birth will be 1,015 (i.e., $2 \times 365 + 9 \times 30 + 15$).

Table XXXVI gives the mean number of days between marriage and first birth for two marriage cohorts and according to the occupation of the fathers of the respondents. It seems that over the years there has been little change in the length of the interval for first birth. While the respondents in the 1940-47 cohort as a whole show an interval longer than that of the respondents in the 1920-39 cohort, the discrepancies in some of the occupational categories are not large and could probably have been due to the separations occasioned by World War II, -- a fact which will be taken into account later.
TABLE XXXVI

MEAN NUMBER OF DAYS BETWEEN MARRIAGE AND FIRST BIRTH, BY YEAR OF MARRIAGE AND OCCUPATION OF FATHERS

<table>
<thead>
<tr>
<th>Fathers' occupation</th>
<th>Year of marriage</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1920-39</td>
<td>1940-47</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>839 (22)</td>
<td>987 (18)</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>1,184 (10)</td>
<td>975 (10)</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>1,184 (9)</td>
<td>1,145 (6)</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>1,010 (10)</td>
<td>943 (6)</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>1,118 (5)</td>
<td>1,320 (6)</td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td>-- (0)</td>
<td>741 (5)</td>
<td></td>
</tr>
<tr>
<td>VII</td>
<td>1,590 (3)</td>
<td>1,654 (7)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,041 (59)</td>
<td>1,091 (58)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Discrepancies between this and other tables are due to the elimination of 7 and 2 respondents in the 1920-39 and 1940-47 cohorts, respectively. They are the childless respondents and the respondents who did not report the occupation of their fathers.

Test of significance: (Analysis of variance)

1920-39: \[ P \left( F_{4,53} = 3.39 \right) < .05 \] (V and VII were combined.)

1940-47: \[ P \left( F_{6,51} = 13.75 \right) < .001. \]

The relationship between social mobility and the interval between marriage and first birth is indicated by the data in the above table. It appears to be what should be expected in terms of the hypothesis.
For the respondents in the 1920-39 cohort, the lowest interval is shown for those in the first occupational category, and the highest interval is found in the last occupational group. The average intervals for the respondents in the other occupational categories are nearly identical and intermediate between the two extremes. A test of the differences between these mean intervals indicates that the observed pattern of reproduction by occupational origin is statistically significant.

The mean intervals for first birth by occupational origins are also significantly different in the case of the respondents in the 1940-47 cohort. But, unlike the 1920-39 cohort, the pattern of family building is rather irregular. For some of the respondents who experienced mobility (e.g., those born to families in the fifth and seventh categories), the average intervals exceed, by a large margin, that of the non-mobile respondents in the first occupational category. However, other mobile respondents (i.e., those in the sixth category) had their first child sooner than the non-mobile respondents. Thus, the data on the interval between marriage and first birth for the 1940-47 cohort only partially support the hypothesis.
Age at Marriage Held Constant

The above findings are based on the birth-interval data of all respondents, irrespective of age at marriage. In the case of the respondents in the 1920-39 cohort, the data show that mobility is associated with a longer interval between marriage and first birth. But, for the respondents in the 1940-47 cohort, the intervals prove to be not entirely consistent with the hypothesis. They cannot be taken, therefore, to be an irrefutable confirmation of the hypothesis. In addition, some of the averages were computed on the basis of extremely small numbers.

It has been shown that age at marriage is independent of the number of children ever born to the respondents in the 1920-39 and 1940-47 cohorts. This finding does not, however, preclude the possibility that age at marriage may be a factor affecting the interval for first birth. Among those who marry young, there may be a tendency to refrain from having their first child for some time after marriage if mobility and/or other factors are also present. On the other hand, postponement of marriage may make it less necessary to
delay and may even increase the urgency to begin child-bearing if a desirable number of children is to be attained. Thus, in order to achieve more homogeneity within the subgroups by mobility status, it is imperative that the respondents be differentiated according to age at marriage.

Ideally, of course, age at marriage should simultaneously be held constant for both husbands and wives. Instead, only one is held constant at a time because the present group is too small to impose double controls.

In Table XXXVII the respondents are identified as "non-mobile" and "mobile". The non-mobile group consists of respondents whose fathers belonged to the first two occupational categories. The mobile group is made up of the respondents who were born to fathers in the other 5 occupational categories. This ad hoc arrangement preserves the size of subgroup for statistical analyses.

Also indicative of the present dilemma of small numbers is the fact that in the 1920-39 cohort, average intervals for first birth are shown only for the respondents who were married between the ages of 25 and 29. They are not given for other respondents in this cohort because (1) there are only two non-mobile
TABLE XXXVII
MEAN NUMBER OF DAYS BETWEEN MARRIAGE AND FIRST BIRTH
BY MOBILITY STATUS OF THE RESPONDENTS AND THE
RESPONDENTS' AGE AT MARRIAGE,
1920-39 AND 1940-47 COHORTS

<table>
<thead>
<tr>
<th>Mobility status</th>
<th>Marriage cohort</th>
<th>1920 - 39</th>
<th>1940-47</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(A) Under 25 years</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-mobile</td>
<td>-- (2)</td>
<td>1,236(11)</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>-- (8)</td>
<td>943(12)</td>
<td></td>
</tr>
<tr>
<td><strong>(B) 25-29 years</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-mobile</td>
<td>915(22)</td>
<td>884(14)</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>1,230(14)</td>
<td>1,369(13)</td>
<td></td>
</tr>
<tr>
<td><strong>(C) 30 years &amp; over</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-mobile</td>
<td>-- (8)</td>
<td>-- (3)</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>-- (5)</td>
<td>-- (5)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,041(59)</td>
<td>1,091(58)</td>
<td></td>
</tr>
</tbody>
</table>

Test of significance: (t-test)

1920-39:
(A) Under 25 years
\[ t = 0.37 \]
\[ d.f. = 21 \]
\[ P > .40 \]

(B) 25-29 years
\[ t = 1.31 \]
\[ d.f. = 34 \]
\[ P > .10 \]

1940-47:
(A) Under 25 years
\[ t = 0.37 \]
\[ d.f. = 21 \]
\[ P > .40 \]

(B) 25-29 years
\[ t = 2.01 \]
\[ d.f. = 25 \]
\[ P > .05 \]
respondents who were married before 25 years of age, and
(2) there are only 5 mobile respondents who were married after their 30th birthday and who had at least one child.

Likewise, average intervals are not given for the respondents in the 1940-47 cohort who were married after the 30th birthday. As was previously shown, there are only 8 respondents in this age at marriage group.

The data presented in Table XXXVII do not completely support the hypothesis that mobility is associated with a longer interval between marriage and first birth. Nevertheless, in the 1920-39 cohort, the occupationally mobile respondents do exhibit a longer average interval than the respondents who are non-mobile. This refers to the respondents who were married between the ages of 25 and 29.

Among the respondents in the 1940-47 cohort who were married at similar ages, a longer interval is again shown for the mobile respondents as compared with the non-mobile respondents. But, the reverse is true in the case of the respondents in the same cohort who were married before their 25th birthday. In this case, the mobile respondents have an average interval shorter than the non-mobile respondents.
Thus, the marriage-birth interval data give conflicting indications in regard to the relationship between mobility status and the pattern of family building. In order to assess whether the observed differences in the interval between marriage and first birth by mobility status are statistically significant, the t-test was applied. The results are given at the bottom of the last table.

Immediately apparent is the fact that none of the differences is statistically significant at the .05 level. There is little definite support, therefore, for the assertion that, by holding constant age at marriage, mobility can be seen to be related to the timing of the first birth within marriage.

A further analysis of the data in Table XXXVII was made, eliminating from the non-mobile groups in both cohorts the respondents who were born to families in the second occupational category. Thus, each of the non-mobile groups consists only of respondents from the first occupational category. The pertinent

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11/ No statistically significant results were obtained when the average intervals for the respondents in the second category were compared with those for the respondents in the first category and with those for the mobile respondents.
### TABLE XXXVIII

**MEAN NUMBER OF DAYS BETWEEN MARRIAGE AND FIRST BIRTH BY MOBILITY STATUS AND THE RESPONDENTS' AGE AT MARRIAGE (REFINED.)**

<table>
<thead>
<tr>
<th>Mobility status</th>
<th>Age at marriage</th>
<th>Under 25 years</th>
<th>25 - 29 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1920-39</td>
<td>1940-47</td>
<td>1920-39</td>
</tr>
<tr>
<td>Non-mobile</td>
<td>--</td>
<td>1,324 (8)</td>
<td>683 (14)</td>
</tr>
<tr>
<td>Mobile</td>
<td>--</td>
<td>943 (12)</td>
<td>1,230 (14)</td>
</tr>
</tbody>
</table>

**Test of Significance:**

<table>
<thead>
<tr>
<th>t</th>
<th>d.f.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.07</td>
<td>&gt;.20</td>
</tr>
<tr>
<td>18</td>
<td>2.09</td>
<td>&lt; .05</td>
</tr>
<tr>
<td>18</td>
<td>1.33</td>
<td>= .20</td>
</tr>
</tbody>
</table>

Data are given in the above table (Table XXXVIII), together with the results of testing the significances of the differences between the marriage-birth intervals by mobility status.

Comparisons of the average intervals for the non-mobile respondents in Tables XXXVII and XXXVIII show that there is a considerable reduction in the case of the non-mobile respondents in the 1920-39 cohort and that there is a slight increase in the case of those
in the 1940-47 cohort who were married before their 25th birthday. For the non-mobile respondents in the 1940-47 cohort who were married between the ages of 25 and 29, the adjusted average interval is slightly smaller than previously.

Except in one instance, the adjusted data do not particularly support the hypothesis that mobility is associated with a longer interval between marriage and first birth, for persons with similar ages at marriage. The one exception is found among the respondents in the 1920-39 cohort who were married between the ages of 25 and 29. This improvement in the data is consistent with the hypothesis.

A more detailed discussion of the findings so far will be made after considerations have been given to the same marriage-birth interval data, holding constant age at marriage of the wives.

From Table XXXIX it can be seen that, like most of those shown for the respondents themselves, the average intervals are longer among the mobile couples than the non-mobile couples.

However, tests of the significance of the differences between marriage and first birth intervals
TABLE XXXIX
MEAN NUMBER OF DAYS BETWEEN MARRIAGE AND FIRST BIRTH
BY MOBILITY STATUS OF THE RESPONDENTS AND
AGE AT MARRIAGE OF THEIR WIVES,
1920-39 AND 1940-47 COHORTS

<table>
<thead>
<tr>
<th>Mobility status</th>
<th>1920-39</th>
<th>1940-47</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-mobile</td>
<td>1,136(9)</td>
<td>851(18)</td>
</tr>
<tr>
<td>Mobile</td>
<td>1,270(12)</td>
<td>1,142(19)</td>
</tr>
</tbody>
</table>

(A) Under 25 years

(B) 25 - 29 years

(C) 30 years & over

Test of significance: (t-test)

(A) Under 25 years: \( P > .80 \) \( P > .90 \)
(B) 25 - 29 years: \( P < .05 \) \( P > .60 \)
(C) 30 years & over: -- --

demonstrate that none save one of the observed differences in this table is statistically significant. The
significant difference is found among the respondents in the 1920-39 cohort, whose wives at the time of marriage were 25 - 29 years old. However, these data do not in general confirm the present hypothesis.\footnote{The data in Table XXXIX, however, support the previous observation that the wives in the 1940-47 cohort (who were married before their 25th birthday) appear to have commenced childbearing sooner than the wives in the 1920-39 cohort who were married at similar ages.}

In sum, this analysis shows that when age at marriage is not controlled, statistically significant differences are present in the case of the respondents in the 1920-39 cohort as well as in the 1940-47 cohort. But, the direction of the relationship is not wholly consistent with the hypothesis. When age at marriage is held constant of either the respondents themselves or their wives in the 1940-47 cohort, no definitely significant differences are found.

One could speculate that the relationship envisaged in the hypothesis may be situation-bound and transient. Its transient nature is given some tangible proof; for, it is among a segment of the respondents in the 1920-39 cohort that statistically significant differences are found to exist between the marriage-birth intervals by mobility status.
It may be recalled that the present division of the respondents into two marriage cohorts, while being in itself a methodological necessity, has another function. It affords an opportunity to appraise whether mobility is a factor affecting fertility behavior of persons who lead their married lives under different socio-economic conditions. Granted that changes in the socio-economic environment can inhibit as well as accelerate the rate of mobility, (but probably not with the same intensity as they influence fertility within a short span of time,) the present findings seem to imply that mobility is to some extent related to the timing of births of married couples living under adverse socio-economic conditions. For some of the respondents in the 1920-39 cohort, significantly longer intervals are shown to exist in the case of the mobile couples.

Under the relatively prosperous circumstances of the 1940 and 1950 decades, childbearing could have been less burdensome than previously. The relationship, as hypothesized, between mobility status and marriage-birth interval could be no longer present. In favor of this line of reasoning is the absence of any positive findings when age at marriage is held constant in the case of the respondents in the 1940-47 cohort.
On the other hand, were the preceding interpretation in fact valid, there would be sufficient justification to expect lower average intervals for the respondents in the 1940-47 cohort. But, except for the wives in the 1940-47 cohort who were married before their 25th birthday, comparisons of marriage-birth intervals by mobility status for the respondents with comparable ages at marriage in the two cohorts reveal neither substantial nor consistent modifications over time (see Tables XXXVI and XXXIX). It is quite likely then that the reality is far more complex than the simple argument that the differences in the socio-economic conditions in favor of the respondents in the 1940-47 cohort could have rendered childbearing less inimical to advancement.

In the previous discussion on the number of children ever born to the respondents, it was found that the wives in the 1940-47 cohort who were married before their 25th birthday appear to have begun childbearing sooner than wives of similar age at marriage in the 1920-39 cohort. This resulted in a larger average number of children at each of the specified durations of marriage. Remembering also that the Second World War intervened at the time when a number of the respondents
in the 1940-47 cohort began their married life, its
effect on the interval between marriage and first birth
should have been considerable. It was maintained, among
other things, that some of the respondents (or their
wives) could have in fact decided upon early procreation.

Implicit in this statement is the assumption that
such respondents, in spite of the urgent circumstances,
were able to so begin childbearing. But, this is only
part of the story. For other respondents, the effect
of World War II was to separate them from their wives
and thereby prevent them from becoming parents for some
time.

This physical separation of husbands and wives in­
jects an involuntary element into the reproductive pro­
cesses of some of the respondents. This being so, it
seems sound to eliminate them from consideration as
the present analysis is based on the postulate that the
interval between marriage and first birth is the result
of deliberate planning. An inspection of the occu­
pational histories of the respondents indicated that
none of the respondents in the 1920-39 cohort was in
the armed forces at the time of marriage or birth of
the first child. But, 18 respondents in the 1940-47
cohort reported war service at the beginning of married
life and were accordingly excluded.
The details of the re-calculated mean intervals for first birth by mobility status after the exclusions are given in the next table (Table XL). For the sake of convenience, the mean intervals computed previously when the respondents with war services were not omitted are also given. As before, the results of the t-test are included.

Omitting the respondents with war services at the time of marriage or thereabouts results in only a slight improvement in the data in favor of the hypothesis. That is, for the wives who were married before their 25th birthday, the intervals for first births by the mobility status of their husbands (i.e., the respondents) differ favorably in the direction of the hypothesis. The new difference is statistically significant at the .02 level.

For all the others, the adjusted marriage-birth intervals are lower than the unadjusted averages, except in the case of the mobile respondents who were married before their 25th birthday where there is a slight increase. Nevertheless, the differences in the birth intervals by mobility status remain higher than the .05 level of statistical significance.
TABLE XL
MEAN NUMBER OF DAYS BETWEEN MARRIAGE AND FIRST BIRTH
BY MOBILITY STATUS AND AGE AT MARRIAGE OF THE RESPONDENTS AND THEIR WIVES, SEPARATELY,
1940-47 COHORT

<table>
<thead>
<tr>
<th>Age at Marriage</th>
<th>Mobility status</th>
<th>Non-mobile</th>
<th>Mobile</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 25 years:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondents:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unadjusted</td>
<td>1,236(11)</td>
<td>943(12)</td>
<td>&gt; .40</td>
</tr>
<tr>
<td></td>
<td>Adjusted</td>
<td>1,022(8)</td>
<td>1,067(7)</td>
<td>&gt; .80</td>
</tr>
<tr>
<td>Wives:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unadjusted</td>
<td>851(18)</td>
<td>1,142(19)</td>
<td>&gt; .90</td>
</tr>
<tr>
<td></td>
<td>Adjusted</td>
<td>674(13)</td>
<td>1,098(9)</td>
<td>&lt; .02</td>
</tr>
<tr>
<td>25 to 29 years:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondents:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unadjusted</td>
<td>884(14)</td>
<td>1,369(13)</td>
<td>&gt; .05</td>
</tr>
<tr>
<td></td>
<td>Adjusted</td>
<td>616(11)</td>
<td>902(8)</td>
<td>&gt; .10</td>
</tr>
<tr>
<td>Wives:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unadjusted</td>
<td>1,016(10)</td>
<td>1,276(8)</td>
<td>&gt; .60</td>
</tr>
<tr>
<td></td>
<td>Adjusted</td>
<td>956(8)</td>
<td>764(7)</td>
<td>&gt; .40</td>
</tr>
</tbody>
</table>

Notes: (1) Two of the respondents who were excluded on account of war service belong to the age at marriage group 30 years and over. Therefore, the differences between the totals of the subgroups of respondents do not add up to 18.
(2) The t-test was used.
The single improvement in the data (i.e., among the wives who were married before their 25th birthday) in favor of the hypothesis creates a reasonable doubt that childbearing is less inimical to mobility in times of prosperity. It weakens the previous inference that the verity of the hypothesis is both time- and situation-bound.

As it cannot be claimed that the relationship between mobility and marriage-birth interval is either unequivocally validated or completely nullified, an obvious dilemma emerges from the above analysis and discussion. The very nature of the dilemma is such that it seems legitimate to end the present attempt with a remark that it neither confirms nor confutes the hypothesis. To terminate the inquiry on such a note, however, is to foster an impression that the present attempt has been adequate in all respects.

Only two of the many possible factors affecting marriage-birth interval have been explicitly considered, viz., age at marriage and war separations. However, one other factor which is known to be related to marriage-birth interval has not been taken into account. This is the negative association between family size and the
average interval between marriage and first birth. Unfortunately, the size of the present sample does not permit the introduction of this control of family size along with age at marriage and war separations. It would have little meaning to hold constant family size without regard to these factors which have already been shown to influence marriage-birth intervals. Consequently, an additional analysis has not been made. It seems imperative that the factor of family size be taken into account in future research if the timing of births is a variable to be analyzed.

Moreover, there is but little dispute that conscious control of the reproductive process is more important than physiological causes in limiting and spacing childbirth. It is explicitly assumed that variations in the reproductive behavior of the respondents results from this conscious control rather than differences in the physiological capacity to have children. It is further stated that this conscious control, when being practised most successfully, includes both the limitation of the number of children and the regulation of their births at chosen intervals after marriage.

On the strength of the data on the number of children ever born to the respondents, it has been possible
to infer that the assumption is supported to the extent
to which the smallness of their average family size re-
jects the prevalence of contraceptive practice. As the
number of children ever born is the resultant of specific
births that have occurred over a period of ten or 15
years, variations in the physiological capacity to have
children at any given point of time probably matter
little, if at all.

When dealing with intervals between marriage and
first birth, however, variations in the physiological
ability to conceive at a given point of time may not
be so lightly dismissed as unimportant. For the pre-
sent group of respondents, information is lacking with
respect to differences in their physiological capacity
to have children. But, a number of past investigations
have provided sufficiently detailed evidence which
clearly demonstrates both the existence and the magni-
tude of such variations among both non-contraceptive
and contraceptive population samples.

Beebe reported that, for a sample of 1,165 white
patients given contraceptive advice in a mining com-
munity in the Southern Appalachians, U. S. A., from
1936 to 1939, the interval between marriage and first
birth was very brief. Of the patients who took no
contraceptive precautions after marriage, 50% became pregnant within three months and 80% within ten months. But, a few of them (less than 1%) required as long as five years to realize their first conceptions.\footnote{13}

On the basis of information supplied by 597 women who sought advice in a birth control clinic in New York City between 1931 and 1932, Stix and Notestein concluded that "most of the women ... conceived very rapidly, once contraceptive practice was (deliberately) stopped." Their data pertaining to first pregnancies (206 women in this category) indicate that 59% of them conceived within one month and nearly 85% within three months. Nevertheless, it took 8 or more months for not a small proportion of the women (6.8%, to be exact) to become pregnant for the first time.\footnote{14}

The implications of these findings are clear. They suggest that, notwithstanding the presence or absence of contraceptive measures, most conceptions readily take place within a short period of time. Yet, much longer intervals are sometimes observed. Whether they

\footnote{13}{Beebe, \textit{op. cit.}, pp. 64-67.}
\footnote{14}{Stix and Notestein, \textit{op. cit.}, pp. 67-8 and Table 27, p. 68.}
are the result of temporary physiological inability to conceive on the part of either or both marriage partners is, for present purposes, immaterial. The point is that the existence of physiological differences as measured by intervals for first births, might be a source of serious distortion in the present inquiry as the number of respondents is small. Some of the average intervals for first birth by mobility status could have been sharply affected by the inclusion of even just a few couples who had their first conceptions only after an extended period.

As it is impossible to identify and remove such couples from consideration, one cannot therefore be certain that the results of the statistical tests of significance were not somewhat prejudiced by the very fact that individuals do differ in their physiological make-up. It will never be known to what extent this factor has been responsible for the lack of statistical conclusiveness in this study either to affirm or to reject the hypothesis. But, in terms of further research

15/For a comprehensive review of causes that are responsible for either permanent or temporary sterility, see Reports of the Biological and Medical Committee, Royal Commission on Population, London, 1950, pp. 35-52.
there is a need to increase the size of population sample sufficiently so as to minimize the effect of individual variations in physiology on average intervals for first birth, or to permit the employment of other statistical measures less affected by extreme individual deviations, e.g., the median, in connection with significance tests.

The most important, though not less obvious, consideration in this connection appears to be that every effort should be made to secure from sample couples their medical and contraceptive histories, which should include, among other things, the actual interval between their first attempt and the realization of a first conception. This would make possible the identification and elimination of couples who are physiologically handicapped and cannot obtain a conception within the short period of 3 or 6 months when the great majority of conceptions take place in the absence of contraception.

The lack of statistical conclusiveness in the present data should occasion no surprise in view of the various methodological defects as noted above. Yet, a few other comments seem in order. When age at marriage is held constant, the observed differences in the intervals for first birth by mobility status are, with one
or two exceptions, in favor of the hypothesis. These visual differences are, however, nearly all no larger than would be expected or could be accounted for by sampling fluctuations. Had a considerably larger group of persons been investigated, there might be more likelihood that the observed differences would be statistically significant.  

At least, the negative findings -- not statistically significant -- in the present inquiry do not necessarily mean that the hypothesized relationship between mobility and marriage-birth interval is not in reality present since the hypothesis has been partially sustained for some of the respondents differentiated by mobility status.

Summary

(1) The determination of the interval between marriage and first birth for each respondent was made in the following way: every year that lapses since the date of marriage is counted as 365 days, and each month 30 days.

(2) For respondents in the 1920-39 cohort, the average interval between marriage and first birth was 1,041 days. The respondents in the 1940-47 cohort had an average interval of 1,091 days.

(3) By analysis of variance, it was shown that the observed differences in the timing of first births among the respondents in the 1920-39 cohort by mobility status are statistically significant and consistent with the hypothesis. However, the data on the marriage-birth interval for the 1940-47 cohort only partially supported the hypothesis.

(4) By holding constant age at marriage of the respondents and their wives, separately, and by eliminating the respondents serving in the armed forces at the time of marriage, further analyses of the data were made.

(5) Before omitting the respondents with war services, there were only two instances of relationships consistent with the hypothesis that mobility is associated with a longer interval between marriage and first birth. The first was among the respondents in the 1920-39 cohort who were married between the ages of 25 and 29 (in this instance, the non-mobile group consisted only of the respondents in the first occupational category). The other
related to the respondents in the same cohort whose wives were aged 25 to 29 when married.

(6) After excluding the respondents with war services, an additional significant finding was obtained among the respondents in the 1940-47 cohort whose wives had not reached their 25th birthday at the time of marriage.

(7) Except for these three instances, none of the other 11 comparisons gave statistically significant results, even though many of the observed differences were consistent with the hypothesis. Thus, it cannot be claimed that the relationship is either unequivocally validated or completely nullified.
CHAPTER VIII

CAREER, MARRIAGE, AND FERTILITY

General Remarks

The orientation of the analysis so far has been exclusively concerned with the relationship between inter-generational mobility and family size and between inter-generational mobility and the timing of first births within marriage. The chief results pertain to the existence and the magnitude of differential fertility and fertility behavior by mobility status.

Important as these preliminary data are to further analysis, they are not productive in terms of any definite answers to questions concerning the nature of the relationship between the variables. For example, Berent advanced the thesis that fertility behavior is influenced by both the present social status and social origin. His findings indicated that the socially promoted have higher fertility than those into whose class they have ascended, but lower than their less fortunate peers remaining in their class of origin. One of the points at issue here is whether the acquisition of the family building habits of the class into which the socially have moved precedes or follows upward social mobility.
This particular issue cannot be clarified from the preceding analysis, however. Instead of showing that the socially promoted have higher fertility, the present data disclose that their fertility is about the same as the non-mobile persons in the class into which they have ascended.

Furthermore, even if the results of the present study had been similar to Berent's, it would remain improbable that any definite solutions to the issue would be forthcoming within the framework of the preceding analysis. There appear to be nearly insurmountable obstacles to the gathering of such data as are necessary to clearly understand this essentially attitudinal aspect of fertility behavior.

In terms of Berent's findings, the mobile couples were marginal in their fertility (i.e., their fertility was intermediate between that of the class of destination and that of the class of origin.). This marginality presumably arose from the fact that the mobile couples had, in part, renounced their past affiliations and, also in part, adopted the present mores. However much this marginal fertility resembled that of the class of destination, the reproductive behavior of the class of origin was a sine qua non for its manifestation.
This marginality of fertility performance might have reflected a gradual displacement of values and attitudes that the mobile couples once held, firmly or otherwise, because of their original class-affiliations. The extent to which this may be true cannot be determined simply by pointing to a difference in the actual fertility that may be observed between persons, distinguished by mobility status, after they have passed the reproductive period. As family size can be affected by a host of factors, it is clearly not permissible to attribute the observed difference to mobility alone.

For a minimum understanding of this attitudinal aspect of fertility behavior in relation to mobility, it is crucial that the formation of attitudes regarding family size be followed over time. An inquiry along this line might better exclude the adults in the population; for, errors are likely to be great in the recall of attitudes and the extent to which they had changed. Instead, the formation of fertility attitudes and actual fertility performance should be followed pari passu for persons not yet married. Even if this were not carried to the extreme of closely studying a group of persons from birth to the conclusion of reproduction, such a
longitudinal investigation probably ought to begin with persons in their adolescence.

Methodologically, the task might not be beyond imagination, but it is certainly formidable in terms of management. There is no reason, of course, to subscribe categorically to the notion that this "cradle to the grave" sort of social research cannot be undertaken and accomplished. For the time being, however, ways have yet to be devised for an adequate assessment of changes in attitudes and their corresponding behavior over an extended period of time, not mentioning the fact that such a longitudinal project would be very expensive.

In discussing the methodological lessons of the Indianapolis Study, Kiser suggested that, in lieu of a full-scale longitudinal investigation, a selection of several different cohorts and a limited number of visits to them at intervals might possibly suffice. A few studies have apparently utilized this suggestion in their research design, viz., *Growth of American Families* and the *Study of Social and Psychological Factors Affecting the Future Fertility of Two-Child Families*.1/

Adequate descriptions of the two studies are available elsewhere. Presumably, as the two studies were designed to obtain a large amount of information both prior to, and at a specified interval after, the birth of a child or a third child, they provided good opportunities of partially overcoming the problems associated with the use of retrospective data.

However, the design of the present study is not at all longitudinal. Nor is this survey directly concerned with the actual practice of family limitation and the means of its accomplishment. When the questionnaire for the present investigation was being prepared and considered in various conferences, the decision was made to not ask for any contraceptive information as this was felt to be likely to deter many people from giving any response at all.

Because of this self-imposed handicap, little more than purely statistical analyses of the data could be attempted to test the fertility/mobility hypothesis. The


findings so far were predicated on the more easily quantifiable information obtained from the respondents.

The respondents also furnished, in addition to the quantitative data, fairly detailed chronologies of their educational attainments and occupational experiences and achievements. An exploration of such data should be profitable, as these events in the lives of the respondents nearly coincided with their marriages and parenthood. By the use of these biographic data, it becomes possible to portray more concretely, as Riemer and Kiser observed, "... the stage of career at which marriage takes place, the timing of births within marriage in relation to status changes, ... (and) the severity of the struggle to improve or maintain status at various stages in married life." Moreover, on the methodological side, the use of the chronological data permits an analysis on a different level and serves to attenuate somewhat the lack of longitudinal depth in the present research design.

The re-construction and analysis of the educational, occupational, marital, and reproductive histories are not undertaken for all the respondents. The following analysis makes use of the pertinent information from only 46

\[\text{Riemer and Kiser, op. cit., pp. 1050-1051.}\]
respondents for whom the average intervals for first birth were previously found to be significantly different (or nearly so) by mobility status. All of the 46 respondents were married between the ages of twenty-five and twenty-nine. None of them reported war service at the time of marriage.

The distribution of these respondents by year of marriage and mobility status is as follows:

(1) 1920-39: Non-mobile -- 13.5
Mobile -- 14

(2) 1940-47: Non-mobile -- 11
Mobile -- 8.

The following items were not included in the texts of their biographies: year of birth (present age), place of birth, date of marriage, present position, and field of teaching. These omissions were made in order that the respondents remain anonymous. The Australian academic profession is small, and it would be easy for an informed person to identify the respondents from these characteristics. The biographies of the 46 respondents represent highly condensed versions of their actual life experiences. They give the highlights, but not many details of their lives so as to avoid disclosing their identities.

5/One respondent gave incomplete occupational history and was excluded. (See Tables XXXVIII and XL.)
The excluded items are not germane to the present analysis, useful as they are in terms of identifications. The present purposes are adequately served by the information that is included in these biographies. This information is fairly substantial and includes:

(1) Educational attainments and occupational achievements of their siblings.

(2) Educational experience of the respondents, such as type of primary and secondary education, academic degrees and ages when awarded, major sources of financial support while attaining university degrees, etc.

(3) Occupational career: ages when first gainfully employed, nature of first employment, subsequent jobs before entering into the academic profession and titles of first university appointments and ages.

Also, employment experiences of their wives at the time of and since marriage.

(4) Marital and reproductive history: age at marriage, intervals between marriage and first birth and between subsequent births, and number of children.

While each of the biographies pertains to the most important events (i.e., education, marriage, reproduction, and occupation.) in the life of an unique individual, these events occur, more or less, sequentially in the life processes of all individuals. As much as these events are liable to vary from individual to individual, depending upon personal inclinations and
circumstances, they are shaped by customs, mores, and other "impersonal" forces prevailing in the society in which they live. In other words, they are not merely random episodes, but follow discernible patterns.

Some patterns have been treated statistically as in the previous chapters. For the present purposes, however, patterns of education, marriage, reproduction, and occupation of the 46 respondents are presented narratively. These data serve to complement the statistical analyses.

The biographies on which this narrative is based are given in Appendix F. The present chapter will now specify and examine a number of broad patterns emerging from these data.

Education and Mobility

The importance of education in relation to occupational achievement and mobility requires little elaboration, particularly when professional and technical work is involved. Its importance is vividly dramatized by comparisons of the educational attainments of the respondents with those of their siblings.

Considering first the educational attainments of the sisters of some of the respondents, the pattern is clear. Most of them were not educated beyond the secondary level, and this was true irrespective of the mobility status of the respondents. A mobile respondent was just as likely to have sisters who received only a secondary education or less as a non-mobile respondent. Almost invariably, these sisters were not employed outside their homes. Only a few of the sisters had a university education, and even fewer of them were also gainfully employed as professional workers.

An easy, and probably correct, explanation of these facts would be that of the "women's place is in the home" variety. By tradition they were (and possibly still are not) neither required nor encouraged to have more than "enough" education. But, the significant fact is not so much that most of the women had considerably less education than the respondents, but rather that some of them did deviate from tradition and acquire university degrees. Their educational attainments undoubtedly played an important part in their subsequent emancipation, i.e., in their professional employment.

The occupational achievements of the brothers of the respondents also were directly related to their educational
attainments. A number of the respondents (13) had one or more brothers whose education and occupational status were comparable to their own. Of these 13, 10 were in the 1920-39 marriage cohort, and not a single one of them belonged to the group of mobile respondents in the 1940-47 cohort, possibly owing to the fact that the respondents in the 1920-39 cohort had more brothers than the respondents in the 1940-47 cohort.

It is interesting to note that some of the 13 respondents also had one or more brothers who did not take up further studies after secondary school. Nor were they gainfully occupied in a profession. On the contrary, they were generally found in skilled, clerical, or rural occupations. Again, there were exceptions, as a few brothers with less education than the respondents managed to enter into such professions as secondary school teacher, artist, etc.

Nevertheless, the pattern is such that differences between the educational attainments of the respondents and their brothers accounted in a large measure for the differences in their subsequent occupational achievements. This appears to be true with respect to the non-mobile and mobile respondents alike in both cohorts. The occupational careers of brothers in a particular family can
follow entirely different courses and develop independently of each other. This is one of the characteristics of the modern occupational system which, though not providing completely equal opportunities to all, does select persons and permit their mobility according to educational attainment or personal excellence.

Given the fact that the occupational achievements of the respondents were directly related to their educational attainments, it is of interest to note by what means their education was financed.

A comparison of the educational backgrounds of the mobile and non-mobile respondents in the 1920-39 cohort indicates that the tendency was for the mobile respondents to be educated in state schools, at least at the primary level, and for the non-mobile respondents to be schooled in private institutions.

The pattern was considerably altered on the secondary level. Nearly all of the non-mobile respondents in the 1920-39 cohort went to private schools, and more of the mobile respondents transferred to such institutions. This shift could possibly have been brought about by the parents' recognition that attendance at private schools would facilitate upward mobility.\(^\text{2}\)

Among all the respondents in the 1940-47 cohort, this preference for private schools persisted but was much less marked. Only a very few of them were given a primary education in private institutions. Nor were the mobile respondents, save one, educated in private schools at the secondary level. Many of the non-mobile respondents, however, were sent to private secondary schools for a few years immediately prior to their university enrollment.

Most of the respondents were financially supported by their parents until they earned their first university degrees. Only a few respondents in the 1920-39 cohort supported themselves while studying at the university for the first degree. Some few others in this marriage cohort were partially supported by their parents and had jobs at the same time. In terms of the number of scholarships (which generally were supplementary to parental support), little difference existed between the non-mobile and mobile respondents.

The respondents in the 1940-47 marriage cohort were likewise supported by parents and scholarships. One important difference between them and the respondents in the 1920-39 cohort was that none of them was gainfully employed during their university years. This could have
been because the respondents in the 1940-47 cohort had fewer siblings than the respondents in the 1920-39 cohort. Thus, their parents were in a relatively better position to provide for their education, particularly in view of the fact that the few respondents in the 1920-39 cohort who worked during university years came from families of 5 or more children.

There is little difference between the groups with respect to the number of holders of advanced academic degrees (i.e., M.A. and Ph. D.). Nor is there much difference between them in regard to the major sources of financial support while studying for these higher degrees. As a rule, their own earnings and/or savings enabled them to proceed.

Thirteen of the 46 respondents obtained one or more higher degrees from overseas universities. Six of the 13 belonged to the mobile group of the 1920-39 cohort, 3 were in the non-mobile group of the same cohort, and two each in the other two groups of the 1940-47 marriage cohort. This distribution suggests that World War II prevented some of the respondents in the 1940-47 cohort from going abroad. Hence, fewer persons in this cohort had overseas degrees as compared with the 1920-39 cohort.
Of course, this does not mean that these people in the 1940-47 cohort do not spend some time overseas during their career.

Admittedly, the present number of respondents is very small and does not allow definite generalizations. But, it seems worth noting that the number of mobile respondents in the 1920-39 cohort who had overseas degrees leads all other groups. Does it mean that at that time, an overseas degree offered prestige and placed a person in a more advantageous position in relation to mobility? If this is so, it is easy to comprehend why nearly one-half of the mobile respondents sought and gained additional qualifications abroad.

Education is an important channel of mobility and almost the only gateway to a professional career. For this group of university teachers, it seems clear that their education was made possible nearly exclusively because their parents undertook to finance it. The implication is, in the case of the mobile respondents, that their subsequent occupational achievements were facilitated by, or resulted from, the struggle of their parents to give them a university education. Probably, for this reason, their fertility (i.e., the number of children) and mobility are, as has been previously shown,
unrelated to each other. They are actually two independent events that occurred at different points of time in their lives.

Moreover, education is so organized that persons are given the same instruction at more or less the same age. Those who do have the opportunity to have a university education undertake and complete it ordinarily at about the same age. Thus, irrespective of their social origins, they are qualified to hold professional employment and become established about the same time in life.

**Career Patterns and Marriage**

Australian universities grew slowly until after the Second World War. In the 1930's, the number of positions at the two universities was a little more than 400, including demonstrators and assistant lecturers. By the end of the 1940's, however, it was well over 900. Thus, there were relatively fewer opportunities in the academic profession when the respondents in the 1920-39 marriage cohort began their occupational careers.

This expansion meant, among other things, the creation of more posts after the war at the lower range of the profession. They were naturally filled by recent graduates.
in the 1940's, just as tradition and the shortage of Australian graduates played a part in the recruitment of foreign-born personnel from abroad to take up some of the higher positions (see Chapter IV, Table VII.)

It is against this changed background of employment opportunities in the academic profession that the career patterns of the respondents should be viewed. The non-mobile respondents in the 1920-39 cohort, as their biographies show, followed a number of different occupations at the beginning of their careers. They were first engaged in school teaching and private practice for relatively long periods of time. They became university teachers somewhat later in life than either the mobile respondents in the same cohort or the respondents in the 1940-47 cohort.

In the 1920-39 cohort, the career pattern of the mobile respondents differed from the non-mobile respondent in two principal ways. They became university teachers earlier in life, and undertook relatively fewer jobs in other walks of life before they were so engaged. They tended to remain at their alma maters after graduation, or to go abroad for additional training before taking up university teaching.
In other words, many of the mobile respondents in the 1920-39 cohort were, so to speak, career university teachers. A similar, and more marked, career pattern can be observed among the respondents in the 1940-47 marriage cohort. These respondents, irrespective of mobility status, either became university teachers immediately upon graduation, or were relatively briefly engaged in academic and other research work and then took up university teaching.

The discussion so far has been made in non-quantitative terms. However, at this point, it seems useful to mention some quantitative information. For the non-mobile respondents in the 1920-39 cohort, the mean age at first university appointment was 36.2. The mobile respondents in the same cohort had a mean age of 31.3, the non-mobile respondents in the 1940-47 cohort a mean age of 29.9, and the mobile respondents of this cohort a mean age of 28.4.

The fact that non-mobile respondents in the 1920-39 cohort became university teachers somewhat later in life is principally related to the post-war university expansion. Many of them were brought into, or persuaded to join, the profession on account of their prominence.
in closely allied professions (e.g., medicine, law.), and they were generally given senior posts at the time of appointment.

Some of the mobile respondents in the 1920-39 cohort were also not career university teachers, but received relatively senior positions when entering the academic profession. This accounts for the slightly higher mean age at first university appointment of these respondents as compared with the respondents in the 1940-47 marriage cohort.

Notwithstanding the differences, there can be little doubt that the respondents all became established in their occupational career at about the same time, and also early, in life. Simple calculations show that the non-mobile respondents in the 1920-39 cohort had a mean age of 23.3 at first employment, and the mobile respondents a mean age of 24.4, whatever their occupations were.

It may be recalled that 38 of the two hundred and eight-seven Australian-born respondents were still bachelors at the time of the survey. The likelihood is that at least the younger respondents (See Chapter V, Table XVII.) will soon or eventually marry. In other words, marriage is shunned by only a very small proportion
of the members of the academic profession. It is of
definite interest to know at what stage of their career
the respondents were married.

From the biographies of the 46 respondents, it seems
clear enough that almost all of them did not marry until
they had worked a few years whatever their jobs were.
Though some were married about the same time they were
first employed, only one married before the completion
of his B. A. degree. Thus, among university teachers,
marrage was postponed not only until after the attain-
ment of the minimum qualifications for professional
employment, but also until after the actual commence-
ment of the occupational career.

This fact is significant on two accounts. It rein-
forces the previous observation that, among university
teachers, their fertility and mobility are two independent
events in their lives. Presumably, given their identical
university background and common age denominator in occu-
pational achievement, and as they were married and com-
menced childbearing some years after their occupational
achievements, family size of the respondents should be
independent of their occupational origins.

In other words, the above fact corroborates Scott's
observation that "... Teachers achieve their mobility
early and are apparently quickly formed into a homogeneous group, irrespective of social origin, with behavior patterns and conventions of its own."

Employment Experiences of the Wives

Notwithstanding the fact that the family size of the respondents is independent of their occupational origins, it was found elsewhere in this study that, for some of the respondents, the average marriage-birth intervals by mobility status are significantly different. Though direct interpretations of the differences appear impossible, a few indirect explanations can be ventured and may help to locate some possible sources of variations.

Considering first the career patterns of the respondents in the 1920-39 cohort, there is another interesting feature which has only been casually mentioned in the preceding discussion. It pertains to the fact that, although the mean ages at first employment are about the same for the non-mobile and mobile respondents in the 1920-39 cohort, a number of the non-mobile respondents did not become university teachers immediately upon graduation and instead went into private professional practices. Financially, they would have been somewhat
better off than most of the mobile respondents whose occupa-
tional careers generally began in the teaching pro-
fession.

To what extent this difference in their career patterns was related to the differences in marriage-birth intervals can only be surmised. Nonetheless, it is a difference between the non-mobile and mobile respondents in the 1920-39 cohort.

But, among the respondents in the 1940-47 cohort, this difference is largely absent. These respondents, irrespective of mobility status, were either career university teachers or relatively briefly engaged in academic and scientific research before taking up university teaching. Thus, the differential pattern of marriage-birth interval by mobility status cannot be entirely accounted for by this difference in career patterns.

It is commonly assumed that mobility is to be achieved by the efforts of the male head of a family. It is he, and he alone, who carries his family to higher social status. The analysis so far has viewed mobility only with reference to the respondents themselves who certainly are responsible for the present status of their families. They were married after the actual commencement of their occupational careers.
But, it cannot be claimed that the respondents were alone responsible for either their family sizes or the spacing of their children. However, little would be gained by relating the number of children ever born to the mobility status of the wives. The uniformity in the fertility averages and the actual range of family sizes render such a comparison of little value.

Nor would much be learned by relating the timing of first births to the mobility status of the wives. If, as is assumed in this study, the interval between marriage and first birth is the result of conscious planning, such additional statistical analysis would be unlikely to throw light on the differential pattern of marriage-birth interval. It would be unlikely so because of the absence of information in regard to contraceptive practices, etc..

The examination of the career patterns of the respondents was fruitful, however, and provided some answers to the lack of difference in fertility performances by mobility status. Similar examination of the employment experiences of the wives might also prove useful and help to account for the differences in marriage-birth intervals.

As is evident in the biographies, there are three discernible patterns of the employment experiences of the
wives: (1) No employment either before or after marriage, (2) Employment before, but not after marriage, and (3) Employment before and after marriage.  

With respect to employment history, there is a sharp difference between the wives of the non-mobile respondents and the wives of the mobile respondents in the 1920-39 cohort. Eight of the 13 wives of the non-mobile respondents were never gainfully employed in their life, but nearly all of the wives of the mobile respondents had worked before, and until, their marriages.

Among the respondents in the 1940-47 cohort, it can be observed that, irrespective of the mobility status of their husbands, all the wives were in the labor force at the time of marriage. Though a majority of them instantly gave up their jobs, some continued to work for a year or more after marriage.

There are, of course, many factors affecting the employment of women in Australia. It is likely that employment opportunities were considerably fewer during the depression years than in recent years. But, this

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8/ Logically, there should be two more types (i.e., no employment before, but after marriage and employment before and again 10 or more years after marriage.). None of the wives had no employment before marriage, but was employed afterwards. Nor were there more than a couple of isolated cases where the wives re-entered the labor force after their children had grown up.
does not adequately explain why those wives who were employed at the time of marriage did not so remain. Could it be that they voluntarily withdrew from the labor force in order to better fulfill domestic duties and have children? Could it be because of the preference for single women on the part of the employers? Or, could it be both?

It is of more immediate interest that some of the wives in the 1940-47 cohort went on working, at least for a few years, after marriage. Three of such wives belonged to the non-mobile group, and four to the mobile group. As the mobile group is much smaller (8) than the non-mobile group (11), the continued employment of the wives of the mobile respondents had, therefore, more effect on their average interval between marriage and first birth than it did in the case of the non-mobile group.

No satisfying answers can be offered to account for this "working wife" phenomenon (which, incidentally, is

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2/The answer to the first question seems to be affirmative. For example, in 1947, 66.3% of the women aged 15-19 were in the labor force. The proportions of women in the labor force were 49.0% and 24.4% in the age groups 20-24 and 25-29, respectively. In the age group 30-34, it was only 18.2%. See Statistician's Report, 1947, op. cit., p. 267.

/Continued on the next page./
obviously of recent origin), but it can be said that the relatively longer average interval between marriage and first birth for the mobile respondents is directly related to the employment experiences of some of the wives. As this difference in the employment experiences is also a difference between the non-mobile and mobile groups, mobility status of the respondents is associated with a longer interval, at least indirectly.

Summary

(1) To complement the statistical treatment of the relationship between mobility and fertility and fertility behavior, a detailed description of the education, occupation, marriage, and parenthood of 46 respondents was made. Twenty seven of them were in the 1920-39 cohort (13 non-mobile and 14 mobile respondents), and nineteen in the 1940-47 marriage cohort (11 non-mobile and 8 mobile respondents). From their biographies, the following observations emerged:

a) Differences between the educational attainments of the respondents and their brothers accounted

2/(Continued) It may be mentioned that a study entitled "The Role of Women in Public and Professional Life in Australia," the first of its kind in this country, will shortly be undertaken by N. MacKenzie under the auspices of the Australian Social Science Research Council.
for, in a large measure, the differences in their subsequent occupational achievements. Education was the fundamental factor in the occupational achievements of the respondents, irrespective of differences in occupational origin.

b) As a rule, the respondents in both marriage cohorts were supported by their parents while studying for their first university degrees. Their subsequent occupational achievements were the results of struggle on the part of their parents rather than their own, i.e., their university education enabled them to hold professional employment.

c) While many of the mobile respondents in the 1920-39 cohort were career university teachers, the non-mobile respondents in this cohort tended to be initially engaged in other professional occupations and became university teachers somewhat later in life.

Irrespective of mobility status, the respondents in the 1940-47 cohort either became university teachers immediately upon graduation, or were only very briefly engaged in academic and other research work before entering into the teaching profession. The respondents in the 1940-47 cohort were,
therefore, first appointed to the universities at definitely younger ages than the respondents in the 1920-39 cohort.

Nevertheless, almost all of the 46 respondents did not marry until they had finished their initial university studies and worked a few years whatever their professional jobs were.

d) Given their identical university background and common age denominator in occupational achievement, family size of the respondents should be independent of their occupational origins. As a matter of fact, their fertility (i.e., the number of children) and mobility (as defined in terms of the respondents' occupational origins) were actually two independent events that occurred at different points of time in their lives.

(2) An examination of the employment experiences of the wives was also undertaken, which showed a number of substantial differences between the wives of the non-mobile respondents and the wives of the mobile respondents in both marriage cohorts. Most of the wives of the non-mobile respondents in the 1920-39 cohort never had any employment in their life, but nearly all of the wives of the mobile respondents worked until their marriages.
While all the wives in the 1940-47 marriage cohort were in the labor force at the time of marriage, a greater proportion of the wives of the mobile respondents remained employed for a few years after marriage. These differences in the employment experiences of the wives could have been responsible for the few significant differences found in the timing of first births. As they are differences between the non-mobile and mobile respondents, mobility status is, at least, indirectly and positively related to the interval between marriage and first birth.
CHAPTER IX

CONCLUSIONS

As stated in the letter of appeal to members of the academic profession, this is a pioneer study and has been undertaken with the hope that it may stimulate more research in a field in which little systematic exploration has been made in Australia. On the other hand, this study was also planned to test theoretical concepts or hypotheses which have guided many inquiries, in other countries, concerning the relationship between mobility and fertility and fertility behavior.

The gradual shift of research interest abroad in differential fertility has recently expressed itself in a number of studies of social and psychological factors affecting fertility and fertility behavior. These studies differ both in scope and approach. Some adopt the "drag-net approach", examining a great variety of factors which might be related to fertility behavior. Others follow a more circumscribed approach, selecting a few factors which early investigations have shown warrant further study.

The data for the present study were collected from persons in the Australian academic profession, and the
analysis was focussed upon mobility in relation to family size and the timing of first births within marriage. The present investigation, therefore, is limited both in scope and approach.

This relationship was first assessed quantitatively in terms of both the number of children ever born and the average intervals between marriage and first birth. Then, to explore the relationship further, this statistical treatment was followed by a detailed examination of some biographic data of a selected number of respondents.

Because mobility may not be a factor affecting fertility and fertility behavior under all socio-economic conditions, a division of the respondents into two cohorts was made in order to provide a roughly realistic basis for an assessment of their relationship.

However, the present study has a number of limitations. As the number of respondents involved was small, it was not possible to get such homogeneity within subgroups as would have been desirable. For example, age at marriage was not held constant simultaneously for both husbands and wives. Furthermore, the respondents were not differentiated according to their religious affiliations. Had this been done, some different results might have developed in connection with the marriage-birth interval
analysis. Also, the respondents were not requested to divulge their contraceptive histories. Nor were they asked to answer any questions concerning their attitudes relating to fertility and fertility behavior. Such information would be extremely valuable.

Nevertheless, a number of significant findings have emerged from the present probe into the relationship between mobility and fertility and fertility behavior. They permit a re-assessment of the mobility/fertility hypothesis.

The Mobility/Fertility Hypothesis Reconsidered

The three propositions which guided the present analysis were borrowed almost verbatim from prior investigations, namely: (1) Immobility is associated with larger families, (2) upward mobility or social promotion is associated with smaller families, and (3) fertility behavior is influenced by both the present social status and social origin.

Earlier in this thesis the findings of various past studies have been summarized. They indicated varying degrees of confirmation of the existence of the relationship envisaged in these propositions. In more than one empirical investigation, however, this relationship was
absent. The present data likewise show that, for the population studied, mobility is not associated with family size.

To account for this lack of agreement, a critical evaluation of the content and contribution of past studies seems in order and will be made in the light of the present findings. Attention will be particularly focussed on the types of data used, characteristics of the population covered, and assumptions employed in the definition of mobility and interpretation of empirical evidence.

Two distinctive types of data have been used to test the mobility/fertility hypothesis. Some used biographical data in *Who's Who* and similar records (Fisher, Burks, and Baltzell). Such materials pertained to persons who occupied prominent places in diverse occupations of either professional standing or high prestige. Little was known concerning their representativeness of all persons in such occupations who were upwardly mobile.

Most other studies were based on data obtained from persons by means of questionnaires or similar instruments. Persons included in these studies were selected by sampling
procedures (Berent and Scott) or according to certain demographic, religious and educational characteristics (the Indianapolis Study). Like the studies based on published biographies, these questionnaire studies lumped together persons who had occupations of similar prestige and, thereby, disregarded their specific occupations. They were based on data furnished by persons occupying heterogeneous socio-economic positions. Scott's study, however, was an exception as it dealt only with persons of more homogeneous status and in a particular occupation, the teaching profession.

Owing to differences in the sources of data, different definitions of "mobility" have been used in past studies. Educational attainment was the sole criterion in Fisher's study. He assumed that, in order to be included in Who's Who, persons with less schooling achieved "more" mobility than those with extended formal education. In Baltzell's work, persons who did not possess "attributes of high ascribed position" were considered to be "more mobile" than those who did. In these two studies, mobility was, therefore, defined in terms of degrees. Fertility differences were attributed, in the main, to differences in the degrees of mobility.1/

1/Baltzell also examined and compared some other characteristics of his subjects, such as religion, types of school attained, etc. But, his main conclusions appear to have been based on the differences in the degree of mobility.
Though Burks used data similar to those employed by Fisher and Baltzell, she apparently had more information at her disposal. She adopted a definition of mobility which made reference to both occupational achievement and educational attainment of the parental generation. This more tangible definition rested on the similarity or dis-similarity in occupational achievement and educational attainment between two successive generations. Fertility differentials were seen to reflect mobility status.

With certain modifications, most other studies adopted this frame of reference in defining mobility. Berent, for instance, classified his subjects into four broad social classes which were based on the occupational grade of the husband and his father. Others treated mobility as a change in occupational position in terms of the non-manual-manual dichotomy.

Thus, the findings of past studies are not strictly comparable in view of the differences in the definition of mobility. They are also not comparable because some (Fisher and Burks) merely relied on visual examinations of differences in the absolute values of fertility averages; whereas, others put such differences to statistical tests before coming to any conclusions. Moreover, neither Fisher nor Burks made any attempt to control such factors as age
at marriage, duration of marriage, etc. in their analyses. Methodologically, the results of their studies were, therefore, questionable.

Incidentally, it is interesting to note that definite findings were obtained only in the few studies which were methodologically less sound in research design. Where more rigorous standards of research were applied, findings and conclusions were generally tentative or even contradictory.

Furthermore, different assumptions have also been employed in the interpretation of empirical findings.

Fisher mentioned that family limitation was a factor in social promotion. It should be made clear, however, that family limitation operated, in Fisher's scheme, at a different level than is commonly assumed. The usual belief (or hypothesis) is that in order to gain social promotion for oneself, one tends to limit the number of one's own children; whereas, in Fisher's view, "members of small families are on the average at a social advantage compared to members of large families, the parents being in other respects equivalent."

In terms of the individual's own mobility, Fisher stressed the social promotion of the relatively infertile and assumed a priori that persons who were "temperamentally
infertile tended to ascend in the social scale, an assumption which still lacks substantiation. In Fisher's view, their infertility was "hereditary" rather than being "environmentally" induced.

Aside from the defects in his data, Fisher also appears to have been somewhat lopsided in his arguments. Were "social environment" the important cause of differential patterns of fertility, Fisher claimed that "we should confidently expect the families who rise in the social scale to carry with them some measure of fertility from which they originated." However, little was offered to bolster this assertion.

Nor was it made clear why we could not also expect mobile persons to adopt completely the fertility habits of the class into which they moved. Nor could a third possibility be ruled out, i.e., the possibility that fertility could be influenced by both factors, social origin and the status subsequently achieved.

In fact, Burks' data implied this third possibility, even though she did not herself elaborate upon it -- an instance of serendipity lost. In Berent's work, however, this third possibility was greatly expanded and provided the sole frame of reference for the interpretation of his findings.
Thus, Fisher's thesis of infertile selection in the social mobility process has gained little acceptance. Variations in the fertility of the socially mobile have increasingly been attributed exclusively to "environmental" factors: "the acquisition of the fertility characteristics of the class into which the (mobile individuals) have moved and the maintenance by them of the family building habits of the class in which they were born."

According to this line of reasoning, mobile persons tend to be marginal in fertility. It is not, however, immediately apparent whether the two forces play an equal role in bringing about this marginality, or whether one leads the other in importance. Most writers are of the opinion that, in the case of upwardly mobile persons, the family building habits of the class into which they have moved are more influential.

Baltzell declared that "... fertility declines as one ascends the social-class hierarchy mainly because the requirements of a more expensive pattern of consumption militate against having children and partly because of the internalization of small-family norms already existing in the cultural definitions of the class of destination."

Kantner and Kiser shared this view and indicated that for upwardly mobile couples, "lower fertility is perhaps
a function of the higher status they have achieved."

Riemer and Kiser also stressed that "... for upwardly mobile persons, ... orientation toward the higher status would minimize the influence of the background status level. Upwardly mobile couples thus would be likely to resemble the non-mobile couples at their destination much more than the non-mobile couples at their origin with respect to fertility control and fertility."

Scott gave the opinion that "the urge for children is clearly not the result of inherited fecundity or of parental example." He suggested that the present status is probably decisive: "Teachers ... are apparently quickly formed into a homogeneous group, irrespective of social origin, with behavior patterns and conventions of its own."

Nevertheless, in most of these studies, there remains one obstacle which prevents a clear understanding of whether the acquisition of the family building traits of the class of destination precedes or evolves from social promotion. In other words, which is the cause and which the effect? This obstacle evidently exists because of the lack of mobility information in regard to how and when the mobile persons selected for study achieved their occupational advancement.
As Burks remarked, "some professions, e.g., teaching, medicine, the ministry, scientific research, etc., are virtually closed to individuals whose formal education is inadequate; whereas other professions such as art, music, and authorship are open to any one who can find the key." In addition, differences in fertility and fertility behavior may obtain between persons whose formal education qualifies them, for example, to hold high executive positions (say, in government or business firms) and those who occupy similar posts solely because of their experience or seniority accumulated within these organizations.

The study by Scott referred to persons in a professional occupation. In order to enter it, one must meet the minimum requirements of this profession. It can be more or less assumed that persons have joined it in a known way, irrespective of social origin. The present study has a similar advantage in the fact that the members of the Australian academic elite have been recruited from among university graduates and, on that account, have been admitted into the profession in a clearly formal manner.

The occupational achievements of the respondents, therefore, were related fundamentally to their educational attainments. Owing to the fact that their education was
made possible because their parents undertook to finance it, the "struggle" to improve or maintain status was more or less a personal triumph and depended on personal ability. Mobility is, as it were, at the expense of the parents rather than children.

As a matter of fact, marriage was postponed until, not only after the attainment of the professional qualifications, but also after the actual commencement of the occupational career. Thus, the struggle to improve or maintain status was virtually over even before university teachers assumed any family responsibilities of their own.

Also, as a matter of fact, the average family sizes of the respondents by mobility status are nearly uniform and reflect the assimilation of group standards and lifestyle which presumably militate against excessive fertility within the academic circle. This conformity, coupled with the time-lag between mobility and fertility, corroborates and upholds the opinions expressed by Baltzell, Kiser, Kantner, Riemer, and Scott. It disputes the proposition that fertility performance is influenced by both the present social status and social origin, and emphasizes that the present affiliation appears decisive in this connection.
All these give credence to the belief that the acquisition of fertility habits results from, or is concomitant with, social mobility. Or, family limitation is the effect of mobility rather than vice versa as is implied in Dumont's theory of "social capillarity". His thesis was, it may be recalled, that "a family must be small in order to rise in the social scale." (Italics added.)

This thesis has had the status of a law. Many empirical studies of mobility and fertility have been affected by it, being generally pre-occupied with proving or disproving the relationship between the two variables. Only recently has it been pointed out that, in studies of mobility and fertility, attention must be given to "the time at which shifts in socio-economic status occur, the stage of career at which marriage takes place, (and) the timing of births within marriage in relation to status changes ..."

Prior to this recognition, many investigators were inclined to follow Dumont's theme and introduced the element of financial costs to account for, or as an intervening variable in, the negative association between mobility and fertility.
In terms of spatial mobility, Kantner and Whelpton remarked that "other things being equal, the restriction of family size and extent of planning would vary directly with the costs and therefore frequency of movement."

Riemer and Kiser stated that "... The expense and responsibility of rearing children, especially if undertaken at an early age, are handicaps to social advancement since they divert time, energy, and money into family care which might otherwise be devoted to further education, apprenticeship, and other activities facilitating upward social mobility."

The explicit assumption is that children and mobility, vertical or otherwise, are incompatible, -- an assumption which is applicable only to persons whose marriages precede their mobility. This assumption, therefore, is not applicable to the university teachers studied. Their mobility and fertility are two independent events that occurred at different points of time in their lives. In their case, mobility (i.e., mobility into the academic profession) was achieved early in life and before marriage.

The inapplicability of this assumption does not per se preclude consideration of costs as a factor in the pattern of family building subsequent to mobility achievement. The following example illustrates the point:
Let us compare persons A and B who are now both in
the academic profession and who have the same number of
children. Though A's father was a university teacher
and B's an unskilled worker, it seems sound to infer
that neither social origin nor social mobility is re­
lated to fertility. This homogeneity of family size
is then largely a function of their conformity to group
behavior patterns or acceptance of the prevalent ideology
regarding the "ideal family size." This creates a
reasonable doubt concerning the propriety of using the
number of children itself as an effective measure in
studies of mobility and the reproductive behavior.

If we probe further, we may find that A's children
followed one another soon after marriage and B's arrived
after a considerably longer interval after his marriage
and between each other. Thus, although the number of
children is the same for both, mobility status may be,
other things being equal, regarded as a significant
variable in relation to fertility behavior.

However, this relationship envisaged in the above
hypothetical example was not conclusively demonstrated
in the present study. Various defects in the research
design may have accounted for this, such as the lack
of pertinent information about the medical and contraceptive histories of the respondents studied.

On the other hand, the hypothetical example is based on the assumption that the couples compared would be similar in all aspects and differ only with respect to mobility status. Otherwise, differences in the timing of births cannot be directly attributed to this factor.

One of the interesting developments in this regard resulted from the analysis of the biographic data with special reference to the wives. None of the wives of the non-mobile respondents in the 1920-39 cohort had any employment either before or after marriage, but nearly all the wives of the mobile respondents in this cohort were employed before, and until, their marriages. While all the wives of the respondents in the 1940-47 cohort were in the labor force at the time of their marriages, a greater proportion of the wives of the mobile respondents remained employed for a year or more afterwards.

Furthermore, while many of the mobile respondents in the 1920-39 cohort were career university teachers, the non-mobile respondents were initially engaged in other professional occupations which, incidentally, are known to be lucrative.
These differences in the occupational backgrounds of the wives and career patterns of the respondents themselves could have been responsible for the few significant differences found in the present study with respect to the timing of first births by mobility status.

While these differences appear to have accounted for the differential pattern of marriage-birth interval, they are differences between the non-mobile and mobile respondents. Thus, the present study tends to support the hypothesis that mobility status is positively, though only indirectly, associated with a longer interval between marriage and first birth. The costs of child-rearing might have been a factor in this connection.

In conclusion, it seems that mobility facilitates family limitation (i.e., the limitation of family size) rather than the reverse as Dumont implied a decade before the present century. Drastic alterations have taken place in all aspects of life in Western society since his time which have, for all practical purposes, rendered void whatever validity there might have been in his sweeping generalization. As Boggs pointed out,

Prosperity, higher education, and successful experience in adapting to the social mobility required by the urban occupational system all minimize the impact of social mobility ...
It would indeed be an intellectual anachronism to maintain that Dumont should have foreseen the growth of higher education and its importance in relation to mobility, and that he should have anticipated the influence of the more elusive factors (i.e., attitudes, beliefs, etc. of the group) on family size.

However, in view of the present findings, further research in this area should take account the circumstances under which mobility, marriage, and multiplication commence. It should probably be focussed more upon the timing of births rather than the number of children ever born to the couples investigated.

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APPENDIX A

Fertility Data and Research in Australia

It is the purpose of this section to describe briefly data relevant to fertility research that are available in published form in Australia. In part, the types of data available appear to have been a factor limiting the scope of existing studies on the Australian fertility. This should not be taken, of course, to mean that all available data have been utilized to the fullest extent. The evident inclination to treat fertility in its immediate context of Australian population problems has tended to exploit certain types of data to the neglect of others.

Insofar as the history of Australian fertility is concerned, Borthwick and Coghlan were the first investigators who examined and analyzed the relevant vital statistics and census data for South Australia and New South Wales (see Chapter I, footnotes Nos. 1 and 2). Packer, in his study of the population growth of Victoria during the period of gold rushes (1851-1861), referred to the vital registration data of that State. 1/

As regards the more contemporary fertility materials in Australia, two major types of information are available, those of the decennial Census and the vital statistics of Australia in the Demography Bulletins.

The first all-Australian Census was taken in 1881,\(^2\) but it was not until 1911 when the Commonwealth Government became solely responsible for census-taking in Australia that uniformity in census methods and scope was attained throughout the Commonwealth. Since that date there have been five Censuses of Australia, 1911, 1921, 1933, 1947, and 1954. The first two Censuses were ten years apart as originally planned; but, owing to the depression of the 1930's, there was an interval of 12 years between the Censuses of 1921 and 1933. The next Census in 1947 was taken after an interval of 14 years because of World War II, and the 1954 census followed only seven years later in order that the effects of the huge inflow of migrants after the war could be assessed. Thus, \(^2\)

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\(^2\)The census information, while being quite different in nature from the vital registration data, could be used in conjunction with the latter. It would be an enormous task to analyze the mass of data from these sources, a task made particularly difficult by the fact that the quality of data varies from state to state until at least 1881. Until then exactly comparable population bases on which fertility rates might be calculated for the various States do not exist. For example, State censuses, though taken generally in the same years in the colonies (States after 1901), were taken in different months.
because of these variations in the intervals between the Censuses, the data given in the last three Censuses are not comparable with those in the Censuses of 1911 and 1921.

The other source of irregularities making comparisons difficult is the variation of the questions in the census schedules. Both in 1911 and 1921, questions were asked concerning the number of children (living or dead) born to existing and previous marriages. It was most unfortunate that these questions were omitted from the 1933 Census, rendering it nearly useless for fertility studies. The 1947 Census revived the questions on the number of children but limited them to existing marriages only. Similar questions were included in the 1954 Census. Thus, while the Censuses of 1947 and 1954 contain data on fertility, only the 1911 and 1921 Censuses are strictly comparable and can be combined for discussion.

It is convenient to distinguish two kinds of fertility data in the Australian Census. The first category includes those data cross-tabulated by what can be termed demographic variables, such as age, duration of marriage, etc. The other category embraces data cross-tabulated by sociological variables, e.g., place of birth, religion, place of residence, and occupation.
In the Census of 1911, tabulations of data in the first category are given in two forms. In absolute numbers, married males and females (or, in Australian census terminology, husbands and wives) are shown separately by the number of children born to them and by their ages. Also, married females are tabulated according to the number of children by duration of existing marriage in quinquennial groups. Data are also given on the average number of children by duration of marriage and by age (married females only), both for Australia and for individual States and Territories.

In the 1921 Census, similar data are given in respect to the number of married males and females classified according to number of children and their ages. But, the 1911 data are related to all married males whether or not they were enumerated with their wives, and to all married females whether or not they were enumerated with their husbands; whereas, the 1921 data include only those married males and females who were enumerated with their wives and husbands, respectively. Thus, in 1921, the number of married males and females are identical (853,107), but, the 1911 data show an excess of 25,56 married males (735,849) over married females (733,773). The discrepancy is, however, rather small to negate the comparability of the two sets of data.
As regards average issue of married females by age and duration of existing marriage, the 1921 data are similar to those in the 1911 Census, except that they refer only to those enumerated with their husbands. Like the 1911 data, separate tabulations of these data are made for Australia and individual States and Territories.

The use to which the data on the number of married males or females classified by age and by the number of children born to them can be put, is fairly limited. They permit little more than the computation of the distribution of family by size for the various age groups, showing thereby a static picture of the fertility pattern at a particular date. It is of definite interest to know how families are distributed according to size. But, the data do not allow for any inference as to whether the variations in the distribution of family by size, say between the age groups 45-49 and 65-69, are due to variations in the duration of marriage or to selective mortality.

Data on the average issue of married females by age and duration of existing marriage are likewise difficult to interpret. They permit the general observation that, when holding age constant, the longer the duration of marriage, the higher is the average issue. But, they do not
allow any other meaningful conclusions to be made. To illustrate the point, a portion of the data is reproduced below:

TABLE 1

AVERAGE ISSUE OF MARRIED FEMALES, AGED 45 - 49, WITH DURATION OF EXISTING MARRIAGE 20 YEARS OR MORE, AUSTRALIA, NEW SOUTH WALES, AND VICTORIA, 1911

<table>
<thead>
<tr>
<th>Duration of marriage (Year)</th>
<th>Australia</th>
<th>New South Wales</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 24</td>
<td>4.85</td>
<td>4.84</td>
<td>4.70</td>
</tr>
<tr>
<td>25 - 29</td>
<td>6.37</td>
<td>6.36</td>
<td>6.14</td>
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<tr>
<td>30 - 34</td>
<td>7.69</td>
<td>7.64</td>
<td>7.50</td>
</tr>
<tr>
<td>35 - 39</td>
<td>7.67</td>
<td>--</td>
<td>12.50</td>
</tr>
<tr>
<td>40 +</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>


The previous observation that the longer the duration of marriage, the larger is the average issue is supported by the data in Table 1. However, the unreliability of the averages becomes evident if age at marriage is taken into account. That is, persons who married at the ages 21 - 24, could be included either in the 20-24 marriage duration group or in the 25-29 group, depending on whether they were 45 or 49 years of age at the date of the Census. The overlapping raises
the question whether the averages by duration of marriage
are as meaningful as they seemingly are. Another critic­
ism of these averages is that the minimum number of fe­
males on which they were calculated is not known, -- a
fact which obscures possible biases due to small numbers.
For instance, the 30-34 marriage duration group could have
included persons who entered into marriage between the
ages of 11 and 19, and the next group 35-39 included only
a few persons who married very young, namely 14 years or
younger at the time of marriage. The average of 12.50 of
the 35-39 Victoria group is, perhaps, an extreme example
of bias from this source.

Therefore, owing to the ambiguous nature of averages,
a great deal of flexibility in the data could have been
preserved if absolute figures, i.e., the number of married
females by age and duration of existing marriage and the
number of their children, had been given instead of merely
averages. No statistical manipulation is possible when
only averages are shown. The same criticisms are equally
applicable to the 1911 and 1921 fertility data classified
according to sociological variables.

Fertility data in these two Censuses are tabulated
by four major sociological variables, religion (1911 only),
place of birth, place of residence, and occupational
pursuit of the husband. For each religious group, the number of married females is shown by the number of children born to them. The number of married females is also given by place of birth and the number of children. From both types of data, the distribution of family by size can be calculated, supplying some rudimentary indication of fertility differentials by religion and by place of birth, respectively. It is not possible, however, to infer whether such variations in the distribution of family size for different religious groups are due to variations in age, duration of existing marriage, age at marriage, or actually to religious affiliation. Likewise, it is impossible to say whether fertility variations as regards place of birth are due to some demographic factors or selective migration or other socio-cultural factors.

The 1911 Census also gives the average issue of married females by age and religion, but no data of a similar nature are given in the 1921 Census. The average issue of married females by age and place of birth is given, however, in both of them, though with some minor modifications in the age-groups in the 1921 Census. These data are given for Australia as a whole and individual States and Territories. A sample of the data is presented below to illustrate their use and limitations.
### TABLE 2

**AVERAGE ISSUE OF MARRIED FEMALES AGED 45 - 49, BY PLACE OF BIRTH, AUSTRALIA, NEW SOUTH WALES, AND VICTORIA, 1911 AND 1921**

<table>
<thead>
<tr>
<th>Place of birth</th>
<th>1911</th>
<th>1921</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aus-</td>
<td>Vic-</td>
</tr>
<tr>
<td></td>
<td>tralia</td>
<td>N.S.W.</td>
</tr>
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<td>Australia</td>
<td>5.33</td>
<td>5.58</td>
</tr>
<tr>
<td>New Zealand</td>
<td>4.50</td>
<td>4.71</td>
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<td>British Isles</td>
<td>4.97</td>
<td>4.76</td>
</tr>
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<td>Canada</td>
<td>3.45</td>
<td>3.36</td>
</tr>
<tr>
<td>Germany</td>
<td>6.52</td>
<td>4.61</td>
</tr>
<tr>
<td>Greece</td>
<td>6.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Italy</td>
<td>5.45</td>
<td>6.54</td>
</tr>
<tr>
<td>Poland</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

*Source: 1911 Census, Vol. III, pp. 1160-1169. 1921 Census,*

The countries for which data are given in Table 2 were selected at random, but with a view towards permitting some generalizations concerning fertility patterns in the conventional way of distinguishing between British and non-British places of birth. On the whole, the data show that the 1921 averages are generally lower than those of 1911. The exception is that of Canadian-born females whose fertility averages were higher in 1921 than in 1911. The data also show that, for Australia as a whole, married females born in Greece, Italy, and Poland generally had a somewhat larger average issue than those born in Australia,
New Zealand, the United Kingdom (British Isles), and Canada in both Census years. Again, this is not without exception as shown by the average issue of Greek-born females which was actually lower than that of the Australian-born in 1921. Thus, it cannot be stated on the basis of these averages that females of non-British origins were more reproductive than those of British origin. The number of non-British females on which averages were calculated was much smaller than the females of British origin.

It is not possible to determine the extent to which the lower fertility of females of British origin is due to selective migration in terms of education, occupation, etc. Nor is it possible to detect from the data the effect of duration of marriage on fertility performance. A more meaningful index of fertility differential would have been made if, in addition to age or duration of marriage, two or more sociological factors were held constant in the tabulations.

The 1911 and 1921 Census fertility data by occupation and place of residence are equally unsatisfactory. The place of residence data show the average issue of married males and females, separately, by age for metropolitan and extra-metropolitan regions in the 1911 Census. A four-fold classification is used in the 1921 Census, the
average issue of married females by age being calculated for metropolitan, provincial and rural regions. The fourth group is called "migratory". These fertility averages by place of residence are useful, and, as Borrie concluded, "a study of average issues for 1911 and 1921 does indicate a striking difference in the size of the family of women then living in urban and rural areas."3/ But, these averages are not free from those defects already mentioned in previous discussion on other data.

The occupational classification on which average issues are calculated is the same in the 1911 and 1921 Censuses. Eight major occupational classes and some 37 separate occupations are distinguished. The data are, however, limited to married males only and are tabulated by five-year age groups from 15-19 to 65 and over.

An analysis of these occupational fertility data has already been made by Borrie. His conclusions are that, on the basis of the average issue of males aged 40-44, 45-49, and 50-54, three fertility groups can be distinguished: "(1) 'Primary' with a relatively high average, (2) an intermediate group made up of 'Industrial' and 'Transport and Communication'; and (3) a group with a low

average represented by the 'Public Administration and Professional,' 'Commercial' and 'Domestic' occupations."\footnote{4}{Ibid., p. 114.} Unfortunately, the data give no indication of the duration of marriage.\footnote{5}{Ibid., pp. 114-115.} Nor were there indications of place of birth, place of residence, or migration status to allow for more fruitful interpretation of occupational differentials in fertility.

It should be mentioned also that in the 1911 and 1921 Censuses, average fertility data by occupation are also presented for three occupational grades, namely, employers, self-employed, and employed. It is, however, exceedingly difficult to generalize from these averages.

For example, the average issue of the "Primary" employers aged 45-49 is identical with that of the "Transport and Communication" employers, 5.07 and 5.08, respectively. Also, among the self-employed aged 45-49, the average issue of the "Primary" class is actually lower than that of the "Transport and Communication" class, and this is evident in both the 1911 and 1921 Censuses. These suggest that homogeniety of the "Primary" class may not be taken for granted in fertility research. Some of the employers and self-employed in the "Primary" class may have quite different characteristics from others in the same class in terms of size of holding, income, etc..
No data comparable with those of the 1911 and 1921 Censuses are available in the 1933 Census as the question concerning the number of children born to existing marriage was omitted from the Census schedule. There are data in the 1933 Census on the number of dependent children under 16, but they are no substitute for direct information on fertility.

The 1947 Census revived the question of the number of children born to existing marriage. But, the presentation of the data was drastically limited. The 1947 Census presents two major types of data: (1) age of husbands and wives in conjunction with the issue of existing marriages and (2) average issue in conjunction with ages of husbands and wives and duration of marriage. These data are tabulated for Australia as a whole, by metropolitan and extra-metropolitan areas and for individual States and Territories. The emphasis was obviously laid upon urban-rural and inter-state differences in fertility, for no tabulation was made of the number of children by religion, place of birth or occupation of the husband.

It is not necessary to examine the 1947 data in detail as they are subject to the same limitations many
times repeated on the previous pages. It may be added that, even though data in earlier Censuses relating to some of the sociological variables are of limited value, the decision to discontinue their tabulations in the 1947 Census seems to have been unwisely taken.

The 1954 Census adopted a similar question of the number of children born to existing marriage. Like the 1911 and 1921 Censuses, fertility data will be given for main birthplace (country) groups by duration of residence. This is to enable the post war immigrants to be separated. But, detailed tabulations of the 1954 fertility data are not yet published.

Demography Bulletins, which have been published since 1906, constitute the other major source of Australian fertility data, which are valuable for studies of cohort analysis and inter-State fertility differentials. They have been extensively used by various investigators, such as Karmel, Linford, Henry, etc. For full citations of their work, see Ch. I, footnote No. 16 and Ch. V, footnote No. 5. Nevertheless, such vital statistics are of little use insofar as the present study of the relationship between mobility and fertility and fertility behavior is concerned.
APPENDIX B

The Questionnaire
<table>
<thead>
<tr>
<th>Question</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sex</td>
<td>M, F</td>
</tr>
<tr>
<td>2. Date of Birth</td>
<td>(Month) (Year)</td>
</tr>
<tr>
<td>3. Place of Birth</td>
<td>(City or Town) (State) (Country)</td>
</tr>
<tr>
<td>4. If born OUTSIDE Australia, year of arrival in Australia</td>
<td></td>
</tr>
<tr>
<td>6. Date of Existing Marriage</td>
<td>(Day) (Month) (Year)</td>
</tr>
<tr>
<td>7. If married more than once, please check (X) here</td>
<td></td>
</tr>
<tr>
<td>10. MAJOR Source of financial support while attaining degree or professional qualifications (please check):</td>
<td>a. Parental support</td>
</tr>
<tr>
<td>11. Occupational History (please begin with FIRST FULL-TIME job and include war service and scholarships)</td>
<td>Title</td>
</tr>
<tr>
<td>12. Paternal Grandfather</td>
<td>a. Country of Birth</td>
</tr>
<tr>
<td>13. Father</td>
<td>a. Year of Birth</td>
</tr>
<tr>
<td>15. Brothers and Sisters (From Oldest to Youngest):</td>
<td>Sex</td>
</tr>
<tr>
<td>a.</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td></td>
</tr>
<tr>
<td>h.</td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td></td>
</tr>
</tbody>
</table>
1. Date of birth: 
   (Month) (Day, Month, Year)
2. Place of birth: 
   (City or Town) (State) (Country)
3. If born OUTSIDE Australia, year of arrival in Australia: 
4. If married more than once, please check (X) here: 
5. Religious affiliation or preference: 
   a. Protestant 
   b. Catholic 
   c. Jewish 
   d. Other (please specify)
6. Education: 
   a. Primary (up to 12 years of age): 
      State Private 
   b. Secondary (12 years and over): 
      State Private 
   c. Standards attained in secondary school: 
   d. University degrees or equivalent Professional qualifications:
      Degree or Professional Qualification and Name of University
      Year Enrolled Year Obtained Full- or Part-time Student
   i. 
   ii. 
   iii. 
7. Occupational history since first full-time job: 
   a. If never held any paid employment, please check (X) here: 
   b. Jobs held: 
      Title Place and by Whom Employed From Year To Year Full- or Part-time 
     i. 
     ii. 
     iii. 
     iv. 
     v. 
     vi. 
8. Family information: (Children, living or dead) born to existing marriage: 
   Sex Date of Birth (Day, Month, Year) If attending school, indicate whether state (S) or private (P) or age at death
   If not still living, age at death and year of death and last occupation
   a. 
   b. 
   c. 
   d. 
   e. 
   f. 
   g. 
   h. 
   i. 
9. If any children are under school age, please indicate whether you intend to send them to STATE 
   or 
10. Paternal Grandfather: 
    a. Country of Birth 
    b. If born outside and MIGRATED to Australia, approximate decade of arrival: 
    c. Principal occupation at time of retirement or death: 
       Where held: 
11. Father: 
    a. Year of Birth 
    b. Country of Birth 
    c. If born IN Australia 
       (City, town or rural area) (State) 
    d. If born OUTSIDE and MIGRATED to Australia, approximate decade of arrival: 
    e. Occupation: 
       i. If still employed, please define precisely present position: 
12. Mother: 
    a. Education: Highest Education Attained: 
       i. Primary 
       ii. Secondary 
       iii. University degree (please specify): 
       iv. Professional qualifications (please specify): 
    b. Occupation: If ever gainfully employed before marriage, please describe nature of employment: 
13. Brothers and Sisters (from Oldest to Youngest): 
    Sex Age Highest Education attained Occupation at present If deceased, age and year of death and last occupation
    a. 
    b. 
    c. 
    d. 
    e. 
    f. 
    g. 
    h. 
    i. 
   j. 
   k. 
   l. 
   m. 
   n. 
   o. 
   p. 
   q. 
   r. 
   s. 
   t. 
   u. 
   v. 
   w. 
   x. 
   y. 
   z.
APPENDIX  C

Letters of Appeal and Reminder
The Department of Demography of the Australian National University wishes to undertake a study of family structure and social mobility of persons teaching in Australian universities. It is designed to ascertain the patterns of opportunity in the academic profession and to record some statistical aspects of their families.

While this study is planned essentially to test theoretical concepts, we hope nevertheless that it will have some practical significance and stimulate more extensive work in a field in which little research has yet been done in Australia.

The data for this study will be based on direct information from the two academic staffs of the University of Melbourne and of the University of Sydney. For this purpose we have prepared a questionnaire. It consists of two parts. We would like you to complete the first part and, if married, to have your spouse complete the second part.

Mr. H. Y. T'ien, a scholar of this department, who is conducting the study under my supervision, will seek an appointment with you later and will bring the questionnaire to you in person.

In order to insure maximum anonymity, you will be given a stamped-envelope in which you can place your completed questionnaire and mail it directly to the Australian National University in Canberra. At that point it will of course be necessary to check the code number shown on the envelope against a roll of university staff drawn from the calendars. I shall personally do this checking. Thereafter data on the completed questionnaire will become entirely anonymous to the research workers.

I do realize that it will take some time to answer the questionnaire, but I feel this is a pioneer study that merits support. Thus I will greatly appreciate your co-operation in this project.

Yours sincerely,

[Signature]
Dear

May I take the opportunity of thanking you for consenting to complete the Family and Social Origins Survey questionnaire which was submitted to you by Mr. H. Y. T'ien a few weeks ago.

I have checked the numbers on the return envelopes against our confidential list of people to whom copies of the questionnaire were presented. I note that your reply is not amongst those received.

In order to conclude this first phase of our research, I would greatly appreciate it if you would complete your copy of the questionnaire and mail it back to us at your earliest convenience as we cannot begin the analysis until all the replies are in.

Thank you again for your co-operation.

Yours sincerely,

(W. D. BORRIE)
Reader-in-Charge
Department of Demography
University of

Dear

I am writing to you again in connection with our Family and Social Origins Survey. So far we have received replies from nearly 80% of the faculty members of your University. This response has indeed been very satisfactory, but naturally we are anxious to have returns completed by as many as possible of the remaining 20 per cent. Therefore I would appreciate receiving your completed questionnaire at your earliest convenience.

In case you have mislaid the questionnaire delivered to you by Mr. H. Y. T'ien, I am enclosing another copy of it and a new return envelope.

Thank you for giving our project considerate attention.

Yours sincerely,

(W. D. Borrie)
Reader-in-Charge
Department of Demography
APPENDIX D

Distribution of Respondents by Number of Children Ever Born and by Parental Family Size of Their Own and Their Wives, 1920-39 and 1940-47 Cohorts

(1) 1920-39: Non-mobile

<table>
<thead>
<tr>
<th>Parental family size</th>
<th>Number of children</th>
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<td>1</td>
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<tr>
<td>(A) Respondents:</td>
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<td>Total</td>
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</table>

Coefficient of correlation:

(A) Respondents: \( r = +.16 \)

(B) Wives: \( r = -.13 \)
(2) 1920-39: Mobile

<table>
<thead>
<tr>
<th>Parental family size</th>
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<tbody>
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<td>(A) Respondents:</td>
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<td>(B) Wives:</td>
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Coefficient of correlation:

(A) Respondents: \( r = -.06 \)

(B) Wives: \( r = -.11 \)
(3) 1940-47: Non-mobile

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<th>4+</th>
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Coefficient of correlation:

(A) Respondents: \( r = -0.43 \)

(B) Wives: \( r = +0.40 \)
(4) 1940-47: Mobile

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Coefficient of correlation:

(A) Respondents: $r = -0.44$

(B) Wives: $r = +0.28$
APPENDIX E

Occupational Classification and Selected Occupational Titles

I. Professional, semi-professional

Accountant (chartered)
Architect
Artist
Dentist
Engineer, professionally trained
Headmaster, teacher
Journalist
Medical practitioner, surgeon
Minister, clergyman
Pharmacist
Psychiatrist
Researcher, scientific and academic
Solicitor, barrister
Technician, professionally trained
University teacher

II. High official, managerial

Bank manager
Builder
Captain (armed forces)
Chief executive (public service)
Company director
Factory manager
Insurance manager
Judge
Manufacturer
Member of Parliament, state and federal
Owner, business firm, factory
Police chief
School inspector

III. Low official, managerial

Book maker
Grocer
Hotel keeper
Merchant
Policeman
Postmaster, local
Proprietor, cafe, etc.
Town clerk
Union organizer

IV. Sales, clerical

Accountant, book-keeper (no formal training)
Bank teller
Cashier
Clerk, public service, insurance
Collector
Commercial traveler
Insurance agent
Sales representative, sales man
Wool buyer

V. Skilled

Butcher
Carpenter
Draper
Engineer, locomotive
Engineer, (no formal training)
Foreman, electrical, industrial
Instrument maker
Iron worker, blacksmith
Jeweler
Machinist
Painter
Printer
Turner, fitter

VI. Semi-skilled, unskilled

Axeman, woodman, timber getter
Laborer
Lorry driver
Packer
Railway section hand
Shearer
Stock rider
Taxi driver
Tram driver
VII. Rural occupations

Farmer
Fruit grower
Grazier
APPENDIX F

Biographic Data

Notes:

(1) Respondents are identified by marriage cohort and mobility status; for example, 1920-39: NM-1000 refers to a non-mobile respondent on whose questionnaire the code number 1000 appeared.

(2) Unless otherwise specified, no employment was reported for the wife either before or after marriage.

(3) Intervals between marriage and first birth and between successive births are given in terms of whole calendar months.
Both paternal grandfather and father were born in Australia. No other siblings, but one sister who had neither any university education nor gainful employment.

Primary and secondary education was in private institutions. Studied full-time in a university and was supported by parents during those years. Awarded a degree at the age of 25, and had further training and degrees overseas.

Remained abroad for a number of years; was first in professional practice, and then taught in a university. After serving in the armed forces in the home country, returned to the former teaching job. Given a senior position, the respondent became a member of the Australian academic profession at the age of 40.

Was married when both the respondent and his wife were 26 years of age. She was not gainfully employed during the first two years of marriage, but appeared to have been so engaged for a short time after their first child was born. The birth took place 17 months after marriage. Two other children, one of whom was born slightly more than 12 months later, and the other after 31 months.

Both paternal grandfather and father were born in another Commonwealth country. A younger sister only finished her secondary education.

Completed his schooling before the university in private institutions. His university education was principally financed by parents until the respondent was given his first degree at the age of 23. Own earnings enabled him to proceed to two higher degrees, the last of which was conferred when the respondent was 36 years old.

Following his first academic degree, the respondent was engaged for a number of years in professional practice, both in public institutions and on his own. Career was briefly abandoned for war service, but was resumed later. Given a senior position at his alma mater at the age of 49.
Was married while in private practice. The respondent was then 26 years old, and his wife 22. The first child was born about 9 months after marriage. Had another child after an interval of 33 months.

1920-39: NM-600

Both paternal grandfather and father born in Australia. Had one brother and one sister, but neither of them had as much education as the respondent himself. Nor were they engaged in professional occupations.

Educated in state primary school until 11 years of age and then private secondary schools. Attended university full time and apparently was supported by parents during that period. Received his first university degree at the age of 24. No further formal education.

Married at the age of 27 after working several years with professional standing in the public service. Remained there until the age of 39. Then had a senior post in the academic profession.

Married when his wife was 32 years old. Had their first child 30 months thereafter, and the second child followed after an interval of 22 months.

1920-39: NM-1000

Both paternal grandfather and father were born in Australia. An older brother died very young, and an older sister was qualified for and engaged in professional work.

Went through private schools before enrolling in the university. With both parental support and scholarships, the respondent completed the requirements for a degree at the age of 21. Added another degree to his qualifications after a period of study overseas. Obtained an advanced degree in his late forties.

Occupational history dated from the end of his overseas studies, at which time the respondent returned and became a school teacher when 24 years old. Moved from there to a university lectureship at the age of 33. His career was only briefly interrupted by war service.
Was married at the age of 25. His wife was two years younger (who was not employed again until a decade and a half after marriage). Their first child arrived 31 months after marriage. The next, and only other child, was born 29 months later.

1920-39: NM-1077

British origin; father was born in England. Was the youngest in a family of 5. None of the three sisters had more than secondary education, and only one was gainfully employed. The brother was educated in a university, and in a profession.

Primary schooling was in a private institution, but the first part of secondary education was in a state school. Obtained his university degree at the age of 21. This was financed by both scholarships and own earnings.

Began to work as a school teacher at the age of 17, and did so for a decade. Overseas studies followed, and was made a university teacher at the age of 38.

The respondent was married at the age of 27 and was two years younger than his wife. One child was born to the couple about 42 months after marriage.

1920-39: NM-1091

Irish origin; father was born in Australia. Three brothers, of whom two were older than the respondent, and one younger sister. One of the brothers had some university education and was professionally occupied. The other two had no more than secondary education and worked in the primary sector of the economy. His only sister had an university degree, but was not gainfully employed at the time of survey.

Schooling was in private institutions. Two university degrees and one diploma, all of which were earned on a part-time basis and financed through own earnings and savings. The respondent furnished no dates on the attainment of the degrees. Available information indicated that he was awarded the first degree around the age of 25, and the second about 32.
Prior to and during his initial university studies, the respondent was a school teacher. Not until he was 32 years old, was the respondent made a university lecturer.

A year older than his wife; the respondent was married at the age of 27. Wife worked a couple of years after marriage, and their first of two children was born 27 months after they were married. Another 30 months later the second child was born.

1920-39: NM-1140

British origin; father was born in Australia. Three brothers all older than the respondent, and a younger sister. But, only one brother received university education and was engaged in a profession.

Attended private schools before the university. Supported by parents during his university years, and awarded his first university degree at the age of 24. Obtained his second academic degree a year later in a likewise manner.

Worked first in a well-known government-sponsored research organization. Married and left the organization when the respondent was 29 years of age and his wife 27.

Went into private practice after marriage. Spent a number of years in the armed service and then entered into teaching as a lecturer at the age of 45.

First child was born 14 months after marriage. Had two other children at the intervals of 24 months and 59 months, respectively.

1920-39: NM-1277

Both parental grandfather and father were born in Australia. One sister, who also had an advanced degree and was gainfully employed in a profession.

Education before university was exclusively in state schools. Various scholarships and own earnings enabled the respondent to obtain his first university degree at the age of 21, and the second two years later.
A number of teaching jobs in secondary schools followed the last university degree.

Married after a few years of teaching when the wife was 26 years old and the respondent 25. Had altogether 4 children. The interval between marriage and first child was 31 months, and between subsequent births, 23 months, 27 months, and 49 months.

The last two children were born after the respondent had assumed the position of a lecturer for more than a year. He was then 33 years old.

1920-39: NM-1278

British origin; father was born in Australia. Second in a family of 4. Both the older and the younger brothers had university degrees and were in professional practice. The younger sister did not do so.

Received primary education in a state school, but later attended a private school. Graduated from a university when 21 years old. Had parental support as well as scholarships during the university years. Qualified for an advanced degree after an interval of 12 years.

A year in the army followed university studies. Returned to his alma mater and served both in tutorial and research capacities. Was named a lecturer at the age of 26.

Was also married at the age of 26. His wife was then 25. Altogether had 5 children. The first child was born a little over 9 months after marriage, and the others followed at intervals of 25 months, 34 months, 35 months, and 48 months.

1920-39: NM-1280

Scotish origin; father was born in another Commonwealth country. Was youngest in a family of 3. Neither the brother nor the sister were beyond secondary school. Nor was the brother in a professional occupation.
Attended state primary school, but secondary education was in a private school. With parental support, the respondent studied full-time and earned his first university degree at the age of 21. No additional formal education.

Professional career in the academic world began as his university studies ended.

Married seven years after the commencement of his university career. His wife was 27 years old, a year younger than the respondent. She had a job, which was terminated at the time of marriage. Their first child was born 14 months later. Some 47 months after the first, they had the second and last child.

1920-39: NM-1388

British origin; father was born in Australia. No sisters, but one older brother. Though the brother had only secondary education, his occupation was in a profession.

Went to university after finishing primary and secondary education in private schools; and, as a full-time student, gained his first university degree at the age of 22. Also, was qualified for an advanced degree 10 years later. Was principally supported by parents while in university.

Upon graduation, he remained for a few years in his alma mater in a position below that of a lecturer. Some graduate training overseas followed, but did not lead to a degree. Returned and was initially engaged by a state agency on its professional staff. Became a senior lecturer at the age of 35.

Married, while working for the state agency, at the age of 28. His wife was 3 years younger. Three children; the eldest was born 20 months after marriage. The second followed after an interval of 26 months, and their third 41 months later. All except the last child were born before the respondent entered into the teaching profession.
British origin; father was born in Australia. Six brothers and one sister. Except for two of the brothers, all were older than the respondent. All had university education or technical training, and four obtained advanced degrees. All save one brother and the sister followed a profession.

A small part of his primary education was in a state school, and the rest and all secondary schooling were in private institutions. Studied in university on part-time basis and was awarded a diploma at the age of 21. Then went abroad, studied full-time and obtained an advanced degree four years later. A further advanced degree was conferred on the respondent after twenty-three years. With a little financial support from parents, university education was financed through scholarships and own earnings and savings.

Professional career with private firms began three years before marriage, which took place at the age of 28. The bride was then 24 years old. One child was born 19 months later. Not until another 79 months had elapsed was the second child born. For the next two children, the interval was 27 months for the third, and 34 months for the last.

At the time of the births of his second and subsequent children, the respondent was still engaged by a private firm and had attained a high position therein. At the age of 41, he was given a high teaching post in Australia.
Irish origin; father was born in Australia. Oldest in a family of 5. No sister. Not one of his brothers went beyond primary school. Their respective occupations were proprietor, farmer, taxi driver, and steel worker.

Attended stats schools exclusively. Supported by scholarships, the respondent was a full-time university student and graduated at the age of 21. Two higher degrees were awarded at the ages of 25 and 28, respectively, the second of which was given by an overseas university.

Before going abroad, the respondent taught briefly on the preparatory level and was a member of the tutorial staff of his alma mater. Upon return, he was made a lecturer at the age of 28.

Was married at the age of 25, a year before his sojourn overseas. His wife was a year younger, and was not again employed after marriage. The birth of their first child occurred 67 months later, and the second followed after an interval of 45 months.

British origin; father was born in Australia. No siblings.

Education before university was exclusively in state schools. Went through university at the age of 22, and was supported by parents while there. No further formal education.

Became a lecturer immediately after university studies.

Was married after a few years on the job. Age at marriage for the respondent was 28, and his wife 25. No employment was reported for the wife after marriage. Three children; the first one was born exactly 12 months after marriage. The second arrived 27 months later, and the third 40 months after the second.
1920-39: M-172

Paternal grandfather was probably of Australian birth; father was born in Australia. A younger brother had no university education nor a professional occupation. His younger sister had an advanced degree, but was not gainfully employed.

Was educated first in a state primary school and then in a private secondary institution. Partially supported by parents and partly by own earnings, the respondent graduated from university at the age of 22.

Accepted a professional post abroad for a few years, earned his way through graduate school, and obtained a higher degree at the age of 27. Returned to do research with both government and private agencies. After serving in the armed forces, the respondent went into private practice until he was named a senior lecturer at the age of 43.

Married at the age of 29. For his wife (who was 4 years younger than the respondent), marriage meant the instant termination of her occupational career. Four children, the first of whom was born 25 months later. The others followed at the intervals of 29 months, 28 months, and nearly 59 months, respectively.

1920-39: M-238

British origin; father was born in Australia. No brother, but one younger sister who attended secondary school and was employed outside her household.

Schooling before university was in private institutions. Parental and some scholarship support put the respondent through the university on a full-time basis. Obtained his first degree at the age of 22. Went abroad after that for a higher degree and finished it about 6 years later.

Taught briefly in an overseas university. Returned to his alma mater at the age of 30, where the respondent still remained at the time of the survey.
Married while abroad at the age of 29. His wife was a year younger, and stopped working at the time of marriage. Their first child was born 28 months later. The next, and also the last, child came after nearly 59 months.

1920-39: M-242

Irish origin; father was born in Australia. Eldest of five. His only sister had university education, but was not employed. Two of the three brothers were also university graduates and were in professional occupations. The other did not go beyond secondary school and was a skilled worker.

Preparatory schooling was in private institutions. Had both parental and scholarship support while studying full-time in the university. Three university degrees at the ages of 21, 23, and 35. (last two on own earnings.)

His academic career started in another university at the age of 24. Moved from there to be a senior lecturer at his alma mater a little more than a decade later.

Was married about 4 years after becoming a university teacher. His wife was 24 years old, three years younger than the respondent. She did not return to her job after marriage. Their first child was born 13 months later. The second followed after an interval of 71 months, and the last another 35 later.

1920-39: M-282

British origin; father was born in Australia. An older brother died while attending university, and an older sister finished only secondary education and was not employed.

Was educated in a state preparatory school at the primary level, and transferred to a private secondary institution later. Some scholarship grants, but principally parental support, enabled the respondent to study full-time in the university.
Won his first university degree at the age of 20 and a higher degree 4 years later.

Was engaged as a specialist by a government agency when he received his second university degree. Stayed on this job for some six years, and was named a lecturer at the age of 30.

Married while working for the government agency. He was 26 years old, and his wife 30. Their only child was born 18 months later.

1920-39: M-1009

Both paternal grandfather and father were born in territories under British control. A younger sister had a university degree, but was not gainfully occupied.

Studied in state schools before university. Parents provided the major part of his financial support. The respondent was a full-time student and graduated at the age of 20. A scholarship took him overseas where he obtained another degree three years later. No further formal education, but a higher degree was "purchased" from a foreign university some years later.

An exclusively academic career began when the respondent returned from abroad. Taught and did research in three different Australian universities before he was given a senior post at his present university. The respondent was then 39 years old.

Married two years after the respondent assumed university teaching. He was 25 years old, and his wife 23. The first of their four children joined them 19 months later. The intervals between the first and the second and between the two subsequent children were 40 months, 56 months, and 39 months, respectively.

1920-39: M-1037

British origin; father was born in Australia. Brother and sister both younger than the respondent. The sister was a teacher. The brother had technical training and a highly skilled position.
Was sent to a private school for his primary education, and then attended a state secondary school. Commenced university studies at the normal age, but did not obtain a degree until 17 years later. Did receive, however, a diploma at the age of 23, and another at the age of 32. His only formal degree was awarded when the respondent was 35 years old. Had some parental support, but mainly earned his way through university.

Occupational history dated from the age of 20. Taught school and worked on farms concurrently for a number of years. Then had various teaching jobs in different places until the age of 39. Enlisted in the army. After demobilization, the respondent was made a lecturer at his alma mater (43 years of age).

Married at the age of 25. His wife was then 35 years old, and worked until marriage, but not later. Their only child was born a little more than 12 months after marriage.

1920-39: M-1152

British origin; father was born in Australia. Second in a family of 5. Three sisters (one of whom was older than the respondent) had but primary education, and the older sister was in a clerical occupation. The others had no gainful employment. The brother went through university and was in a profession.

Attended state school for his primary education, but secondary education was in a private institution. A part-time student in the university, the respondent earned his way through it and was graduated at the age of 36. No further formal education.

Occupational career dated from the age of 15. Did clerical and semi-professional work for a decade in various private firms. Established his own practice. Was persuaded to join the university at the age of 67. *

*This respondent was excluded in the computation of the average age at first university appointment.
Was married ten years before the completion of university studies. His wife was 25 years old. She had a clerical job before, but not after, marriage. Their first of 3 children arrived to celebrate the first wedding anniversary. Had their second child 33 months later, and the last after an interval of 58 months.

1920-39: M-1225

British origin; father was born in Australia. One younger brother who had a primary education and was a skilled worker.

Attended state schools exclusively before university. Was supported by parents until he obtained his university degree at the age of 23. After a period of study overseas, the respondent was qualified for a higher degree.

Returned to his alma mater as a lecturer at the age of 26. His academic career was very briefly interrupted by the war.

At about the time the respondent entered the teaching profession, he was married. His wife was then 22 years old, four years younger than the respondents. She was not again employed. After an interval of 60 months, their first of three children was born. The second child came 26 months later, and the third some 55 months after the second.

1920-39: M-1228

British origin; father was born in Australia. No siblings.

Education before university was first in a state school and then a private institution. Was supported by parents while studying full-time in a university. Won two degrees in succession, at the ages of 23 and 25, respectively. Three years later, he received another higher degree from an overseas university.

Before going abroad, the respondent served very briefly on the technical staff of a government department
and then, also briefly, on the tutorial staff of his alma mater. His appointment as a lecturer followed his overseas sojourn immediately.

Was married before travelling abroad at the age of 25. His wife, of the same age, was employed prior to their marriage, but not thereafter. Their first child was born 51 months later. Their second child joined the family after a little more than 24 months.

1920-39: M-1368

British origin; father was born in England. Was the youngest in a family of 6. Two of the three brothers had technical training and the other secondary education only. One of the technically trained brothers was in a clerical occupation. The others were professional workers. Neither of his sisters went beyond primary school.

All schooling before university was in state institutions. Obtained a diploma in a technical field before his university studies. His parents supported him during his technical training and university studies, though a small scholarship was won by the respondent. Awarded his university degree at the age of 21. No further formal education.

Following his university studies, the respondent worked a short time with a private firm. His next job was on the professional staff of a government agency where he remained until the age of 42. Then began his university teaching career, as a senior lecturer.

Was married while working with government agency at the age of 26. Four years younger than the respondent, his wife relinquished her job and was never employed after marriage. Their first child was born a little more than 66 months later, and their second child followed after an interval of 37 months. No other children.
1920-39: M-1402

British origin; father was born in Australia. His younger sister had secondary education and a clerical job.

For his primary education, the respondent was sent to a state school. But, he attended a private secondary institution. Went through university full-time with the support of parents and some scholarships. Obtained his only university degree at about the age of 21.

During the ten years following his university studies, the respondent moved from job to job in different parts of the country and advanced from a technical post to a supervisory position. Took up his first academic post at the age of 30, and remained in this profession.

Married when the respondent was 25 years old, a year older than his wife. Their first child, a still-birth, was born 14 months later. Not until 84 months after that, was their second child born. Wife worked before, but not after, marriage.

1920-39: M-1408

Both paternal grandfather and father were born in Australia. There were three brothers and two sisters. All save one brother were older than the respondent. One of the older brothers had professional qualifications and was so employed. The other older brother did not go beyond secondary school, nor attain a professional position. Neither did the two sisters. Though the younger brother also had only secondary schooling, he managed to move into a profession, apparently on a free-lance basis.

Completed primary education in a state school, but secondary education was in a private institution. No formal degrees, but a technical diploma was obtained at the age of 25. Was not entirely supported by parents, and obtained his diploma on part-time basis while earning a living.

Began to work at the age of 19 as an assistant in a privately owned technical firm. Changed firms but apparently not positions a few years later. Continued for a couple more years in the second firm after his technical diploma.
and then went abroad from there. After his return, the respondent was again employed by his former employer. Shifted to another firm and then was made a senior lecturer. The date of his university employment was not given, but he probably was in his mid-30's.

Married while abroad at the age of 27, and his wife was of the same age. Their only child was born 5 years later, and his wife never had a job after marriage.

1940-47: NM-012

British origin; father was born in Australia. The oldest in a family of 4. None of the three brothers went beyond secondary school, nor were any of them in a professional occupation.

Educated in state schools. Supported mainly by parents, the respondent attended university full-time and received a degree at the age of 20.

Remained on the tutorial staff of his alma mater after graduation, and concurrently studied for a higher degree. Was promoted to the position of a lecturer at the age of 26. Never left the academic profession.

His marriage took place a year after becoming a lecturer. His wife was then 21 years old and continued her employment after marriage. Their only child was born some 11 months later.
Scottish origin; father was born in another Commonwealth country. A younger sister with professional qualifications, but not employment.

Education before university was in state schools, except the last few years when the respondent was transferred to a private school. Undertook full-time university studies with parental support and earned his first degree at the age of 21.

Professional career with a private firm began immediately, only to be interrupted by a tour of duty in the armed forces. Career was resumed with another firm after the war. At the same time, the respondent commenced his study for another academic degree and served on the tutorial staff of his alma mater, both on part-time basis. Following the completion of this degree (at the age of 28), the respondent did post-graduate work overseas. Returned to become a lecturer at the age of 32.

Was married before his sojourn abroad at the age of 28. His wife, who was 5 years younger than the respondent, worked before marriage and continued to do so until the birth of their first child about 29 months later. The next two children came at the intervals of 27 months and 21 months, respectively.

Both paternal grandfather and father were born in England. His older brother was a university graduate and professional man. A younger sister, who had professional qualifications, was not employed outside her home.

Educated in state schools. Own earnings, coupled with parental support, enabled him to study part-time in the university and obtained a diploma at the age of 21. Added two higher degrees to his qualifications later, one at the age of 30, and the other 42.
His first employment with a commercial firm was at the age of 18, which lasted until two years after he obtained his diploma. Turned to teaching, but not in a university. Was named a lecturer at the age of 30, and went later to teach in another Commonwealth country. Returned to join his present university at the age of 36.

Was married a year before his first university teaching job. His wife, then 27 years of age, left and did not return to her employment at the time of marriage. Their first of two children was born precisely 12 months later, and the second followed after 48 months.

1940-47: NM-319

Both paternal grandfather and father were born in Australia. A younger sister was not educated beyond the secondary level. Nor was she gainfully employed.

Was educated in state schools. Had a total of 4 university degrees, all of which were below the postgraduate level. While working for the first two degrees, the respondent was supported by parents. The other two were financed by his own earnings and savings.

His first two academic degrees were obtained in succession, at the ages of 21 and 23, respectively. Retained by his alma mater to serve on its tutorial staff. Became an assistant lecturer at the age of 23 - a position which he occupied until he was made a lecturer at the age of 28.

Married at the age of 25. His wife was 5 years younger and continued her employment for another three years after marriage. Their first of two children was born 10 months after she resigned from her work. The second child was born 47 months after the first.

1940-47: NM-1109

Both paternal grandfather and father were born in Australia. His only younger brother had a university degree, but was engaged in a rural occupation.
Was educated in private schools. A university degree was conferred on the respondent at the age of 21.

Had two other degrees only one of which was a higher degree. Financial support for his university studies came from parents and some scholarships, except for the last degree (at the age of 34) which was obtained while employed.

Subsequent to his first university degree, and before his appointment as a lecturer at the age of 34, the respondent taught schools in different places and then accepted a research job in a well-known government research organization.

Was married while a school teacher. His wife, 5 years younger, was then 20 years old. She had paid employment before, but not after, marriage. All their three children were born before the respondent was appointed to the university staff. The first one was born 29 months after marriage. The two subsequent children were added to the family after 37 months and 24 months, respectively.

1940-47: NM-1176

British origin; father was born in Australia. An older brother, who had secondary education and occupied a managerial position. An older sister, who had secondary education, but not employment.

Went through state schools until the last few years before university when he was transferred to a private school. Finished his university degree at the age of 23, and was supported by parents. Later during his occupational career, the respondent was qualified for another degree and a diploma.

Had a number of different jobs from the age of 24, beginning as a religious worker and shifting to teaching in secondary schools, to research, and to university teaching at the age of 33.

Was married some 5 years earlier. His wife, six years younger than the respondent, withdrew from the labor
force at the time of marriage. Had their first child 20 months later. Two other children after the intervals of 35 months and 72 months, respectively.

1940-47: NM-1195

British origin; father was born in Australia. His only sister, who was younger than the respondent, had secondary education, but no employment.

Was educated in state schools, but did spend the last few years in private institutions before university. Was exclusively supported by parents while studying full-time in the university. Graduated at the age of 22, and as a scholarship holder, continued his studies for two additional degrees, the last of which was awarded 3 years later.

His first employment as a researcher in a private commercial firm lasted for five years. Was made a lecturer at the age of 32.

Was married four years before his university appointment. His wife, who was two years younger, did not return to her former job after marriage. Had altogether 4 children. Their first was born slightly less than 11 months after marriage. The intervals for the next three children are as follows: 33 months, 64 months, and 25 months.

1940-47: NM-1210

British origin; father was born in Australia. His only younger sister did not go beyond the secondary school and was not employed.

Except for the first years in a state school, the respondent was educated in private institutions. Had parental support while a full-time university student, and obtained his first degree at the age of 20. Spent the next 5 years in the army. Resumed his studies and received another degree at the age of 29 (own earnings).
Was engaged in research at his alma mater, and made a lecturer at the age of 34. Before this appointment, the respondent was given an advanced degree, apparently as a result of his research activities.

Was married at the age of 28. His wife, a year younger, never returned to her job. After an interval of 11 months, their first child was born. Two other children were born 24 months and 56 months later.

1940-47: NM-1306

Both paternal grandfather and father were born in Australia. Two brothers, one of whom was older than the respondent. This older brother had a primary education and was a skilled worker. The younger brother had a university degree and was in a profession.

Except for a few years immediately preceding his university training when the respondent was in a private school, he was educated in state institutions. He was partially supported by parents while a full-time university student and, graduated at the age of 24. A higher degree (scholarship) was awarded him three years later. After a brief break, the respondent went abroad and obtained another higher degree there (31 years of age).

Was gainfully employed at the age of 15. Had clerical jobs in three different places in three years, and joined the state education system as a teacher at the age of 18—a career which was interrupted by his own university training. Taught again for a while before travelling overseas. It is not certain when the respondent was appointed to the university staff but it was probably at the conclusion of his overseas studies.

Was married at the age of 25. His wife, of the same age, did not again take up a paid employment after marriage. Three children; the first child was born 31 months later. Their second and third children were born after 20 months and 16 months, in that order.
British origin; father was born in Australia. Two older sisters, both of whom had technical training and were housewives. A younger brother was professionally qualified both in terms of education and occupation.

Was sent to a state school for his primary education, and to a private school for his secondary training. His full-time university studies were financed by parents and scholarship subsidies. Earned his first degree at the age of 22. Obtained three higher degrees after many years (by examination or theses).

Worked as a specialist for a government department and held that position until he was 25 years old. Savings accumulated on the job made possible a sojourn abroad, where the respondent successfully completed a diploma course. His appointment as an assistant lecturer came after the conclusion of his overseas training at the age of 27. He was then affiliated with another university. Not until he was 33 years old, was the respondent made a senior lecturer by his present university.

Married when he was 29 years of age and his wife 20. She had a full-time job at the time of marriage, and was again employed on a part-time basis 14 years later. Two children; the first one was born a little more than 24 months after marriage, and the second was 27 months after the first.

British origin; father was born in Australia. Two brothers, both younger. One of them had university education and professional employment. The other finished secondary school and was a skilled worker.
His entire schooling before university was in state institutions. With practically equal support from parents and scholarships, the respondent attended university full-time. Obtained his first degree at the age of slightly over 20, continued his studies, and won a higher degree three years later.

A research job kept him at his alma mater for two years, and was made a senior lecturer.

Was married at about the same time when he assumed his teaching position at the age of 25. His wife, two years younger, resigned from her job to raise a family of 5. The interval between marriage and first child was 20 months. The next four children came at the intervals of 23 months, 25 months, 32 months, and 57 months, respectively.

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Both paternal grandfather and father were born in Australia. Neither of his two sisters had more than a primary education. Nor were they gainfully occupied. No brothers.

Was educated in state schools. University education was financed by parents and scholarships. Obtained his first degree at the age of 21.

Worked very briefly after attaining his degree in a private firm. During the next five years, served as tutor and part-time lecturer and then as an assistant lecturer. Taught for two years in a technical college and moved from there to be a lecturer at the age of 31. Took leave from his job to do additional studies, and earned a higher degree at the age of 38. In addition to scholarships and own earnings and savings, he was supported also by his wife while abroad.
Was married at the age of 25. His wife, a year older, was professionally qualified and continued her employment after marriage. Their only child was born 17 months later.

1940-47: M-086

British origin; father was born in Australia. Two younger sisters, both of whom had secondary education and were not employed.

Received all his education before university in state schools. Was supported by parents until the respondent obtained his first academic degree at the age of 20. An advanced degree was awarded the respondent some years after he began his university teaching.

Taught briefly in the state education system when the respondent was 22 years old. Was named a lecturer in another institution, probably less than a year later. Career was interrupted by the war, but the respondent resumed his university teaching (at the age of 32) immediately thereafter.

Was married at the age of 26. His 4-year younger wife kept her job after marriage and did not resign from it until some 4 years later. Had altogether 4 children; their first was born 58 months after marriage, and the others followed at the intervals of 41 months, 23 months, and 59 months, respectively.

1940-47: M-182

Both paternal grandfather and father were born in Australia. A sister was both professionally qualified and occupied. No other siblings.

Was educated only in state schools. Parental support enabled the respondent to study full-time in the university and obtain his degree at the age of 20. No further formal education.

Began as a professional research worker in both Commonwealth and state agencies. Continued his research
in the university at the age of 27, and was made a lecturer at the age of 34.

Was also married at the age of 27. His wife was three years older, and she did not give up her employment until very shortly before their first child was born, which was 46 months after marriage. Their second child was born 22 months after that.

1940-47: M-244

Scottish origin; both paternal grandfather and father were born in Scotland. He was third in a family of 4. His older sister and brother and younger brother had secondary education and all of them were in clerical occupations.

Attended state schools before university. Supported by both his parents and scholarships, the respondent was a full-time student and obtained his first degree at the age of 20. Two advanced degrees were awarded after 2 years and 17 years later, respectively.

After he secured his second degree, the respondent was retained by his alma mater to serve on its tutorial staff. Was made a lecturer at the age of 24.

His marriage took place when he was 28 years old, and his wife 25. She had no employment after marriage. Their first of three children was born 10 months later, and the other two came after the intervals of 29 months and 48 months, respectively.

1940-47: M-415

British origin; father was born in Australia. The respondent was the 5th child in a family of 6. Three olderers, one older sister, and one younger brother. Two of the older brothers had only primary education, and the others completed secondary education. All of the brothers were in rural occupations, and the sister was not employed.
Except for the last three years immediately prior to his university studies, the respondent was educated in state schools. Was supported by both his parents and scholarships. The respondent studied full-time and obtained his first degree at the age of 24.

Did research work for a short while at his alma mater, and was made an assistant lecturer at the age of 24 — a position which he held until about 8 years later. Took leave from his job to do additional studies overseas, for which he was awarded an advanced degree at the age of 27. Was promoted to be a senior lecturer at the age of 32.

Was married at the age of 27. His wife, a year younger, was not again employed after they were married. Three children; the first was born 16 months after marriage, the second 34 months after the first, and the third 24 months after the second.

1940-47: M-435

British origin; father was born in Australia. Three older sisters, but no brothers. One of the sisters had secondary education, and the others finished only primary education. None of them was employed.

Attended state schools before university. His main support in university came from scholarships, which enabled him to study full-time and obtain his first degree at the age of 23. Was awarded a diploma a year later, and an advanced degree 12 years after that.

Joined the public service at the age of 25. Four years later, he returned to his alma mater to take the position of an assistant lecturer. Was promoted to be a lecturer at the age of 33.

The respondent was 29 years old and his wife 26, when they were married. She probably worked for another few months after marriage, and did return to her former employment about 8 years after the birth of their second child. The first child was born 46 months after marriage, and the second 32 months after the first.
1940-47: M-1040

Irish origin; both paternal grandfather and father were born in Ireland. There was a brother born a year earlier than the respondent, but who died in infancy. A younger sister was not educated beyond the secondary level and was a housewife.

Primary education was in a private school, but secondary training was in a state institution. Had both parental support and scholarship assistance while studying full-time in the university. Two degrees were awarded at the ages of 20 and 21, respectively.

Spent the three years after graduation in a government agency before he was made a lecturer at the age of 25.

Married about a year after his university appointment. His wife was 4 years younger, and terminated her occupational career at the time of marriage. Had altogether 4 children. First child was born 14 months after marriage, and the others followed at the intervals of 28 months, 37 months, and 35 months, respectively.

1940-47: M-1154

Scottish origin; father was born in Australia. A younger sister who had only primary education and a skilled occupation. Also, one younger brother who partially finished his secondary education and was a skilled worker.

Educated first in a state primary school, but attended a private institution for his secondary education. Had parental support while studying full-time in university and graduated at the age of 28. Another degree which was earned on part-time basis was awarded two years later.

Was first employed, at the age of 17, as a teacher in the state education system - an employment which lasted until two years after the respondent obtained his second academic degree. During the next two years, he worked in the public service and then in a private firm. Was made a lecturer at the age of 35.
At the age of 27, he married his wife who was two years younger. She had a job up to the time of marriage, but gave it up to raise a family of 4. She went back to work some 5 years after the birth of the last child. Their first child was born 28 months after marriage. The others followed at the intervals of 22 months, 23 months, and 22 months, respectively.