THE WORKING MOTHER A PROBLEM
FOR THE SCHOOL?

by Agnes Jean Groome

A Thesis
Submitted to the Committee on Graduate Studies
In Partial Fulfilment of the Requirements
for the
Degree of Master of Arts
in the
Department of Education
We accept this thesis as conforming to the
required standard

THE UNIVERSITY OF BRITISH COLUMBIA
September, 1958
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In increasing numbers, Canadian women with young children are engaging in work outside their homes. What are the effects upon their children when these mothers seek gainful employment? Will the emotional, intellectual or moral development of the children suffer in any way?

Controversial writing, much of it mere opinion or prejudice, can be found dealing with every phase of the problem; however, little is known concerning the precise situations which are favourable or unfavourable to a combination of maternity and gainful employment. Few studies have been made of the relationship between the mother working outside the home and the child's all-round growth.

Such studies as were found in the literature dealt with quite small samples and were of the enumerative type rather than of a scientific nature. Essig and Morgan found girls less well-adjusted when their mothers worked. In Rouman's study, the children of the working mothers differed somewhat from the children of non-working mothers. The former were younger and proportionately more were referred for clinical treatment because of withdrawal tendencies, but fewer because of academic failure. In
other studies, Beals, Carter, Hand, and Nye did not find significant differences in personality development with their measuring instruments.

This study attempted to compare, at the grade-six level, the school achievement and adjustment of the children whose mothers worked outside the home with those whose mothers did not. The writer hypothesized that the factor of the mother's employment would not significantly affect the school achievement and adjustment of her children. The "working mother" was defined as one who was employed full-time and had been so for at least twelve months previous to the collection of the data.

Data were collected in two Saskatchewan cities, Moose Jaw and Saskatoon. The children finally selected came from homes where both real parents were living and living together. In the grade-six sample in Moose Jaw, there were 58 children of working mothers and 211 of non-working mothers. In Saskatoon, the numbers were 96 and 500 respectively.

The writer studied attendance for the school-year as recorded on the registers, year's average mark given by the classroom teacher, attitude of the pupil to his school work as judged by his teacher, reading grade as measured by the Gates Reading Survey, and manifest anxieties as measured by the children's form of Taylor's Scale of Manifest Anxiety. Means and standard deviations were calculated for boys and girls taken separately and together in the control and experimental groups. Because two of the Moose Jaw groups differed at the .05 level of confidence
in chronological age and intelligence quotient, a second statistical analysis was made in which the cases of the experimental groups were matched in age and intelligence with cases in the control groups.

From the t-values of the mean differences between the experimental and control groups, the writer accepted the null hypothesis. At the .01 level of confidence, there were not significant differences in school attendance, year's average mark, reading grade, attitude to school work, or manifest anxieties between grade-six children with employed mothers and those with non-employed mothers in Moose Jaw and Saskatoon.

It may be that the effects, if any, of the single factor, "employed mother," are quite small and hence amenable only to the most refined measuring instruments. Then, too, the variable, maternal employment, is not a simple one. It subsumes many components, such as motivation to work, hours of employment, child-care arrangements, age and number of children. In order to find the working mother's effects upon her school child's overall growth in knowledge, mental health, and social adjustment, subsequent studies need to make provision for greater control of these related sub-variables. Because so little has yet been investigated, this field invites long-term scientific study in all aspects of the problem.
In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the Head of my Department or by his representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Education

The University of British Columbia, Vancouver 8, Canada.

Date October 9, 1958.
ACKNOWLEDGMENTS

This investigation would have been impossible without the wholehearted cooperation and help of the Superintendents and staffs of the Moose Jaw and Saskatoon elementary school systems. Special indebtedness is due to Mr. A. E. Peacock, Superintendent of the Moose Jaw schools and Mr. Fred Gathercole, Superintendent of schools in Saskatoon for their interest, cooperation and effort.

The writer wishes to thank her graduate advisor, Miss Grace Dolmage, and other members of the faculty, College of Education of the University of British Columbia, for their guidance and helpful criticism.

A.J.G.
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17. A Rough Classification of the Occupation of the Parents of the Grade Six Children of Working Mothers and of Non-Working Mothers in Saskatoon.
CHAPTER I

DEFINITION OF THE PROBLEM

Purpose of the Study

"Working mothers" has become a topic of controversy and social interest, yet little systematic study of the problem has been made. It has been used as a peg on which to hang rising delinquency (35), (57), (132: 49), increasing divorce rates (2), school failure, personality maladjustment (37), and even the charge of economic slavery (5: 344). In an extreme instance, working mothers are blamed for "sowing the seeds of teenage drinking, carousal, gambling, and sexual promiscuity" (39: 15).

In fact, the morality of mothers' taking employment outside the home has become an issue for disagreement. In current magazines and newspapers, catch phrases and titles imply the critical attitude of the general public: "Latch-Key Children" (126), "Door-Key Kids" (57: 8), "Mommy, Why Do You Have To Work?" (12). In a Gallup poll of five hundred Vancouver residents chosen at random, seventy-six per cent disapproved of the mother working.¹

¹ News item in the Vancouver Daily Province, January 16, 1956.
However, recent educational literature suggests an increasing awareness of the need to study all the facets of the problem (4), (8), (44), (81). The government of Canada has recognized the growing participation of married women in the Canadian labour force. Hence the Department of Labour has just conducted a survey to determine the types of jobs which women hold and how their employment affects them as women and as community members (8), (27), (22).

There is a real need to study objectively the effects upon school children of the mother's working. Such an investigation would necessitate a comparison of children whose mothers are gainfully employed with children whose mothers are not employed outside the home. Doubtless, it would be most difficult to isolate the effect upon their children of gainful employment of mothers from among the myriad of other influences of home, school and community.

Society today inflicts its multiplicity of problems and stresses upon its children. Rutledge (113: 326) considers that the family of today has become "the scapegoat of the fears, frustrations, resentments, complexes of a frustrating society." This frustration is due, in part, to rapid changes in industry and economy, and to conflicts in political ideology, moral standards, and religious faiths.

The school, too, adds its share of factors which make it more difficult for the child to adjust. The social adjustments among classmates and teachers, the curriculum load, achievement, school standards, extra-curricular activities -- these are but a few.
In the home, the complexity of forces and pressures is nearly overwhelming. These are some of the independent variables of a family constellation: sex of child, sex and number of siblings, their age differences, ordinal position, age of parents (71). Add to these, the many dependent variables: economic differences, authoritarian or democratic attitudes of parents (75), conflicts of parental ideology and their inconsistent practices (78), (106), emotional maturity of the mother and father (84), family cohesiveness. In fact, the list might be expanded indefinitely. The result is an intricate network of interacting influences on the growing child. The most important variable is the child himself who brings his own individual differences into every situation!

This should be sufficient to warn any researcher in the area of the home to guard against the pitfalls of over-simplification. Writers caution against ignoring the complexity of culture and family patterns in studying the child (70), (11). In such a maze of influences, the attempt to isolate the effect upon the children of the mother's working outside the home becomes a most challenging problem.

The Trends in Employment of Married Women

To determine whether a study in this field would be worthwhile, one must discover whether the proportion of employed mothers is large, whether it is increasing, and whether the trend is temporary or permanent.

A number of factors have to be borne in mind in considering the
statistical picture of women's participation in economic life. Statistical information (where it exists) is often incomplete or insufficiently precise (33: 23). International comparisons are very liable to error. Even comparisons in the same country but of two different periods contain inaccuracies. In national statistical practices, the distinction between "economic" and "non-economic" activities is seldom very clear and the criteria applied to distinguish them are often quite arbitrary (65: 1).

What of the world picture? According to a recent UNESCO report (100):

"The number of women in the working population is steadily increasing.... Austria holds first place in Western Europe with (39.3 per cent) of its women gainfully employed, followed by France (34.8 per cent), West Germany (33.1 per cent), Great Britain (30.8 per cent), Sweden (26.4 per cent), and Italy (25.4 per cent). In the Netherlands and Belgium roughly one-quarter of the working population are women while in Spain only one-sixth are gainfully employed."

About 15 to 20 per cent of women of Nationalist China work outside the home (67: 3). In Japan, in 1952, thirty-seven per cent of the working population were women (26: 663). The percentage of women amongst employees in U.S.S.R. in 1955 is reported as 45 per cent (65: 3).

There has evidently been a tremendous rise in the number of women at work during the present century, but this increase has been very largely proportional to the growth of the female population as a whole (65: 2). Smieton (118: 49) interpreted the trends in women's employment in Britain as follows: "little change in the proportion
of women who work outside their homes, an increase in total numbers
and a marked increase in the proportion of married women among the
female employed population." However, in the United States, Canada,
and possibly the U.S.S.R., the proportion of women at work has been
rising conspicuously during the last few decades (65: 2).

The International Labour Office has also compiled figures of
married women in the labour force (65: 7). These figures are
reproduced in Table I. This table shows

"for ten European countries and Australia, Canada
and the United States, the total number of married
women and the percentage they represent in the
total female population aged 15 years and over,
as well as the number of married women in the
labour force and this number expressed as a
percentage of all married women and of all women
in the labour force....

"... the proportion of all women of 15
years of age and over who are married varies from
45 per cent (Ireland) to 67 per cent (United
States), the percentage in the great majority of
the countries falling between 52 and 62. The
number of married women in the labour force,
expressed as a percentage of all married
women, varies from about 5 per cent in Ireland
to about 33 per cent in Austria. In five of
the 13 countries (United States, Austria,
Denmark, the Federal Republic of Germany and the
United Kingdom) the percentage exceeds 20. In
four of them (Australia, Canada, Greece, and the
Netherlands) only about one-tenth of all married
women were in the labour force. Two of the
countries (Belgium and Sweden) occupy an
intermediate position, with about 15 per cent of
all married women engaged in economic activity"
(65: 7).
### TABLE I

**MARRIED WOMEN ** in the Labour Force

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>All married women</th>
<th>Married women in force</th>
<th>Percentage of female population aged 15 years and over</th>
<th>Percentage of all married women</th>
<th>Percentage of female labour force</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number (Thousands)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>America:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada...</td>
<td>1951</td>
<td>3,115</td>
<td>64.4</td>
<td>349</td>
<td>11.2</td>
<td>30.0</td>
</tr>
<tr>
<td>United States.</td>
<td>1950</td>
<td>37,570</td>
<td>67.0</td>
<td>8,635</td>
<td>23.2</td>
<td>52.2</td>
</tr>
<tr>
<td>Europe:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria...</td>
<td>1951</td>
<td>1,541</td>
<td>52.5</td>
<td>501</td>
<td>32.5</td>
<td>39.5</td>
</tr>
<tr>
<td>Belgium...</td>
<td>1947</td>
<td>2,115</td>
<td>61.3</td>
<td>326</td>
<td>15.4</td>
<td>39.7</td>
</tr>
<tr>
<td>Denmark...</td>
<td>1950</td>
<td>987</td>
<td>61.5</td>
<td>268</td>
<td>27.2</td>
<td>38.6</td>
</tr>
<tr>
<td>Germany... (F.R.)</td>
<td>1950</td>
<td>11,051</td>
<td>55.7</td>
<td>2,762</td>
<td>25.0</td>
<td>34.7</td>
</tr>
<tr>
<td>Greece</td>
<td>1951</td>
<td>1,465</td>
<td>52.0</td>
<td>145</td>
<td>9.9</td>
<td>28.4</td>
</tr>
<tr>
<td>Ireland</td>
<td>1951</td>
<td>464</td>
<td>44.8</td>
<td>22</td>
<td>4.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1947</td>
<td>2,005</td>
<td>58.0</td>
<td>200</td>
<td>10.0</td>
<td>21.6</td>
</tr>
<tr>
<td>Sweden</td>
<td>1950</td>
<td>1,589</td>
<td>58.2</td>
<td>235</td>
<td>14.8</td>
<td>28.7</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1950</td>
<td>1,013</td>
<td>53.4</td>
<td>104</td>
<td>10.3</td>
<td>16.3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1951</td>
<td>12,488</td>
<td>60.7</td>
<td>2,673</td>
<td>21.4</td>
<td>37.7</td>
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<tr>
<td>Oceania:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia.</td>
<td>1947</td>
<td>1,755</td>
<td>62.1</td>
<td>140</td>
<td>8.0</td>
<td>19.5</td>
</tr>
</tbody>
</table>

1 Married women generally include the consensually married, except for Greece, and those living separately from their husbands, except for Belgium, Denmark and Sweden; but widowed and divorced women are excluded throughout.
According to the latest census in the United States, gainfully employed women make up 27.5 per cent of all women over fourteen and nearly one third of these gainfully employed women are mothers (77). In the half century before World War II, the female proportion in the labour force increased about one and one half percentage points a decade; but since 1940, the increase has been 4.7 per cent each decade (102: 83). The major factor in this expansion has been the sharp increase in the proportion of married women who participate in the labour force. In April, 1955, figures showed that both husband and wife were members of the labour force in the case of twenty-six per cent of all married couples living together (138).

Some writers have analyzed statistics to discover the relation between the number and age of the children in the family and the probability of the mother's membership in the labour force (2: 20), (22: 52), (129), (133), (67: 24). All found an inverse relation. According to the figures released by the American International Labour Office (133: 16), only about ten per cent of the women living with their husbands who had children under five years and no child of school age were in the labour force in 1949. Where the mothers had no pre-school child but did have children in school, 27 per cent were in the labour force. The percentage reached 31 in the case of mothers with children between 12 and 17 years of age. Nevertheless, in the United States, one out of four mothers who have children under eighteen years of age currently works outside the home (132), (134).

What of the situation in the young nation, Canada? By comparison
with the United States and Great Britain, Canada has the smallest proportion of women participating in employment (24: 376). A summary of data concerning women in the labour forces in these three countries in 1950 is presented in Table II.

**TABLE II**

**A COMPARISON OF PERCENTAGES OF WORKING WOMEN IN BRITAIN, UNITED STATES AND CANADA IN 1950**

<table>
<thead>
<tr>
<th></th>
<th>Great 1 Britain</th>
<th>United2 States</th>
<th>Canada3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of women in total working population</td>
<td>30.8%</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>Percentage of employed women in all women, 14 years and over</td>
<td>33%</td>
<td>33%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Percentage of married women in female labour force</td>
<td>40%</td>
<td>52%</td>
<td>30%</td>
</tr>
</tbody>
</table>

1 See reference (118: 49)  
2 See references (26:808) and (65: 7)  
3 See reference (24)
Canada's percentages may be the smallest because she has a relatively larger rural population and proportionately fewer big cities. Another reason may be discrepancies in national statistical practices. Often the United States and the United Kingdom include in their percentages the unemployed persons who are registered for employment while the Canadian figures represent those actually employed (21: 5). One study compared working women in three cities of similar size and industrial composition in Canada and the United States and found that the percentages were actually higher in the Canadian cities (24: 377).

It is interesting to compare the figures for working women in Canada in the past three census reports and the estimated numbers for 1957 in a fact sheet from the Women's Bureau (21). Table III shows these figures.

**TABLE III**

NUMBERS OF WOMEN PARTICIPATING IN THE LABOUR FORCE OF CANADA

IN 1931, 1941, 1951, and 1957

<table>
<thead>
<tr>
<th>Labour Force</th>
<th>1931</th>
<th>1941</th>
<th>1951</th>
<th>1957</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Labour Force</td>
<td>3,921,833</td>
<td>4,510,535</td>
<td>5,286,153</td>
<td>5,966,000</td>
</tr>
<tr>
<td>Single Women</td>
<td>537,657</td>
<td>665,623</td>
<td>723,433</td>
<td>667,000</td>
</tr>
<tr>
<td>Widowed and Divorced</td>
<td>61,335</td>
<td>81,546</td>
<td>91,927</td>
<td>151,000</td>
</tr>
<tr>
<td>Married Women</td>
<td>66,798</td>
<td>85,633</td>
<td>348,961</td>
<td>623,000</td>
</tr>
<tr>
<td>Total Women in Labour Force</td>
<td>665,790</td>
<td>832,802</td>
<td>1,164,321</td>
<td>1,478,000</td>
</tr>
</tbody>
</table>

According to these statistics, the proportion of employed women in the total labour force showed only a gradual increase of two per cent per decade. But the proportion of married women jumped from ten per cent in 1931 and 1941 to thirty per cent in 1951. In Canada, in the 1951 census, working women totalled twenty per cent of all the employed population. These 1,164,321 women were 23.6 per cent of all women over fourteen years of age. Of these, 348,961 were married, roughly 30 per cent (24). This represents a four hundred per cent jump in the number of working wives since 1941 as compared with a one hundred per cent increase in the United States for the same period (26: 808).

Since 1951, the numbers have become still larger. The figures released by the Dominion Bureau of Statistics\(^1\) for October 20, 1956 as measured by sample surveys show 546,000 married women with jobs or seeking work. In 1958, such a sampling in the eight largest Canadian cities indicates a further gain, 585,000 wives employed, or 43 per cent of all the women working in February, 1958\(^2\). This means that today one in eight employees, apart from farm labour, is a married woman. Twenty-five years ago, she would have been one in fifty.\(^2\)

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The Causes of Mothers' Taking Employment

This review of available statistics reveals a trend of increasing numbers of employed married women in many countries. A study of the causes of this situation is not the primary business of this research. On the other hand, if the causes are temporary, an investigation of the effect upon her children of the mother's working would be of only contingent value.

Causes suggested by observation and surveys. Many writers suggest that the greatest cause of the wife taking employment is an economic one. A lengthy title of one magazine article exclaims,

"Working Wife, $96.30 a Week: Why do ten million married women in the United States leave their homes every weekday to work in offices or factories? The answer, here set down in the story of Peggy Brown, riveter, is simple: to make money" (55).

This is, of course, an oversimplification of the monetary factor. In some cases, there is permanent inadequacy of family incomes from the father's work (67: 5, 11). In other instances, this is a temporary situation (5). Many married women work in order to maintain higher living standards, to build up funds for the education of children, to pay for homes, and to supply care for dependent and aging relatives (25), (64), (142). An analysis of census statistics shows an inverse relationship between the husband's income and the probability of the wife's employment (134: 58), (4: 690), (133: 17).

In surveys, two motives are often put forward for married women
working: the woman's economic need on the one hand and the accompanying condition of full-employment on the other hand. Married women form one of the nation's important sources of needed manpower (133: 19). Baldwin (6: 26) says "full employment in an expanding economy and low birth-rate in the depression years seem to be the main reasons for the increased number of wives on the payroll." The trend toward early marriages is another (92: 417), (142: 689).

Some authors contend that these causes are not likely to disappear quickly (6: 55), (20), (132: 1), (133: 20). On the other hand, this writer considers that these could be quite ineffective in a severe economic recession. Then a nation is faced with large numbers of unemployed, lowered marriage rates and higher marriage ages. At the same time, the employment market could be receiving the influx of young people born during a time of rapidly increasing birthrate. If the phenomenon of working wives is to be a permanent feature of our North American culture, it must have other basis causes.

Causes suggested by working wives. Another method of finding the causes which some investigators have used is to ask the working wife herself for her reasons for working. These studies make it evident that other factors play an important part in influencing women to retain their jobs after marriage. Zweig (93: 83) found that economic need in Lancashire was by no means the only or even the main motive for married women's work outside their homes. Rowntree and Lavers (93: 84) in York investigated 12,708 families whose heads were men in full employment. Ten per cent of the wives in these homes were in full or
part-time employment. "Asked their reasons for going out to work these women gave the following answers:

- 13 per cent - to buy furniture, etc. for their homes;
- 2 per cent - to pay for children's education;
- 1.5 per cent - 'sense of duty' (most of whom were qualified nurses);
- 34.5 per cent - to 'make ends meet';
- 27 per cent - to buy luxuries;
- 21 per cent - for the pleasure of meeting other people instead of being cooped up in their homes all day" (93: 84).

Jefferys (93: 85) studied the reasons given by 234 professional women in Britain. Just over 1 in 5 were working because their income provided the sole or main source of family income. The other 80 per cent gave just as often as financial considerations an interest in the work or failure to secure satisfaction from unrelieved domesticity. From these studies, it would appear that social isolation of the modern housewife is a powerful motive, and that with democratization, and its levelling of incomes, there is developing an ever-increasing equalization of standards. Luxuries, once the prerogatives of a privileged class, are now considered the right of those who wish to put forth the effort to obtain them (93: 84).

It should be apparent that it is difficult to separate economic motives from psychological motives or the voluntary element from the compulsory one. Myrdal and Klein sum up the motives of middle-class and working-class wives:

"There are strong indications that economic necessity is no longer the prime motive. It has been replaced at least to some extent, by a more complex psychological situation in
which the desire for a higher standard of life, the need of company, the preference for more congenial types of work, and the wish to be financially independent, are some of the constituent factors" (93: 86)

The causes according to sociologists. To find the real reasons for wives and mothers entering the labouring market, one must look beneath the surface that is amenable to surveys and even beneath the expressed reasons which the workers themselves give, to the changes in society which affect the status of women.

Kirkpatrick (70) devotes a complete chapter to the family in transition. He underscores the effects of the mechanical and biological revolutions upon the family institution, particularly the effects of improved transportation and communication and of control of forces of life and death. The scientific revolution has given luxuries, but also insecurity. Urbanization and secularism have both affected the family institution. There has developed a competitive system in which wealth and symbols of wealth become the criteria of status so that individuals come to think in terms of personal possessions and gains rather than family status and collectivism. People earn a living for self rather than make a living to transmit to offspring.

Kirkpatrick (93) stresses that there is no sharp line of demarcation between economic and social consequences to the family group. Socially the family group of today is a small primary one. The size of household is smaller partly because there is a decline in the extended family system and partly because of a decline in number of
offspring. This results in a lessening of the association between generations and between siblings and hence in a higher degree of freedom and individualization.

Ogburn (75: 18-21) considers that the economic changes springing from mechanical invention bring many correlated social changes in the family.

"For instance they effect the age of marriage, the training of girls, the activities of women, vocational guidance, the authority of parents, family security, the labour of children, and other conditions. These correlated or near-correlated social functions may be thought of as five in number: the protective, the recreational, the educational, the religious, and that family function which gives status to the individual. These five functions have all been weakening as has been the economic function, and are being transferred to outside agencies such as the state or industries" (75: 19).

Kirkpatrick (70) does not consider that the change is quite so one-sided. In fact, he considers that there is a two-way interaction between the family and the social structure. True, the external forces exert powerful influences on family life, but family life has offered strong resistance to policies of force and fraud from without. He points out that the family institution is part of society, and when other institutions in society are changed, the change affects the family too. Moral and religious institutions previously were strong supports to the family structure. Now they have weakened, so individuals become more their own moralists and priests. The institutions of property and law once upheld the familistic-patriarchal
organization. Today these are redirected so that law does not have clear-cut definitions of family duties and obligations, and property becomes a personal rather than family acquisition. Governments providing social security and education providing prolonged formal education and vocational training have largely appropriated these functions of the family of yesterday.

Ogburn (75: 20) considers that the psychological functions of the family have not decreased like the economic and social functions. The family is the agency for personality relationships and personality shaping. Hill (75: 571) summarizes the trend in family change from familistic-patriarchal to person-centred, democratic family type. The central objectives in the old institutional family were children, status and the fulfilment of its social and economic function in society, says Burgess (75: 22). Now he sees emerging the type of family best described as "democratic companionship".

"The growing adaptability of the companionship family makes for its stability in the long run. But it is a stability of a different kind from that of family organization in the past, which was in large part due to the external social pressures of public opinion, the mores, the law. The stability of the companionship family arises from the strength in the interpersonal relations of its members, as manifested in affection, rapport, common interests and objectives" (75: 26).

Now the forces which have changed society and the family have also affected the status of women and, together with the changed family and social structure, operate to create married womanpower today. Stated another way, the interactions of economic, social and
psychological forces are the causes of women in the labour force.

According to Kirkpatrick (70: 123) the employment of women outside the home is a special consequence of the mechanical revolution. Myrdal and Klein (93: 1) emphasize a two-way change in the social position of women in the last century. The first is characterized by the admission of women to an increasing variety of hitherto 'masculine' jobs, provided, on the whole, that the women were unencumbered by family ties. The outstanding feature of the second phase is the endeavour of a growing number of women to combine family and employment. "Altogether, this social change amounts to a gradual recapture of positions which were lost when women were squeezed out of the economic process by the Industrial Revolution" (93: 1).

Much of the literature indicates that the role of housewife has altered greatly in recent years. Its traditional functions were these: care of the sick, training of the young, making and caring for clothing, preparing and serving food and keeping house. Prior to the Industrial Revolution, women had an important role in the work life of the day. In that era,

"mothers, daughters, and the kin who had no other home, produced goods and performed services for the family group that were of important economic value. Then spinning and weaving, preserving, baking, making cloth, clothing and bedding, laundering and many other personal services began to be done commercially. Agencies outside the family came more and more to take on much of the care of the old and the sick. Much of the child training and many of the recreational activities which had been carried on in the family circle came more and more to be carried on outside the home" (136: 3).
Married woman-power is no modern inspiration. In the pioneer days women worked side by side with their husbands when the home was the chief centre of production. Today women are simply changing the location of their work. An analysis of jobs held by women bears out this claim (65: 19):

"The data reveal clearly that the occupations in which women workers are concentrated differ markedly from those in which most men find employment. In the great majority of the countries covered, for example, women are in the largest proportion among service workers, accounting for between 50 per cent and 80 per cent of all service workers. The only exceptions are three less developed countries (Yugoslavia, India and Pakistan), where the proportion of women is very much lower (8 to 23 per cent). Also, in the great majority of countries, women form a high proportion (31 to 50 per cent) of all professional and technical workers; most women in this group are teachers and nurses, occupations long traditionally recognized as 'women's jobs'. Exceptions are found in India and Pakistan, where women form 17 per cent and 5 per cent respectively of all technical and professional workers.

"Women are also strongly represented among managerial, administrative and clerical workers, because of the widespread employment of women in clerical occupations, and among sales workers. In most of the countries covered, women make up one-third to one-half of the total work force of these groups; they outnumber men in Austria (sales group), Finland (both groups) and Great Britain (administrative and clerical group).

"It is significant that women are only thinly represented in the group of craftsmen, production workers and labourers. In all countries women form less than 30 per cent of the workers in this group, and in most countries (including Canada, Sweden and the United States) less than 20 per cent."

Two-thirds of all American women in professional work were teachers or nurses in 1950. Over half of the women operative in manufacturing were in the food, textile and apparel industries. In the service field, the women carried on those occupations which were predominately their traditional functions. However, over one third of all employed women
in the same year were in secretarial, clerical, and sales occupations. Once these jobs were held mostly by men, but they are now generally regarded as women's work, (102: 84).

In the first instance, then, many home activities have gravitated into factories, laundries, offices, schools, hospitals, and other institutions. Home has been transformed into a place where there is only a limited amount of work. In addition to these changes, the housewife has more and more household machinery within the home itself. This may make her able to do more in the technical sense and to do so in shorter hours, but, just as happens in industry, it probably makes her work less satisfying, since she is functioning as a semi-skilled machine operator (28: 269). Labour saving devices also create needs for higher income. All these changes tend to force the housewife outside her home to find her traditional jobs, her economic value, and her self-satisfactions.

Other factors encourage women into outside employment. Machines today require skill rather than muscular force; better hygienic conditions and reduced hours of work have made both industrial and clerical jobs less exhausting; improved means of communication have helped to bridge the gulf between home and workplace. Changed also is the attitude of employers. Moreover, our society has begun to accept the fact that women are in jobs to stay, (93: 4). Two world wars have demonstrated to the world, women's equality of ability and industrial productivity.

Myrdal and Klein query why the opposite question is not asked -
why married women when they have no small children to look after, do not work outside their homes. While men have no alternative but to work and are considered antisocial if they refuse to do so, this same ethical rule has not been widely applied to women. Women claim and have achieved equal rights so that a re-assessment of all their social contribution should now be made. "For in a democratic society no group has the right to claim exemption on account of birth from comparisons of their social contribution with that of others," (93: 89).

Our western culture provides another vital impetus to women's invasion of the labouring field. "The underlying factor in this occupational revolution is the total lack of sex discrimination in the education system" (92: 421). Most girls, like boys, have to make a vocational choice, for women have come so far along the road of emancipation that no girl can merely sit at home and wait for a husband. Parents today accept society's concept of the value of an education with a purpose for both boys and girls (93: 137).

Three different factors call for a re-definition of women's roles in society (93). Each are strong influences to keep the modern homemaker in dual roles of home and work. The first is the considerable increase in the average life-span. Then there is the second factor of the reduction of the period entirely devoted to maternal duties mainly because of the smaller size of family. Lastly, the later years of married life are fraught with uncertainty and possible loneliness for the woman. Looking after one man and a family of two or three in a modern home is really not enough to fill the many years of an average
woman's life (93: 11).

Jespersen (67: 3) adds that the claim for equal rights and the growing urge for democracy in the society play a part in liberating feminine working power from the home.

Foote (44) summarizes the trends and variables which are affecting women's roles in marriage as "professionalization":

"shifts of employment toward tertiary industries and salaried occupations, rise and stabilization of real income, freer access to higher education and skilled employment, more responsibility in family planning, reliance upon scientific expertness instead of tradition, broadening application of the career concept and self-conscious emphasis upon continuous personal development."

What influences are operating in Canada to produce changes in the family patterns leading to the increasing employment today, and tomorrow, of wives outside the home? The main forces may be summarized as those of the Industrial Revolution, technology, coeducation, familial transitions, public opinion and changes in society too.

The Dilemma for the Working Mother

Now this growing trend to employ mothers outside the home raises a real dilemma for them, because their most vital and cherished function is still in the home. Kirkpatrick (70: 165) defines the distinctive problem of women as a "lack of balance between woman's reproductive function and her work function, so complicated by individual differences and public opinion that there is confusion and unhappiness for herself and others.... The woman's problem arises when
it is no longer possible to spin and rock a cradle at the same time in fulfillment of feminine destiny". Home is the unique place where babies are cared for and loved by parents and where children can grow into healthy personalities. Home should provide not only adequate nutrition, and clean, sanitary living space, but also all the varied ways by which individuals keep up their morale and strength. During the first six years of life particularly, and decreasingly thereafter, the child needs both parents "to furnish the pattern of adult womanhood and manhood" (68: 77). Home is the place where the child learns to develop social skills and the desire to participate in activities with other individuals (141: 348). It is in the home and family living that the foundation for mental health is laid (48: 611).

Society has tried providing institutional care for orphaned or abandoned children. Yet experience in this type of group care of infants has demonstrated that it is not suited to their needs (134: 28), (11). Such babies without a mother or a mother substitute do not develop as fully or as rapidly either physically, mentally or emotionally.

How can the mother be two places at once? Many of her traditional functions in the home have been removed. Technology has transformed her home with its modern gadgets. As a school girl, she was taught to seek achievement and independence in outside fields. Society gave her prestige as an employed person. Now as a young mother, she has become economically dependent in her new role of housewife. Since this job is shorn of much of its economic value, society tends to demean her job as housewife (142: 689). Domestic work is generally held in
low esteem in our society (93: 146).

So the young mother finds herself remaining at home, partially idle, to care for the children, a job of lessening activity as the children grow from babyhood through school age. In many instances, her economic contribution is needed, and only gained through a job outside the home. She misses the feeling of independence and of social esteem (142). She covets the freedom after working hours and the social activities and comradeship of outside employment (3). She may even wish to escape from the monotony and seclusion of household work (64: 546). This isolation, when she has been accustomed to contacts through her work, is even more burdensome (93: 147). The mother needs a sense of achievement, of economic importance and of social prestige. She can gain these often only by combining a job away from home with the care of children in the home.

In the larger households of former days, "someone", a maiden aunt, a grandmother, or more often an older sibling, was on hand to watch the baby while the mother worked at her traditional functions. Thus "baby sitting" and "day care" were home industries (134: 53). Today this is no longer true, although there is some evidence that "other relatives" in the home do care for children while mothers work. In one Canadian city, a sampling found more than a third of the working mothers with dependent children left a grandmother in charge (22: 61).

When the young mother of today looks ahead to her forties, she foresees the truth of the statement; "The housewife at fifty is
typically idle..." (28: 265). Further, she realizes that modern medicine has increased the life span, thereby granting more "idle" years on the average for her after her children are grown (53), (142: 689).

This dilemma of mothers of today is well stated by Lundberg et al (79: 242):

"Deprived of a rich and creative home in which to find self-expression, she tries desperately to find a compromise. On the one hand she must retain her sources of real instinctual gratification and, on the other, find ways of satisfying her need for prestige and esteem."

Or as Kirkpatrick summarizes the problem:

"Given the concepts of a reproductive function, a work function, and of a balance between the two, one is led to the concepts of excess and deficiency. Excess or deficiency may exist with reference to self-judgment or to the judgment of others. (...) It would be appropriate at this point to give some easy and practical solution to the woman's problem. Yet, the very definition of the woman's problem implies a dilemma. A clear-cut opinion as to woman's place in a sacred society is frustrating to women who are unique and different. On the other hand, diversity of public opinion makes for confusion and uncertainty as to the balance between the work and reproductive functions" (70: 66-7).

The problem is further aggravated by a cultural lag in the status of women in economic, political, legal, conduct and domestic areas, and by a cultural conflict over the status of women as between age groups, religious groups, sex groups, and differing areas (70).

Controversy Over the Effects of Mothers' Working

Since 1940, the number of working mothers in Canada has increased
dramatically. It would seem from available data that this trend will continue in the foreseeable future. Many opinions are expressed about the results of this condition. Because it involves a dilemma, there is bound to be controversy over what these effects are.

Wilensky (144) studied the changing patterns of family life. He regards the conflict as one between growing equality with men in competitive occupational achievement on the one hand and the blocks to this equality plus new demands for expertness in home management. "Women have become disaffected from traditional marital and family roles without getting released from housewifery..." Such is the complaint of Mead (86: 62) who says, "Within the traditional setting, working for a married woman means doing two jobs, both of which her separate employers think of as full-time."

Some of the literature deals with the effect of working wives on the role of the husband. One article expresses concern for the change from male superiority to equality (72: 299). More pessimistic authors picture the father as withdrawing from active interaction in the family group (33), (47: 100). Other literature sees the reverse, that of the growth of homemaking as a "husband-wife" teamwork (22: 75), (118: 50), (139). Two studies found the husband's attitude toward his wife's working to be a critical factor in the success of her managing a home and a job (51), (72: 185).

What are the effects of employment of wives in the relationship of husband and wife. Odlum (67: 24) says that, in France, the stability of those homes where the woman works appears to be at least
equal to those in which the woman stays at home and there is no evidence to suggest that divorce is more frequent. A questionnaire circulated by the National Council of Women of Great Britain in 1956 (95: 68) reported that husbands, in most cases, were accepting the fact that their wives should earn, and in many cases, were being cooperative in helping with household duties.

Payne (99) made a study of adolescents' attitudes toward the working wife. In his data, he found that over half of the girls were expecting that when they married, they would hold positions in the labour force outside their homes, and another twenty per cent that they might work. The boys, on the other hand, in 78 per cent of the cases, were expecting that their wives would not work after marriage. It would appear that the girls' expectations were closer to reality. Apparently they were willing to replace the traditional concepts of a bread-winning husband with the emerging patterns of economic partnership. Such divergence of opinions could result in confusion and disappointment, particularly for the boys, during later years.

Being on the payroll is found to affect the mother's participation in community work (109) and social life (8: 27). Rothe's study (109) was inconclusive because the variable of number of children was not controlled. Some regard this smaller part in community affairs as a detrimental outcome of women belonging to the labour force. There is a growing concern on the part of the Church and the Y.W.C.A. that the trend towards "work for pay" may cause a real shortage of volunteer workers within these organizations (46). Meyer (87) urges
mothers to seek parts in community service to gain prestige for themselves and to gain the respect of others. Komarovsky (72: 153) presents evidence that such community work has definite handicaps: the unskilled and often routine nature limits the satisfactions gained from it; it is generally accorded low esteem; there is increasing professionalization of activities formerly carried on by volunteers. Once again, there is controversy over the effects of mother's entering the labour force.

Nor does the controversy disappear when one deals with literature concerning the effects upon the mother herself. In one study, Rose (105) had a questionnaire completed by parents of a college class to determine factors associated with the life satisfaction of middle-class, middle-aged persons. The data indicate that earning an income and engaging in organizational activities help women to contentment. His findings are that dissatisfied mothers are less likely to be those with employment and more likely to be those who claim that housework is burdensome.

Smieton (118: 51) considers that the crux of the problem of the employed mother is the hours of work for her. The survey conducted in eight Canadian cities of married women working for pay (22: 51) found that most married women in full-time jobs work extremely long hours. They usually do some household tasks before leaving for work and again after work. Weekends appear to be particularly busy for them. However, one should remember that housework hours vary greatly according to the number and age of the children, the financial means of the
family, and most particularly to the working capacity of the mother, her knowledge and skill in running a household (133: 21). No comparison was made with the hours of non-employed mothers.

Baers (4: 690) who disapproves of employed mothers, reports a study in France which found that mothers, employed on a full-time basis, work somewhat more than eighty hours each week. Myrdal and Klein (93: 36) who approve of employed mothers, describe the same survey. When the employed and non-employed mothers are matched in number of children, it is found that the more than 80-hour week of the married women in employment exceeds the working week of a full-time housewife with children by only 6 to 8 hours per week, i.e. by roughly one hour per day.

Jespersen (67: 5-7) reports a 1953 sociological inquiry by the Danish Medical Women's Association dealing with the circumstances of 633 housewives in Copenhagen - all of them married with children and 367 of them working outside their homes. One question asked was whether the women were in good health or if they were worn out or perhaps even ill. Just about half said they were well. Those with a full-time job outside the home were worn out a little more frequently than the others, while the housewives staying at home were ill twice as often.

In each area of family and social life, one writer sees good effects from the mother's working, while another sees harmful results. Nowhere is the argument more vociferous than in the area of the effects upon the children. For example, when the mother works, she may have fewer
hours with her children (8: 59). This is decried by those who regard the constant presence of the mother with her children as essential to their physical and emotional well-being (37). On the contrary, LaBarre (74: 53) sees definite dangers in motherhood becoming too all-absorbing and overacted, more especially among the middle class. In the case of an emotionally disturbed mother, such limitations of time with her children will tend to dilute her negative influence (113: 326), (80: 88).

Rhodes and Matthews (103) define maternal deprivation as lack of continuous care by a mother or mother substitute during the period from birth through four years resulting in social and emotional isolation in the child. Maccoby (80: 87) summarizes the effects of separation of children from parents as found by such pioneer researchers as Bowlby (11), Spitz, Freud and Goldfarb. Very young children show few effects from separation. Children between one and three years are most vulnerable. Children vary greatly in their vulnerability to separation trauma. While most severe effects have resulted from separations lasting a week or longer, many young children show disturbances of a lesser degree on very brief separation.

Myrdal and Klein (93: 126) point out that these studies which Bowlby (11) summarizes refer to total deprivation of maternal care; that is, they deal with abandoned, adopted or boarded-out children rather than with children who have daily breaks of some hours away from their mother, in day nurseries, in the care of a maid, etc. Further, in all cases studied, maternal deprivation is the result of some calamity and often accompanied by a sudden shock which itself would
be sufficient to upset the emotional and mental balance of the child. It would be scientifically inadmissible to apply conclusions drawn from such cases to those where the mother is absent at regular intervals for a number of hours yet returns to the child each day and provides it with a home. This is a field of research of great social importance where remarkably little attention has been given.

Does the mother have to remain at home for the children's mental health? Odlum (67: 24) reminds the reader that it has always been the practice among the educated in France, as in other countries to hand the children over to the care of nurses and governesses and to see relatively little of them. There is no evidence that this has resulted in any major damage to the children.

Maccoby (80: 88) reports studies done in nurseries. The findings suggest that, while there is an initial disturbance for the young child when a working mother first leaves him with a substitute caretaker for part of the day, he adjusts quickly to the new routine and appears able to maintain a close affectional relationship with his mother. Maccoby claims that the adequacy of the substitute caretaker depends not so much on the amount of control she exercises nor on how she does it but on how similar her reactions are to those of the mother. MacIver (81) wonders if how the substitute disciplines is not equally important. The reactions of the mother-substitute to the child and her methods of child care both need to be similar to those of the mother (127). The same reference considers that after five years of age the child is able to adjust to the fact that his mother and others taking care of him may differ.
Josselyn (68: 81) reckons this limitation of mother's time as an advantage for the women whose interest span in the mother role is limited to part of a day, and who, therefore, give all they can in a short time. In her article, Josselyn points out that there has been too little recognition that some women are better mothers and members of society if they are employed either full- or part-time, and that some children are happier children because their mothers work. It may be possible to combine the responsibilities of motherhood in such a way that positive values result in the mother-child relationship. Another report (49) concluded that there is much evidence that the home-keeping women do not necessarily have better relations with their children, and that "they tended on the whole, to be more possessive and more irritable with the children, as shown by the number of punishments inflicted." Odlum (67: 22) gave similar observations of psychiatrists.

Virtue (146: 6) sums up the question of time spent with the children in this way:

"being a good mother, someone once well said, is a matter of 'being there'. Being there, I submit, is not accomplished by spending a certain number of clock ticks in a certain room, but by caring with all your heart and soul about your child, by sensing the things that are important to him, and by supporting him always with all the resources at your command. If you are 'there' in this sense, the child knows it. And the children who are supported thus, I suggest, are far from neglected or heart-hungry, whether their mothers work or not."

This is the viewpoint of Myrdal and Klein (93: 127):

"It cannot be too strongly emphasized that the all-
important factor is the attitude and personality of the mother rather than the amount of time she spends with her children. The neurotic, neglectful, or foolish mother is a menace to her children, probably no less if she devotes all her time to them than if she does not. On the other hand, the intelligent, sympathetic, loving mother may be able to give her child a sense of emotional security which is not disturbed by her regular, or even her irregular, absences."

However, in view of inconclusive evidence and in view of the possibility of reduced feelings of security due to more impersonal care, these authors support the view that mothers should, as far as possible, take care of their own children during the first years of their lives (93: 128).

Does the working mother contribute to delinquency? Glueck and Glueck (52) made another analysis of their 1940 data and matched, pair by pair, 500 persistent delinquents with 500 true non-delinquents, not only in respect to general intelligence, age and ethnico-racial derivation, but also in low socio-economic status. This, they considered, got closer to the pure influence of the mother's working, in the complex traits and forces involved in delinquency. Their conclusions are quoted below:

"The deleterious influence on the family life and on the children of the mother's working outside the home has become evident in our analysis. As regards the special impact on delinquency, this too has emerged. There is evidence of a differential influence of the working mother on family life, on children, and on delinquency. There is some suggestion in our data that these influences are more potent when deriving from the mother who works sporadically than from the regularly employed mother. Actually a like proportion of mothers of both delinquents and non-delinquents were found in Unraveling Juvenile Delinquency to be regularly employed, but among the
delinquents there was found a high proportion of mothers who worked only irregularly. So even in *Unraveling Juvenile Delinquency* we could note that it is the working mother of this latter type who exerts the heaviest influence on the delinquency of her children* (52: 349).

Taran (122) finds fault with these conclusions. The whole study was not originally focused on maternal employment as a primary experimental variable, and hence it is dangerous to overgeneralize about findings drawn from them. Maccoby (80: 83-4) is also critical of Glueck's study. The "occasionally employed" mothers had often a history of delinquency themselves, or an emotionally disturbed mate, or were incompatible. Hence the emotionally disturbed and anti-social characteristics of the parents may have produced the mothers' sporadic work pattern and at the same time led to delinquent tendencies in the sons. This writer noted that by combining the information in two tables (52: 33, 342), that only 27 of the regularly employed mothers of delinquents were not in broken homes and 50 of mothers of the non-delinquent boys were not employed and not in broken homes. The factor of absent male in the Glueck study was not held constant, hence the mother's working and the son's delinquency may both follow from the absent father. Certainly any conclusions of causal relationship between mothers' employment and juvenile delinquency are not warranted in this important study by Glueck.

Other conflicting evidence has been found in the field of delinquency. Again Nye (98) reports that "only in studies of delinquent behaviour do we find persistent (but not large) differences
favouring the children of non-working mothers." To explain these differences, Nye reminds his readers that most children of employed mothers are on their own every afternoon from the close of school until five or later.

On the other hand, figures released by the Police Department for the years 1950-54 in Brandon, Manitoba, show only 13 of the 129 cases dealt with to be children of working mothers. No information was available of the proportion of employed mothers in the city, although 10 per cent of married women in Canada were employed. In 80 cases, the family was quite well off financially, both parents were living, and the mother was not working outside the home (94). Furthermore, a survey by the National Council of Women in Britain (40) concludes that there has been no increase in juvenile delinquency due to mothers taking up employment. Witmer (145) discusses parents and delinquency at length and yet never mentions the factor of the mother's working as relevant to causes of delinquency.

Coo (37) claims that working mothers neglect their children. Yet the Children's Aid Society in Western Manitoba apprehended 34 children in 1954 and in none of these family situations was a working mother involved. Of the hundreds of complaints received and investigated by the agency, where neighbours felt that children were neglected, only three were because of the mother working (94).

The National Council of Women of Great Britain sought opinions from teachers and school attendance officers in their survey on the employment of married women with children (95). There was no evidence that
children of working mothers are truants; nor do they arrive late for school. On the contrary, a number of replies stated that they arrive too early. The general opinion in the replies was that school work does not suffer, though a few stated that the older girl is sometimes overburdened by extra duties which the mother expects of her in the home, so that she develops a feeling of resentment. Others stated that this enforced domestic training develops the girl's sense of responsibility and is useful to her. Most of the concern was expressed regarding the hours after school and during holidays when the children of working mothers often lack supervision.

Myrdal and Klein (93: 133-4) call attention to the way that teachers, magistrates, welfare officers and others blame the working mother for all sorts of behaviour problems of the younger generation. They report the observations of teachers that these children of working mothers are intellectually more alert and socially more independent than others. These assertions still have to be supported by studies of the problem.

Maccoby (80) also notes the lack of information about whether the fact that a mother works stimulates her children to vocational achievement. He does mention that many men of achievement have had mothers who had flourishing careers or were otherwise active outside the home.

It becomes increasingly evident that there is little agreement and much divergence in the opinions about the effects of mothers' working. It should be revealing to survey the literature for the few actual studies of the effects upon their school children of mothers in outside employment.
CHAPTER II

REVIEW OF THE LITERATURE

Little scientific or objective study has been made to determine just how detrimental upon her children, if at all, is the outside employment of the mother.

This writer has found six studies bearing directly on the problem. The evidence disclosed by these investigations was of a conflicting nature.

One study found negative results upon the personalities of the children because of the mother's working. Essig and Morgan (42) carried out a survey of 500 girls in the ninth and tenth grades. They used an adjustment scale by Leland Stott entitled *Home Life* and a short questionnaire designed to secure information about the community, the home of the girl and the work of the mother. The sample had one hundred and fifty girls in homes where both parents worked. Almost 75 per cent of these employed mothers had worked two or more years and more than 25 per cent had been employed for five or more years. Eighty-five per cent of these mothers worked during the day and only one half were home when their daughters came from school. This experimental group was compared with a control group of 150 girls.
from complete homes where the mothers did not work. Only four of these mothers were out of the home when the school day ended. No information was given concerning the randomness of the selection of the members of the control group. When the data were analyzed, "there was a very significant difference between the means (C.R. = 8.4) and the standard deviation (C.R. = 4.2) of the two groups in favour of the control group, in adjustment to family life" (42: 232). Essig and Morgan interpreted this to mean that the children whose mothers did not work had greater feelings of love, understanding, interest and cooperation between daughters and parents. Working mothers did not show up well here. Maccoby (80: 84) considers the weakness in this study is that the girls were not matched according to economic level.

In a second study, Nye (97) investigated students at high school level. He surveyed about fifteen hundred adolescents from grades eight to twelve to investigate adolescent-parent adjustment. He selected several variables including age, sex, sibling number, broken homes and employed mothers. His method was to construct and administer an objective form of some 68 items dealing with five areas of adjustment. One was the parental acceptance of the child; another was parental trust and confidence in the child; a further one considered the child's feelings about the personality of the parents; a fourth dealt with the degree of socialization of the child; the last area was the child's adjustment to groups outside the family.

Nye admitted that he hypothesized that full-time work outside the
home was incompatible with family harmony and happiness; and therefore, he expected to find that both full-time and part-time employment of the mother would mitigate against best parent-adolescent relations. To test this expectation, he grouped his sample into children of full-time employed mothers, of part-time and of non-employed.

An analysis of the data did not support his hypothesis that the working mother was a handicap to the unity and general success of the family. Nye found that the students whose mothers were part-time employed showed significantly better adjustment according to the measuring device than either of the other two groups. This was particularly true for the medium level when the socio-economic factor was held constant. Differences between the pupils whose mothers were full-time employed and those whose mothers did not work were non-significant. The author concluded from his findings that it appeared "about equally bad for mothers to have too little or too much to do" (97: 331).

In the literature, two investigations were found which also studied the junior high school level. Both used the California Test of Personality as the measuring instrument. Carter (29) was attempting to find the influence of family relations and family experiences on personality. The experience items which he selected for study were mobility between and within the community, sex of the student, size of family, marital status of parents, and the employment of the mother outside the home during the preceding year.

After administering the California Test of Personality, Carter arranged the students in rank order according to total score. He then
compared the top and bottom thirds of the distribution. From his analysis of the resulting chi-squares, he concluded,

"Experiences such as mobility, living in comparative isolation of the community, employment of the mother, may not reflect the over-all experience world of the child or his role in or reaction to the experience, and are not found to be associated with personality at a significant level" (29: 214).

Certainly the chi-square of .30 for the factor of employment of the mother gave reason for this conclusion.

Beals (10) was another writer who was curious about the growing concern regarding the apparent breakdown of the American home and the effect of this on the maturing personalities of children. With this in mind, Beals made a study of certain home factors and their relationship to the personal adjustment of children. His sample was 100 junior-high school pupils. Two of the factors which he included were the marital status of the home and the number of parents working.

He gave the California Test of Personality to the sample. Using the total scores, he divided them at the fiftieth percentile into two groups, which he called "above-average" and below-average".

Like the former writer, he, too, had assumed that children from homes where only one parent worked would be better taken care of and hence better adjusted. When his data for the children of the working mother were analyzed he found that the difference in percentages of students in the below-average and above-average groups were negligible, and he had been unable to locate any other study of this factor to verify or check his result.
Admittedly, the limitations in validity and reliability of the testing device used in these investigations would apply to the findings of both of these studies and to the one following.

In a study by Rouman (110), 400 problem children of Montebello Unified School District were classified into four groups according to parental factors. Eighteen percent of the cases had mothers full-time employed. A similar percentage of children came from homes of step-parents and guardians. The third group lacked an adult male in the home. The control group had homes where none of the above factors operated. The reasons for the problem cases being referred were interesting:

<table>
<thead>
<tr>
<th></th>
<th>Group 1 (Employed Mother)</th>
<th>Group IV (Control Group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic failure</td>
<td>28%</td>
<td>40%</td>
</tr>
<tr>
<td>Aggressive behaviour</td>
<td>28%</td>
<td>30%</td>
</tr>
<tr>
<td>Withdrawing</td>
<td>33%</td>
<td>20%</td>
</tr>
<tr>
<td>Nervous tendencies</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Stealing, sex, etc.</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Rouman found that the child with the working mother displayed the greatest percentage of withdrawing tendencies.

From the scores made by these students on the California Test of Personality, he computed the percentage of each group which ranked below the 50th percentile in the personality components. The results are given below:
The investigator concluded that those in the first group were lacking to a greater extent than in any other group in feelings of independence towards others. They also felt a lack of cordial relationship with people in general. No statistical data was given to indicate how these conclusions were reached and it is difficult to see how such a generalization could be given on the strength of the evidence presented in the article.

One of the conclusions of this study is quoted since it is related to this research:

"A working mother contributed to only one quarter of the total number in need of psychological help. Apparently there are many children whose mothers work who do not present problems in school. This would indicate that as long as the child is made to feel secure and happy, the mother's full-time employment away from home does not become a serious problem. But if employment is sought, we must be most sensitive to the needs of the younger children" (33: 55).

It should be borne in mind that Rouman's conclusions should be limited in application to his sample which was seriously maladjusted pupils, and not to the population in general. Maccoby (80: 85) cautions readers against concluding that there is a causal relation between the problems and the mother's working since both may be reflections of some other factor in this study.
The last pertinent study located in the literature was made by Hand (56). He divided 102 elementary school children of grades IV to VIII into two well-defined groups of "well-adjusted" and "maladjusted" by means of California Test of Personality, ratings by their teachers, and choices by their classmates.

Hand outlined his data in the following table (56: 246):

<table>
<thead>
<tr>
<th>Sex of Pupils</th>
<th>Pupils in each group</th>
<th>Per cent having working Mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Well-adjusted</td>
</tr>
<tr>
<td>Boys</td>
<td>27</td>
<td>25.9</td>
</tr>
<tr>
<td>Girls</td>
<td>24</td>
<td>37.5</td>
</tr>
<tr>
<td>Both</td>
<td>51</td>
<td>31.4</td>
</tr>
</tbody>
</table>

Such differences as the table shows were found to be far from statistically significant. "The outcomes of this section of the investigation certainly fail to support a belief that there is any general connection between the outside employment of mothers and the personal adjustment of their children" (56: 246). Hand expresses astonishment at his discovery of this evidence, since he had considered that children would be adversely affected by the over-worked mother attempting to run a home and to work outside the home.

Nye (98: 17) claims that research reveals that, in the aspect of school marks, the children of employed mothers seem to be superior. He attributes this to a higher educational level of employed mothers. Unfortunately, the article does not disclose the source of the research.

Myrdal and Klein (93: 134) describe an investigation by the
school's medical officer in Gothenberg, Sweden. The survey included 1,345 elementary school children. No evidence is cited whether the pupils were matched for ability. The findings were that in the first form children of mothers who go to work had lower marks than children of mothers at home; in the fourth form the two groups were equal; and in the seventh form the children of working mothers had better achievement. No statistical method is described so that the findings should be taken with caution. There were no differences in degree of absenteeism between the children of employed and non-employed mothers.

Evidence to date is inconclusive and contradictory concerning the effect upon her children's adjustment of the mother working. That the investigators in some instances were surprised by their data would point to the divergence between public opinion and research findings in objective studies. Certainly the need for further research is clearly indicated.
CHAPTER III

DELIMITATION OF THE PROBLEM

One researcher cannot hope to make a complete survey of this complex problem. Hence it is imperative to delimit it to a reasonable scope and yet to make it as revealing and worthwhile as possible.

Geographical Limitation

Geographically, the writer felt compelled to limit the survey to Saskatchewan. This province has a large rural population and only three cities of over 25,000 people. Moose Jaw, the writer's home, is the smallest one and has only limited industrial development. Either Regina or Saskatoon would provide a larger, more representative sample. Fortunately, the school systems both in Moose Jaw and Saskatoon were willing to have a study carried out.

Age-level Limitation

The second major delimitation was the age-level to be studied. Actually, the pre-school age would be the one where a researcher would hope to find most revealing data. During the first six years of the child's life, the mother is most important. What are the
effects upon her children when she works during this developmental period of their lives? Unfortunately, the writer had to abandon such a study because of the difficulty of locating these mothers and of gaining their co-operation if one did. In addition, there are very few objective measuring devices either in achievement or in adjustment for ages one to six years. Hence, the writer would have to keep this study within the range of school children.

The primary grades were the second most desirable group. The school has had less time to influence the child. Presumably, he would be more of a product of the home than at any other school level. On further consideration, the real problems of what to measure and how to do this in the child's first three school years seemed to pose many difficulties. The writer hoped to keep the measuring to objective instruments, but found that such tests in personality or emotional adjustment were sadly lacking for this age group. The primary pupils as a group were, therefore, unwillingly given up.

To investigate this problem in the high school was really not possible for the writer due to established routines within the school system itself.

The final decision was to use the grade-six level. Here were students for whom tests were devised and for whom adolescence was not yet a major factor.

Factors to Study

There followed another major delimitation. What exactly was to be
measured to determine the effect on her offspring of having the mother in the labour force? Many of the general public have worried that these children would become delinquents. Could this factor be studied? The best place to find this information would be in social welfare and court records. This would be outside the school environment.

Emotional adjustment, social and self adjustment—these were other intriguing areas. However, objective testing in the field of personality is a relatively new science of measurement, and most tests do not have high proven validity. The writer was loathe to limit the investigation to these alone.

The problem may be approached from another direction. If the mother in full-time employment neglected her child, would she see that he had enough rest, regular school attendance, help with his homework, love and affection? In other words, did the working mother create a problem for the school? School records would contain many of these data. Cumulative records would disclose age, intelligence quotients, attendance, lateness, achievement measured by teacher-made and objective tests. One could give the pupils a personality test. Teachers' knowledge and opinion of the student's behaviour and attitude to school work would be useful also.

These were areas where the school itself not only could provide information, but also would be interested in the analysis of the data.

The superintendents of both Moose Jaw and Saskatoon were willing to allow the necessary facts to be collected from school records and
in addition to find out the marital status and employment status of the parents.

Hence, the delimited problem became narrowed considerably. It was to be concerned with the effect of the mother's employment outside the home upon the school achievement and adjustment of grade six pupils in the public schools of Moose Jaw and Saskatoon.

Specifically, this survey would attempt to throw some light on the following questions:

Is the child of the working mother more often late than the child of the non-working mother?

Are there differences in the chronological ages of these two groups which might affect any discrepancies found in other factors?

Are there differences in the intelligence quotients between the two groups?

Is the school attendance of the child of the working mother more irregular than that of the child of the non-working mother?

Does the child of the working mother achieve lower academic marks than the child of the non-working mother?

Does the child of the working mother receive lower scores in standardized achievement tests than the child of the non-working mother?

According to the measuring instrument, does the child of the working mother have poorer emotional adjustment than the child of the non-working mother?
CHAPTER IV

THE HYPOTHESIS OF THE STUDY

Most of the studies in the literature did not find significant differences between children of working mothers and those of non-working mothers. The writer, therefore, expects that there will not be great differences between the children of working and non-working mothers in any of the areas under study.

Accordingly, the general hypothesis of this research is that, in comparison with that of the children of non-working mothers at the grade-six level, the factor of the mother being employed outside the home does not significantly affect the school achievement and adjustment of her children.

This general expectation is stated in specific hypotheses.

1. There will not be significant differences in the chronological ages of the experimental group of children whose mothers work and of the control group of children whose mothers do not work.

2. There will not be significant differences between the mean intelligence quotients of the experimental group and the control group.

3. In total pupil-days attendance for one school year, when the means are computed, there will not be significant differences between
the two groups.

4. The average number of lates during the school year will not be significantly different for either group.

5. When the average marks for each pupil for the school year are considered, there will not be a significant difference between the means of the experimental and control groups.

6. The mean scores of the experimental group and the control group will not be significantly different when a standardized achievement test is used.

7. The results from a personality test will not reveal significant differences between children of employed mothers and those of non-employed mothers.

8. A chi-square analysis of teachers' judgment of the pupil's attitude to school work will reveal no significant differences.

9. These hypotheses will apply when the two groups are considered as whole groups, when the girls of the experimental group are compared with the girls of the control group, and when the boys of one are compared with the boys of the other.

To test these null hypotheses, it was necessary to gather data.
CHAPTER V

THE COLLECTION OF THE DATA

During the last month of the school year of 1956-7, the writer visited nine public schools in Moose Jaw and twenty-one in Saskatoon to collect the data for this study.

The question of lateness did not appear to be a problem in most of the schools. Because of this, records were not kept in a number of the classrooms. As a result, it was impossible to consider this factor in the investigation.

The total days of school attendance for the year for each grade six pupil in the two cities was obtained from the registers or cumulative record cards.

From the same sources, the birthdate of each student was secured and the chronological age then computed to the nearest month.

A recording was made of the pupils' intelligence quotients. In the Moose Jaw schools, the Laycock Mental Ability Test had been given to the population the previous year. In Saskatoon, the Otis Quick Scoring Mental Ability Tests had been used. The population had been given the Alpha Test at the primary level and many had recently been given the Beta Test. However, since many more cases would have had
incomplete records if the latter test were selected, the intelligence quotient derived from the Alpha Test was recorded.

The writer collected the year's average mark given to each student by his teacher. In Moose Jaw, this average mark was computed as a percentage by the class teacher on the basis of all the tests she had constructed or given during the year. Each individual teacher used her own standards and averaged the marks in each subject. In Saskatoon, the year's average for a pupil was given a letter grade of A, B, C, D, or E, with plus and minus rating at each level. This grading was calculated from a weighted credit system for the various subjects and used consistently in all schools. The subject marks seemed to be derived from teacher-made tests and objective tests.

In order to have a standardized measure of achievement the writer administered the Gates Reading Survey For Grades 3 to 10 to the Moose Jaw population. These tests were scored and the individual reading-grades included in the data. The Saskatoon classroom teachers had given this same test to grade six during a particular week in January, 1957. Hence their record cards contained the reading-grades for the pupils of that city.

The classroom teachers in Moose Jaw had just completed scoring The Dominion Tests, Diagnostic Tests in Arithmetic Fundamentals, Spring Term, Grade VI. Hoping to have a second standardized measure of achievement, the writer recorded these total scores made by each student. In Saskatoon, the School Board Office constructed a final arithmetic examination which was administered synonymously in all grade six class-
rooms. The test was scored according to explicit instructions from head office. The writer collected these data as a second gauge of achievement in Saskatoon.

Each student under study had spent a complete school year in most cases with the same classroom teacher. Hence, the teacher knew him well and her opinion of his adjustment was considered valuable. Each teacher was, therefore, given a sheet containing the names of her pupils and asked to rank them, giving number one to the pupil in her class with the best attitude toward school work, and the largest number to the one with the poorest attitude.

To determine whether the pupil's sense of security and emotional adjustment were affected by the mother's employment, the students were asked in both cities to complete the 53 items of a Children's Manifest Anxiety Scale by Taylor (23). These twelve hundred and fifty anxiety scales were then scored and the results tabulated with the data.

The greatest difficulty in gathering data was that of defining "working mother". To do this, considerable information about the home was needed. In Saskatoon, these facts were obtained from the school records, the principals and the classroom teachers. It was not possible, however, to determine in every case, whether the mother had been working a long or short period and, in a few instances, whether her work was full-time or part-time.

In Moose Jaw, each grade six student completed a questionnaire.¹ The pupil told the father's occupation, whether he was often unemployed, the mother's job outside the home, the shift she worked, and how long

¹ See Appendix I
she had been employed. To disclose marital status, the student told
who lived in the home: parents, step-parents, siblings, and step-
brothers and sisters.

These data were recorded carefully for each student and a
statistical analysis then made.
CHAPTER VI

THE PRESENTATION AND STATISTICAL ANALYSIS OF THE DATA

When all the data were compiled, the writer found a considerable number of students with incomplete records. Now it was most desirable to compare the same students in every factor of the study. As a result, although this weakened the representativeness of the sampling, all cases were dropped where information was lacking in one or more factors under investigation.

Sometimes a student had lived only part of a year in the city and his attendance for the full year was not available. A few students had been absent when the reading test or anxiety scale had been given, and these 18 cases for Moose Jaw and 33 for Saskatoon were not included. A very small number were eliminated because not enough was known about the home. In the largest number of instances, (24 in Moose Jaw and 75 in Saskatoon), it was the intelligence quotient which was missing. Probably these were new admissions after the intelligence testing had been carried out. The mobility of urban people today creates real problems in any cumulative record system.

In all, fifty-five cases were removed from the Moose Jaw sample, twenty-eight boys and twenty-seven girls. This represented
approximately fourteen per cent of the total cases of 400. The loss in Saskatoon was even higher, barely under twenty per cent. Of the 166 cases dropped, 99 were boys and 67 were girls. Such a reduction brought the total Saskatoon cases down from 845 recorded ones to 679 with complete information.

Definition of Terms

The sample was further refined so that it included only those students whose parents were living, and living together. In Moose Jaw, thirty-five cases had one parent permanently absent from the home due to death, desertion or divorce. In Saskatoon, this number was forty. Thirteen pupils in Moose Jaw and ten in Saskatoon had a guardian or step-parent at home.

It was decided to define "working mother" arbitrarily as one who was employed full-time outside the home and had been earning for the past twelve months, at least. It was felt that consideration of the effects upon the children of employment for a shorter period would weaken the study. Thus the number of cases became further reduced. Those whose mothers worked full-time for less than one year or part-time regardless of length of service were also removed from the lists. This reduced the Moose Jaw sample by 28 cases and the Saskatoon one by 33.

When the final count was made, 58 grade six pupils in Moose Jaw had full-time employed mothers, 35 boys and 23 girls. In the control group were 106 boys and 105 girls, or a total of 211 cases. The
Saskatoon sample had 96 in the experimental group, 52 boys and 44 girls; and it had 500 in the control group, 281 boys and 219 girls. A summary of these data is given in Table IV.

**TABLE IV**

A summary of the numbers of pupils in grade six according to various home factors and according to sex in Moose Jaw and Saskatoon

<table>
<thead>
<tr>
<th>Grouping</th>
<th>Moose Jaw</th>
<th></th>
<th>Saskatoon</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Total</td>
<td>Boys</td>
</tr>
<tr>
<td>Total Cases Recorded</td>
<td>213</td>
<td>187</td>
<td>400</td>
<td>467</td>
</tr>
<tr>
<td>Cases with incomplete records</td>
<td>28</td>
<td>27</td>
<td>55</td>
<td>99</td>
</tr>
<tr>
<td>Total Cases with Complete Records</td>
<td>185</td>
<td>160</td>
<td>345</td>
<td>368</td>
</tr>
<tr>
<td>Children with guardian or step-parent</td>
<td>8</td>
<td>5</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Children with one absent parent</td>
<td>21</td>
<td>14</td>
<td>35</td>
<td>16</td>
</tr>
<tr>
<td>Part-time working mother's children</td>
<td>15</td>
<td>13</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td>Full-time working mother's children</td>
<td>35</td>
<td>23</td>
<td>58</td>
<td>52</td>
</tr>
<tr>
<td>Non-working mother's children</td>
<td>106</td>
<td>105</td>
<td>211</td>
<td>281</td>
</tr>
</tbody>
</table>
For want of complete records, the problem of lateness had already been discarded. A further elimination was made. A critical examination of the arithmetic test used in Moose Jaw showed that it was really what it claimed to be, a diagnostic test of arithmetic fundamentals designed to pick out special mathematical difficulties, but not to be a measure of achievement as such. Furthermore, although the arithmetic test used in Saskatoon was an objective test, it was not standardized on any other population. Thus the writer decided to confine the study of achievement as measured by standardized instruments to the reading grades obtained on the Gates Reading Survey Test.

In order to make an analysis of the data, the following factors were treated statistically in the same way: chronological age, intelligence, school attendance, year's average mark, reading grade, and number of manifest anxieties. The means and standard deviations were calculated for the boys and girls taken separately and together in the experimental and control groups of both cities.

Table V shows these means and standard deviations for the city of Moose Jaw. Since the sample had only twenty-three girls and thirty-five boys in the experimental groups, a correction was made for small sampling in the calculation of all the standard deviations.
### TABLE V

**MEANS AND STANDARD DEVIATIONS IN THE FACTORS UNDER STUDY FOR THE CHILDREN OF WORKING MOTHERS, (GROUP A) AND OF NON-WORKING MOTHERS, (GROUP B), IN MOOSE JAW**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Boys Group A</th>
<th>Boys Group B</th>
<th>Girls Group A</th>
<th>Girls Group B</th>
<th>Total Group A</th>
<th>Total Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cases</td>
<td>35</td>
<td>106</td>
<td>23</td>
<td>105</td>
<td>58</td>
<td>211</td>
</tr>
<tr>
<td>Chronological-M (months) age</td>
<td>151.86</td>
<td>148.06</td>
<td>147.22</td>
<td>145.54</td>
<td>150.02</td>
<td>146.81</td>
</tr>
<tr>
<td></td>
<td>11.14</td>
<td>9.07</td>
<td>10.61</td>
<td>7.37</td>
<td>11.16</td>
<td>8.37</td>
</tr>
<tr>
<td>I.Q. (Laycock) M</td>
<td>101.28</td>
<td>109.22</td>
<td>104.61</td>
<td>108.33</td>
<td>102.60</td>
<td>108.78</td>
</tr>
<tr>
<td></td>
<td>16.78</td>
<td>16.10</td>
<td>17.39</td>
<td>15.57</td>
<td>17.10</td>
<td>15.84</td>
</tr>
<tr>
<td>Days Attendance M</td>
<td>190.57</td>
<td>189.59</td>
<td>187.22</td>
<td>188.48</td>
<td>189.24</td>
<td>189.04</td>
</tr>
<tr>
<td></td>
<td>9.11</td>
<td>6.19</td>
<td>8.32</td>
<td>7.37</td>
<td>8.93</td>
<td>6.82</td>
</tr>
<tr>
<td>Year's Average Mark (%)</td>
<td>61.57</td>
<td>67.94</td>
<td>68.96</td>
<td>70.57</td>
<td>64.67</td>
<td>69.28</td>
</tr>
<tr>
<td></td>
<td>12.88</td>
<td>12.34</td>
<td>13.71</td>
<td>11.63</td>
<td>13.41</td>
<td>11.94</td>
</tr>
<tr>
<td>Reading Grade M</td>
<td>6.21</td>
<td>6.64</td>
<td>6.17</td>
<td>6.72</td>
<td>6.19</td>
<td>6.67</td>
</tr>
<tr>
<td></td>
<td>1.52</td>
<td>1.34</td>
<td>1.31</td>
<td>1.42</td>
<td>1.44</td>
<td>1.38</td>
</tr>
<tr>
<td>Manifest Anxieties M</td>
<td>15.74</td>
<td>15.49</td>
<td>23.57</td>
<td>18.72</td>
<td>18.84</td>
<td>17.09</td>
</tr>
<tr>
<td></td>
<td>8.15</td>
<td>7.59</td>
<td>8.24</td>
<td>8.27</td>
<td>9.06</td>
<td>8.10</td>
</tr>
</tbody>
</table>
The data of Table V revealed for the Moose Jaw sample that there were mean differences, some apparently large and some very small, between the children of working mothers and those of non-working mothers. In all instances, except two, the differences were in favor of the control group. The exceptions were in school attendance for the boys and for the total number of the experimental group.

A similar comparison of the groups was made for the second city. Table VI shows their mean scores and standard deviations in the components under study.

Since the year's average for the Saskatoon students was recorded in letter grades rated on the basis of the total of points from a system of subject weighting, it was inappropriate to give these grades an arithmetical average. Accordingly, percentile ranks were found for the total sample of 679 cases. These percentile ranks were converted into normalized standard scores. It was then possible to find the means and standard deviations in the component of year's average mark for the various groupings of the sample.
TABLE VI

MEANS AND STANDARD DEVIATIONS IN THE FACTORS UNDER STUDY FOR THE
CHILDREN OF WORKING MOTHERS, (GROUP A), AND OF NON-WORKING
MOTHERS, (GROUP B), IN SASKATOON

<table>
<thead>
<tr>
<th>Factor</th>
<th>BOYS</th>
<th>GIRLS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
<td>Group B</td>
<td>Group A</td>
</tr>
<tr>
<td>Number of cases</td>
<td>52</td>
<td>281</td>
<td>44</td>
</tr>
<tr>
<td>Chronological M age (months)</td>
<td>150.13</td>
<td>149.17</td>
<td>146.23</td>
</tr>
<tr>
<td></td>
<td>9.47</td>
<td>9.29</td>
<td>7.16</td>
</tr>
<tr>
<td>I.Q. (Otis Alpha)</td>
<td>102.85</td>
<td>103.73</td>
<td>108.78</td>
</tr>
<tr>
<td>Days Attendance</td>
<td>184.02</td>
<td>185.99</td>
<td>185.86</td>
</tr>
<tr>
<td></td>
<td>10.06</td>
<td>10.69</td>
<td>6.20</td>
</tr>
<tr>
<td>Year's Average Z-score</td>
<td>.01</td>
<td>.03</td>
<td>.47</td>
</tr>
<tr>
<td></td>
<td>1.00</td>
<td>1.03</td>
<td>.96</td>
</tr>
<tr>
<td>Reading Grade</td>
<td>6.80</td>
<td>6.81</td>
<td>6.96</td>
</tr>
<tr>
<td></td>
<td>1.43</td>
<td>1.28</td>
<td>1.32</td>
</tr>
<tr>
<td>Manifest Anxiety</td>
<td>15.88</td>
<td>16.00</td>
<td>20.29</td>
</tr>
<tr>
<td></td>
<td>7.39</td>
<td>7.11</td>
<td>5.96</td>
</tr>
</tbody>
</table>
From Table VI, it is evident that the mean differences between the boys groups or girls or total groups in Saskatoon, showed variations in sizes. The total groups had consistently small differences. This was also true for the differences between the two samples of boys, with the exception of total days attendance. The differences for the girls, on the other hand, had wider variations. The girls of working mothers had differences in their favour in intelligence quotient and school attendance, but showed more manifest anxieties than the other girls.

In order to discover which of the differences were large enough to be taken as real and dependable, the standard error of the differences between each pair of uncorrelated means was calculated, and the t-value for Moose Jaw or the critical ratio for Saskatoon then computed.

In Table VII are presented these results for the Moose Jaw samples. Since the standard deviation had been corrected for small grouping, it was necessary to select levels of significance from Student's Table (50: 427). The chart below shows the t-value at the .05, .02, and .01 levels of confidence for 23, 35 and 60 degrees of freedom.

<table>
<thead>
<tr>
<th>TABLE OF T₁ FOR THE USE IN DETERMINING THE RELIABILITY OF STATISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>df=23</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>.05 level of confidence</td>
</tr>
<tr>
<td>.02 level of confidence</td>
</tr>
<tr>
<td>.01 level of confidence</td>
</tr>
</tbody>
</table>
TABLE VII


<table>
<thead>
<tr>
<th>Factor</th>
<th>Statistic</th>
<th>Boys of Groups A and B</th>
<th>Girls of Groups A and B</th>
<th>Group A and Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronological Age (months)</td>
<td>D S.E. D</td>
<td>-3.80  2.08</td>
<td>-1.68  2.33</td>
<td>-3.21  1.57</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>1.83</td>
<td>.72</td>
<td>2.04</td>
</tr>
<tr>
<td>I. Q.</td>
<td>D S.E. D</td>
<td>-7.93  3.24</td>
<td>-3.72  3.93</td>
<td>-6.18  2.53</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>2.45</td>
<td>.95</td>
<td>2.44</td>
</tr>
<tr>
<td>School-days Attendance</td>
<td>D S.E. D</td>
<td>.98  1.67</td>
<td>-1.26  1.88</td>
<td>.20  1.26</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>.58</td>
<td>.68</td>
<td>.16</td>
</tr>
<tr>
<td>Year's Average Mark (per cent)</td>
<td>D S.E. D</td>
<td>-6.37  2.48</td>
<td>-1.61  3.08</td>
<td>-4.61  1.94</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>2.56</td>
<td>.52</td>
<td>2.38</td>
</tr>
<tr>
<td>Reading Grade Grade-level</td>
<td>D S.E. D</td>
<td>-.43  .29</td>
<td>-.55  .31</td>
<td>-.48  .21</td>
</tr>
<tr>
<td>Points</td>
<td>t</td>
<td>1.48</td>
<td>1.77</td>
<td>2.29</td>
</tr>
<tr>
<td>Manifest Anxieties</td>
<td>D S.E. D</td>
<td>.25  1.49</td>
<td>-4.85  1.90</td>
<td>-1.75  1.31</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>.16</td>
<td>2.55</td>
<td>1.33</td>
</tr>
</tbody>
</table>
An examination of the t-values in Table VII disclosed no value significant at the .01 level of confidence. At the .02 level of confidence, the boys of working mothers were significantly lower in intelligence quotient and in year's average mark. The girls of working mothers had, at the .02 level of confidence, more manifest anxieties. When the total groups were considered at this level, the pupils at the experimental group were lower in intelligence quotient. At the .05 level of confidence, working mothers' children were significantly older chronologically, lower in average marks and reading grade, as well as in intelligence quotient.

The standard errors of differences and the critical ratios for the Saskatoon sample were outlined in Table VIII.
TABLE VIII


<table>
<thead>
<tr>
<th>Factor</th>
<th>Statistic</th>
<th>Boys of Groups A and B</th>
<th>Girls of Groups A and B</th>
<th>Group A and Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>S.E.</td>
<td>C.R.</td>
</tr>
<tr>
<td>Chronological Age (months)</td>
<td>D</td>
<td>1.43</td>
<td>1.57</td>
<td>1.23</td>
</tr>
<tr>
<td>I. Q.</td>
<td>D</td>
<td>1.40</td>
<td>1.17</td>
<td>1.71</td>
</tr>
<tr>
<td>School Days Attendance</td>
<td>D</td>
<td>-1.97</td>
<td>1.81</td>
<td>2.88</td>
</tr>
<tr>
<td>Year's Average Z-score</td>
<td>D</td>
<td>- .02</td>
<td>- .04</td>
<td>- .02</td>
</tr>
<tr>
<td>Reading Grade Grade-level</td>
<td>D</td>
<td>- .01</td>
<td>- .10</td>
<td>- .04</td>
</tr>
<tr>
<td>Manifest Anxieties</td>
<td>D</td>
<td>+ .12</td>
<td>-2.02</td>
<td>1.02</td>
</tr>
</tbody>
</table>
In general the critical ratios in Table VIII were consistently small. Only one, the difference in means of manifest anxieties for the girls, showed a higher number of these manifest anxieties for working mothers' children at the .05 level of confidence. None of the differences were significant at the .01 level of confidence.

From the critical ratios in Tables VII and VIII the writer drew certain statistical conclusions. At the .01 level of confidence the null hypotheses were accepted: there were not significant differences between the grade six children of working and of non-working mothers in chronological age, intelligence, total year's attendance, year's average standing, reading grade, or manifest anxieties as measured by the various devices outlined in the study.

In order to compare the groups in attitude toward school work, the ranks given to the students by the teachers were divided into quartiles. The lower quartile was given a rating of 4, the second one 3, the third 2 and the upper quartile 1. Then chi-square was calculated to see if there were significant differences between the groups in attitude to school work as rated by the classroom teacher. Table IX shows the resulting chi-squares, and the significance or probability of exceeding the tabulated value for three degrees of freedom.
TABLE IX

COMPARISON BY CHI-SQUARE TEST OF ATTITUDE TO SCHOOL WORK AS RANKED BY THE CLASSROOM TEACHER OF CHILDREN OF WORKING MOTHERS, (GROUP A), AND OF NON-WORKING MOTHERS, (GROUP B), IN GRADE SIX IN MOOSE JAW AND SASKATOON PUBLIC SCHOOLS

<table>
<thead>
<tr>
<th>City</th>
<th>Statistic</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moose Jaw</td>
<td>Chi-square df 3</td>
<td>1.26</td>
<td>2.91</td>
<td>4.88</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>Between .80 and .70</td>
<td>Between .50 and .30</td>
<td>Between .20 and .10</td>
</tr>
<tr>
<td>Saskatoon</td>
<td>Chi-square df 3</td>
<td>2.73</td>
<td>2.52</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>Between .50 and .30</td>
<td>Between .50 and .30</td>
<td>Between .50 and .30</td>
</tr>
</tbody>
</table>

Clearly in Table IX, none of the values of chi-square are statistically significant. Therefore, the null hypothesis that there will not be significant differences in attitude to school work as judged by classroom teachers between the experimental and control group is accepted.

Now in Table VII, the Moose Jaw sample of children of working mothers are found to be older chronologically, lower in average marks and reading grade, as well as in intelligence quotients at the .05 level of confidence. Clearly, the attempt to isolate school achievement and adjustment is foiled in part by these differences in chronological age.
and intelligence quotients. The writer, therefore, carried out a second statistical analysis of the data.

In both samples, each case in the experimental group was matched in chronological age and intelligence quotient with a case in the control group. Because some cases could not be matched, this reduced the numbers somewhat. Table X shows the resulting pairs for both cities.

**TABLE X**

<table>
<thead>
<tr>
<th>City</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moose Jaw</td>
<td>30 pairs</td>
<td>20 pairs</td>
<td>50 pairs</td>
</tr>
<tr>
<td>Saskatoon</td>
<td>50 pairs</td>
<td>42 pairs</td>
<td>92 pairs</td>
</tr>
</tbody>
</table>

Once again, the means and standard deviations were calculated for these groups in the factors of school attendance, average marks, reading grades, and manifest anxieties. Corrections for small sampling were made. The t-values were then calculated for the obtained means and standard deviations. Tables XI and XII contain the obtained means and standard deviations for Moose Jaw and Saskatoon, respectively, and Tables XIII and XIV, the computed t-values for the differences in means of equivalent groups.
TABLE XI

MEANS AND STANDARD DEVIATIONS IN THE FACTORS UNDER STUDY WHEN THE CHILDREN OF WORKING MOTHERS, (GROUP A), ARE PAIRED WITH THE CHILDREN OF NON-WORKING MOTHERS, (GROUP B), IN CHRONOLOGICAL AGE AND INTELLIGENCE QUOTIENT IN THE MOOSE JAW SAMPLE

<table>
<thead>
<tr>
<th>Factor</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group A</td>
<td>Group B</td>
<td>Group A</td>
</tr>
<tr>
<td>Total Days-M Attendance</td>
<td>190.77</td>
<td>190.93</td>
<td>186.40</td>
</tr>
<tr>
<td></td>
<td>5.61</td>
<td>5.27</td>
<td>8.44</td>
</tr>
<tr>
<td>Year's Average Mark (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade M</td>
<td>63.37</td>
<td>66.80</td>
<td>70.15</td>
</tr>
<tr>
<td></td>
<td>10.33</td>
<td>14.48</td>
<td>11.79</td>
</tr>
<tr>
<td>Reading Grade M</td>
<td>6.33</td>
<td>6.25</td>
<td>6.12</td>
</tr>
<tr>
<td>(Gates) s</td>
<td>1.41</td>
<td>1.26</td>
<td>1.25</td>
</tr>
<tr>
<td>Manifest Anxieties M</td>
<td>15.67</td>
<td>15.40</td>
<td>23.30</td>
</tr>
<tr>
<td>(Taylor's)</td>
<td>7.18</td>
<td>8.33</td>
<td>8.89</td>
</tr>
<tr>
<td>N</td>
<td>30</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>
TABLE XII

MEANS AND STANDARD DEVIATIONS OF THE FACTORS UNDER STUDY WHEN THE CHILDREN OF WORKING MOTHERS, (GROUP A), ARE PAIRED WITH THE CHILDREN OF NON-WORKING MOTHERS, (GROUP B), IN CHRONOLOGICAL AGE AND INTELLIGENCE QUOTIENT IN THE SASKATOON SAMPLE

<table>
<thead>
<tr>
<th>Factor</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Total Days-M</td>
<td>183.70</td>
<td>186.46</td>
<td>185.45</td>
</tr>
<tr>
<td>Attendance s</td>
<td>10.42</td>
<td>5.30</td>
<td>6.16</td>
</tr>
<tr>
<td>Year's Average M</td>
<td>- .01</td>
<td>- .21</td>
<td>.47</td>
</tr>
<tr>
<td>(Normalized Z-Score)</td>
<td>1.03</td>
<td>1.03</td>
<td>.87</td>
</tr>
<tr>
<td>Reading Grade M</td>
<td>6.80</td>
<td>6.88</td>
<td>7.09</td>
</tr>
<tr>
<td>(Gates) s</td>
<td>1.45</td>
<td>1.30</td>
<td>1.30</td>
</tr>
<tr>
<td>Manifest Anxieties M</td>
<td>16.10</td>
<td>15.60</td>
<td>20.09</td>
</tr>
<tr>
<td>(Taylor's) s</td>
<td>7.39</td>
<td>6.76</td>
<td>5.93</td>
</tr>
<tr>
<td>N</td>
<td>50</td>
<td>50</td>
<td>42</td>
</tr>
</tbody>
</table>
TABLE XIII


<table>
<thead>
<tr>
<th>Factor</th>
<th>Statistic</th>
<th>Boys of Groups A and B</th>
<th>Girls of Groups A and B</th>
<th>Group A and Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$r$</td>
<td>$D$</td>
<td>$t$</td>
</tr>
<tr>
<td>Total-Days Attendance</td>
<td></td>
<td>-.15</td>
<td>-.16</td>
<td>.12</td>
</tr>
<tr>
<td></td>
<td>$S.E.D$</td>
<td>1.30</td>
<td>2.06</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>$t$</td>
<td></td>
<td></td>
<td>.83</td>
</tr>
<tr>
<td>Year's Average Mark (%)</td>
<td></td>
<td>$.32</td>
<td>$.57</td>
<td>$.42</td>
</tr>
<tr>
<td></td>
<td>$D$</td>
<td>-.343</td>
<td>+2.25</td>
<td>-1.16</td>
</tr>
<tr>
<td></td>
<td>$S.E.D$</td>
<td>2.71</td>
<td>2.88</td>
<td>2.01</td>
</tr>
<tr>
<td></td>
<td>$t$</td>
<td></td>
<td>.78</td>
<td>.58</td>
</tr>
<tr>
<td>Reading Grade (Gates)</td>
<td></td>
<td>$.52</td>
<td>$.65</td>
<td>$.56</td>
</tr>
<tr>
<td></td>
<td>$D$</td>
<td>+.08</td>
<td>-.14</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td>$S.E.D$</td>
<td>.24</td>
<td>.23</td>
<td>.17</td>
</tr>
<tr>
<td></td>
<td>$t$</td>
<td></td>
<td>.61</td>
<td>.06</td>
</tr>
<tr>
<td>Manifest Anxieties (Taylor's)</td>
<td></td>
<td>$.11</td>
<td>$.20</td>
<td>$.18</td>
</tr>
<tr>
<td></td>
<td>$D$</td>
<td>+.27</td>
<td>+.95</td>
<td>+.14</td>
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<tr>
<td></td>
<td>$S.E.D$</td>
<td>1.90</td>
<td>2.31</td>
<td>1.51</td>
</tr>
<tr>
<td></td>
<td>$t$</td>
<td></td>
<td>2.14</td>
<td>1.42</td>
</tr>
<tr>
<td>$N$</td>
<td></td>
<td>30</td>
<td>20</td>
<td>50</td>
</tr>
</tbody>
</table>
TABLE XIV


<table>
<thead>
<tr>
<th>Factor</th>
<th>Statistic</th>
<th>Boys of Groups A and B</th>
<th>Girls of Groups A and B</th>
<th>Group A and Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>r</td>
<td>D</td>
<td>S.E. D</td>
</tr>
<tr>
<td>Total-Days Attendance</td>
<td></td>
<td>+ .17</td>
<td>- .19</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-2.76</td>
<td>+ .55</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.54</td>
<td>1.40</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.79</td>
<td>.39</td>
<td>1.96</td>
</tr>
<tr>
<td>Year's Average (Normalized Scores)</td>
<td></td>
<td>+ .23</td>
<td>+ .53</td>
<td>+ .56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ .20</td>
<td>- .18</td>
<td>+ .02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.64</td>
<td>.18</td>
<td>.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.31</td>
<td>1.00</td>
<td>.18</td>
</tr>
<tr>
<td>Reading Grade (Gates)</td>
<td></td>
<td>+ .26</td>
<td>+ .47</td>
<td>+ .35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- .08</td>
<td>- .01</td>
<td>- .05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.24</td>
<td>.21</td>
<td>.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.33</td>
<td>.05</td>
<td>.20</td>
</tr>
<tr>
<td>Manifest Anxieties</td>
<td></td>
<td>+ .04</td>
<td>- .15</td>
<td>+ .01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- .50</td>
<td>+1.90</td>
<td>+1.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.39</td>
<td>1.62</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.36</td>
<td>1.17</td>
<td>1.08</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>50</td>
<td>42</td>
<td>92</td>
</tr>
</tbody>
</table>
When the two factors of chronological age and intelligence were controlled, all except one of the obtained differences between means were below the .05 level of confidence. The one t-value significant at the .05 level was for the experimental group of girls in the Moose Jaw sample who have more manifest anxieties as revealed by the measuring instrument.

In the last factor, the teacher's ranking of the students in attitude to school work, a chi-square analysis was carried out. Table XV shows these results and the probability of these figures being exceeded for three degrees of freedom. Once again, no statistically significant differences are revealed.
TABLE XV

COMPARISON BY CHI-SQUARE TEST OF ATTITUDE TO SCHOOL WORK AS MARKED BY THE CLASSROOM TEACHER OF CHILDREN OF WORKING MOTHERS, (GROUP A), AND OF NON-WORKING MOTHERS, (GROUP B), IN GRADE SIX IN MOOSE JAW AND SASKATOON PUBLIC SCHOOLS WHEN THE PUPILS ARE PAIRED IN CHRONOLOGICAL AGE AND INTELLIGENCE QUOTIENTS

<table>
<thead>
<tr>
<th>City</th>
<th>Statistic</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moose Jaw</td>
<td>Chi-square df</td>
<td>3.68</td>
<td>1.98</td>
<td>4.76</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>Between .30 and .20</td>
<td>Between .70 and .50</td>
<td>Between .20 and .10</td>
</tr>
<tr>
<td>Saskatoon</td>
<td>Chi-square df</td>
<td>2.12</td>
<td>6.52</td>
<td>6.26</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>Between .70 and .50</td>
<td>Between .10 and .05</td>
<td>Between .10 and .05</td>
</tr>
</tbody>
</table>
From the t-values in Tables XIII and XIV, the writer drew similar statistical conclusions when the cases in the experimental groups were matched with cases in the control groups in chronological age and intelligence as when they were not so paired. At the .01 level of confidence the null hypotheses were accepted: differences in total year's attendance, year's average standing, reading grade, or manifest anxieties between the grade six children of working and of non-working mothers in Moose Jaw and Saskatoon were not significant. Likewise, the null hypothesis was accepted for the matched groups that there are not significant differences in attitude to school work as judged by classroom teachers.

Finally, the general hypothesis was also accepted. At the grade six level, the factor of the mother being employed outside the home does not significantly affect the school achievement and adjustment of her children when compared with that of the children of non-working mothers.
CHAPTER VII

A CRITICAL ANALYSIS OF THE DATA

A critical analysis of the findings in this study involves three major phases. First, there must be recognition of the limitations and the weaknesses in the survey itself. Then, the measuring instruments must be evaluated for reliability and validity. Finally, the statistical analysis should be interpreted in the light of these encumbrances.

Limitations of the Survey

Geographical. The survey undertaken by the writer has severe geographical limitations. Two prairie cities, one of 30,000 and the other of 70,000 population, could hardly be called representative of large, highly industrialized Canadian cities. Nor could these areas be said to represent the population generally when rural and urban parts are combined. Neither Saskatoon nor Moose Jaw is highly industrialized, and the proportion of mothers who work is less than for a large metropolis. In the United States, one in four mothers of school age children work, yet in this survey at the grade six level of children, both cities had only about one in eight (Moose Jaw 65/400
Because these cities are smaller and less industrialized, there is not such a high degree of depersonalization in them as in a larger metropolis. Neighbours are better acquainted. Because they have friends and acquaintances around and near them, it is possible for children to be unattended by a mother for periods of the day and yet not feel lonely. They know their schoolmates better. The baker, milkman and postman are more likely to be the same men for years or even their friends. Shopping downtown is a neighbourly excursion. Entertainment is more likely to be among the same individuals whether the children attend Y.M.C.A., church, school, theatre, or the ball game.

Age. A second major limitation is the age restriction of the survey. It is a study of the grade six population of boys and girls. Conclusions are, therefore, not to be applied to pre-school, primary, or high school groups.

Incomplete records. Furthermore, the data were incomplete for some grade-six pupils so that a fair proportion of cases had to be removed from the study. As indicated in this report, 14 per cent of Moose Jaw cases and nearly 20 per cent of Saskatoon ones were dropped because of incomplete records. An attempt was made to see if either the experimental or control group suffered greater loss by proportion. In Moose Jaw, 7 incomplete cases had working mothers and 36 non-working mothers; in Saskatoon, incomplete cases with employed mothers totalled 18 and with non-employed, 121. Hence, a slightly larger
proportion of students of the experimental group was omitted from the final total than the one-eighth proportion in the original group.

Since the reasons for omitting the cases varied from being absent from a reading test, a scale of manifest anxiety, or an intelligence test, to absence from that school system for part of a year, it is impossible to guess the effect upon the data of such eliminations.

Home factor. This survey was dependent upon the information about the home which the school could provide or would allow the writer to gather. School systems often do not record detailed information about the home, or if they do, they may not keep it up to date. Part of the reason for this is the unwillingness of parents to disclose information to the school. When they know that a cumulative record card contains facts about the home, some parents always object. They feel such matters are private and not the business of the school. This point is well illustrated by three parents who complained to the Saskatoon superintendent about some items of the Scale of Manifest Anxiety used in this study. This superintendent felt it would cause unnecessary trouble to the system to have the children reporting to their parents that they completed a questionnaire about who lived in the home, what were the occupations of the parents and how long the mother had worked (See Appendix A). The writer had, therefore, to be content with what information the individual schools could provide in Saskatoon.

Since it was impossible to define the working mother more accurately from available information, the survey is thereby weakened. Because
the only stipulation regarding length of employment for the mother was a twelve-month period, there is no opportunity to investigate whether, in the experimental groups, the results differ when the mother works during her child's pre-school years from when she seeks employment only after school. In a study of working mothers' children, the researcher will have difficulty obtaining detailed information about the home in a representative sample.

Socio-economic factor. The study does not separate the job factor and examine the results for children when their parents are matched according to occupation or economic status. The record of parental employment was secured in Saskatoon from school records and in Moose Jaw from the students themselves. Even so, no firm lines could be drawn for classification. A carpenter could be a skilled craftsman or a labourer. An engineer could mean a graduate engineer in the professional class, or a stationary engineer in the craftsman group. Since the grouping contains inaccuracies due to outdated information, classification errors, and no facts about salary, the data cannot really be used for research purposes. In Tables XVI and XVII, a very rough classification was made for the two cities. The data, however, do point out general areas of similarities and can be suggestive where wide differences occur.
TABLE XVI

A ROUGH CLASSIFICATION OF THE OCCUPATIONS OF THE PARENTS OF THE GRADE SIX CHILDREN OF WORKING MOTHERS AND NON-WORKING MOTHERS IN MOOSE JAW

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Children of Non-working Mothers</th>
<th>Children of Working Mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Father's Occupation</td>
<td>Father's Occupation</td>
</tr>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>Professional Technical</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Small Business Managerial &amp; Administrative</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Craftsmen</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Production &amp; Transportation</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Service, Sales &amp; Clerical</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Labourers</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Farmers</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Armed Forces</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>TOTALS</td>
<td>104</td>
<td>102</td>
</tr>
</tbody>
</table>
# TABLE XVII

**A ROUGH CLASSIFICATION OF THE OCCUPATIONS OF THE PARENTS OF THE GRADE SIX CHILDREN OF WORKING MOTHERS AND OF NON-WORKING MOTHERS IN SASKATOON**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Occupation of Father</th>
<th>Occupation of Father</th>
<th>Occupation of Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Total</td>
</tr>
<tr>
<td>Professional &amp; Technical</td>
<td>30</td>
<td>24</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>11%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Small Business &amp; Managerial</td>
<td>58</td>
<td>35</td>
<td>93</td>
</tr>
<tr>
<td>Administrative</td>
<td>21%</td>
<td>16%</td>
<td>19%</td>
</tr>
<tr>
<td>Craftsmen</td>
<td>47</td>
<td>45</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>17%</td>
<td>20%</td>
<td>18%</td>
</tr>
<tr>
<td>Production &amp; Transportation</td>
<td>26</td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>9%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Service Sales &amp; Clerical</td>
<td>56</td>
<td>46</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Labourers</td>
<td>36</td>
<td>29</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Farmers</td>
<td>19</td>
<td>10</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Armed Forces</td>
<td>4</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>TOTALS</td>
<td>276</td>
<td>217</td>
<td>493</td>
</tr>
</tbody>
</table>
In both cities the percentage of mothers employed in professional or technical work was roughly 16 per cent, and in service, sales and clerical work approximately 77 per cent. In the two cities, the bias in father's occupation appeared to be toward a higher socio-economic level for the control groups. Each city did have similar proportions of labourers in the control and experimental groups. There were no farmers in the experimental group in Saskatoon, but equal small proportions in the other three groups.

Not enough information was available to study the effect upon the children of the shift worked by the parents. Nor could any study be done of the child-care arrangements made by the mother when she works, whether there is help in the home, or whether extra duties are asked of the children. In a more comprehensive investigation these factors should be included.

Survey. Of course, the study is restricted by the very nature of a survey. It used measures of groups at one particular time. It cannot have perspective gained by observations and measurements over a period of time. It cannot be taken as an investigation of cause and effect. Its real function is to point out areas for further intensive study.

Areas measured. The problem in this study was to compare school achievement and adjustment of pupils. Just what does one measure to evaluate this? Brueckner and Bond (14: 7) consider that the effectiveness of an educational program is estimated by appraising the characteristics of the students as revealed by their progress in
school and by changes in their behavior in social situations in and out of school:

"For purposes of appraisal, educational outcomes can be grouped under three major headings:

1. Basic learnings directly related to areas of the curriculum, such as functional knowledge, skills, abilities, understandings and insights, and methods of thought, work and study.

2. Outcomes of a broad developmental nature, such as the individual's mental, physical, social, moral and emotional health; his interests, purposes, attitudes, and tendencies to act; his appreciations and satisfactions; his creativity in the arts and language expression; and his physical development.

3. Outcomes societal in nature, such as leadership, ability to deal with and solve problems of school and community life, skill in democratic cooperation, social sensitivity, and social creativity" (14: 7).

If this three-fold criterion were used as the basis of the interpretations of this study, it is quite apparent that the whole phase of social outcomes has been omitted from the investigation. Neither has there been broad measurement in the second area of developmental outcomes of education. The ratings by teachers in attitude to school work is one. So too is the measure of manifest anxieties. In the basic learnings related to curriculum, only the year's average mark and the reading grade have been included. Nonetheless, the factors of ability, age or school attendance cannot be overlooked since these all influence the effectiveness of the whole school program.

The Reliability and Validity of the Measuring Instruments

The data consist of several measures of two groups of students;
those of employed mothers and those of non-employed mothers. Before any interpretation of the statistical analysis can be made, some evaluation of the various factors must be done to discover what exactly was measured and how reliable and valid were the measuring instruments.

School Attendance. The total-days' attendance for each pupil came from the school registers. Since these registers are documents which classroom teachers are required to keep accurately and to balance the figures for the whole year, the totals can be taken as rather accurate measures of school attendance.

Chronological age. Chronological age is another factor where the scores are measures with equal units and absolute zero point. Birth certificates are required for school registration of the birthdate of each child. From this birthdate, the writer reckoned the child's age to the nearest month on the closing day of the school year. Calculations have been carefully rechecked to eliminate possible mechanical errors.

Variable measures. In the other factors in this study the measures are variables and expressed as scores. Distinctions among tests of intelligence, achievement, and personality are not always clear-cut. An intelligence test attempts to measure educability; an achievement test attempts to measure education; personality and character tests measure achievement of a different sort. In a sense every test is a test of personality. However, many aspects of personality cannot be measured yet by tests, but are evaluated by means of rating scales,
questionnaires, interviews, controlled observation, and the like. The measures of school achievement and adjustment used in this study need now to be evaluated.

Mental ability. The writer was fortunate to be able to use the measures of intelligence from the Laycock Mental Ability Test which had been secured in a comprehensive testing of the Moose Jaw sample only a few months previously. The same administrator gave the test and one person did all the scoring and recording. Tyler (130) evaluated the Laycock Mental Ability Test. He mentions that it contains tests of information and that age norms are based on relatively small numbers per grade level. On the other hand, the data presented in the manual compare favourably with those for many other group tests of mental ability.

In the Saskatoon system, the school records had the measure of intelligence according to the Otis Quick Scoring Mental Ability Tests, Alpha Test, administered during the child's primary years. It is recognized that these test results were obtained from four to five years ago. Broom (13) conducted a study to determine how constant was the I.Q. yielded by the Otis Self-Administering Test of Mental Ability. He found after an interval of five months, there were slight differences between the mean scores throughout the tenth to ninetieth percentile range with almost uniform differences at each percentile point. Traxler (129) studied the reliability, constancy, and validity of the Otis Intelligence Quotient. He reports that it is not high in reliability since its coefficient based on tests administered at least a year
apart was only .725. However, it compares favourably in reliability with intelligence quotients from other tests. The evidence indicates as well that the Otis I.Q. is at least as constant as the Stanford Binet I.Q. and perhaps it is slightly more so. Kuder (73) made a critical analysis of the Alpha Form of the Otis test. He found the reported reliability of .81 for the test not impressively high. He felt that since young children exhibit high variability of performance, and since there is a limited sampling of abilities, the reliability is adequate for group comparisons though not for prediction for an individual case.

Teacher's marks. Part of this study used measures of achievement based on the classroom teacher's average mark given to the student at the end of the school year. From talks with teachers, the writer found that marks in the separate subject areas were based upon teacher-made tests or subjective evaluations. In a few instances objective or even standardized tests were used.

The year's average for a Moose Jaw student was computed by averaging the marks in the separate subject areas. Some of the records had letter gradings for the subjects and percentage averages on the report card. Others had percentages throughout.

Saskatoon teachers had to use a weighted scale of points for the letter grades they gave each subject. For example, an A standing in reading was worth more points than the same mark in art. Next a scale for total points was followed to give the child an overall letter grade. This scale placed the grade-six population on a slightly negatively-
skewed normal curve. In order to treat these grades algebraically, the writer converted them into normalized standard scores.

There is disagreement among writers concerning the reliability of school marks. Ross (107) claims they are highly subjective and often somewhat of a function of the personality of the instructor rather than the performance of the student. He (107: 45) reports a study by Starch and Elliott where facsimile copies of the same geometry paper were marked by 116 high-school teachers of mathematics. The values assigned ranged from 28 to 92. "Manifestly, if high-school teachers cannot agree any more closely than that in mathematics, one of the most objective subjects, the situation is indeed bad," Ross concludes. Norsted (96) lists the factors which he considers influence the marks teachers assign to their pupils: actual attainment, teacher-pupil relationship, deportment, sex, promptness and attendance, personal appearance, obedience, effort and attitude.

Such claims have lead to investigations to find out exactly what a teacher's mark does measure. As early as 1925, Fleming (112: 562) found that pupils' marks were influenced most by the teachers' estimate of intelligence, school attitude, energy and chronological age. In his unpublished Doctor's Thesis, Hadley (54) tried to determine how much sex, appearance, deportment, and such enter into marks besides actual quality of performance. Basing actual achievement on the rating on the California Achievement Test Elementary Battery, Form AA, he found many most-liked pupils were marked far above actual attainment, while many least-liked pupils were marked far below. Sixteen of the 20
teachers, all of whom were women, assigned higher marks to girls, but in only 11 of the 20 classrooms did the girls make higher attainment scores, while the overall average of the boys and girls showed no significant difference in scores.

Carter (30) reports studies by Day, Douglas, Shinnerer, Garner, Swenson and himself where there was found a definite sex bias toward higher marks for girls than for boys. Volberding (112: 561) and Russell and Thalman (112: 564) had similar findings. Most of these writers also found that women teachers give higher marks than men teachers to both sexes.

Furthermore, the teacher's estimate of pupil's intelligence has been found to affect marks of pupils (30), (112: 563). The latter study by Russell and Thalman indicates a definite positive correlation between the mark of achievement which a pupil receives from a teacher and the personality rating of the pupil which the teacher makes ($r = +.66$). One might question the conclusion of a causal relationship since the same study found moderately lower correlations between the scores on a standardized reading test and the same personality ratings ($r = +.51$) and between intelligence quotient and the same ratings ($r = +.53$). The conclusion could also be drawn that there is a correlation between good personality adjustment, intelligence and achievement and that teachers' marks ought to show such a correlation if they are to be reliable and valid.

In the Encyclopaedia of Educational Research, Monroe (90: 713) gives a brighter picture of the reliability and validity of the year's average mark assigned by teachers. Studies of correlations between
marks given by the same teacher to the same students in successive
courses have been made. So, too, have correlations been calculated
between the marks actually given by the teachers and those the students
think they should receive. From all sources, Monroe decides that
there is justification for concluding that the usual reliability of
term marks can be indicated by a coefficient of from .70 to .80,
and perhaps even higher. Monroe considers, too, that these marks
warrant a validity coefficient from .70 to .80 as a measure of mastery
of subject matter.

Of course, the average marks used by this writer are subject to all
the imperfections and inaccuracies of any school marks. Nevertheless,
these factors operated in the marks of all students, so for group
comparisons, the teacher's measure of achievement should prove useful.

Reading grade. Standardized objective tests do eliminate many of
the sources of error of the teacher-made tests. Furthermore, it makes
possible more accurate comparisons of students who have different
classroom teachers. The Gates Reading Survey was used in the Saskatoon
schools to measure reading grade and to examine the three areas of
pupils' reading ability: vocabulary, level of comprehension, and speed.
In Moose Jaw, the superintendent was pleased to receive the same
information when the writer administered and scored these tests for the
grade six population.

Information provided in the Manual of Directions for Gates Reading
Survey includes reliability coefficients and inter-correlations of the
tests. At the grade six level, the correlation of Form I and Form 2
of the same test is given as .85. For group comparisons this test is, therefore, sufficiently reliable for this study.

**Personality measures.** There are many things to consider in the selection of a personality test. Strang (120: 211) points out that the validity of such a test is lowered by various sources of errors within the test itself. Students have a natural incentive to make a good showing. Questions in the inventory do not present the same stimuli to every individual; each person interprets the items in terms of his own experience and immediate mood. A satisfactory criterion of validity is difficult, if not impossible to obtain. Then a psychologically sophisticated, maladjusted person can answer the questions in such a way as to obtain a favourable score. To these sources of errors should be added that found by Symonds and Jackson (121). After surveying questionnaires, they conclude that the seclusive type of student tends to rate himself too low, and the boisterous rates himself too high in adjustment. Stern et al (119: 29) report a comprehensive investigation by McNemar regarding the validity of all potentially predictive devices at the adult level. Except for the Strong Vocational Interest Blank and the Miller Analogies test, none of the other objective personality tests and projective materials yielded correlations as high as .40.

At the children's level there is a much smaller number of objective personality tests. Most have low reliability, particularly in subtests, and have been validated with outside criteria to determine predictive values in very rare instances.
Several studies (10, (29), (56), (110) have not found differences for children of working mothers in personality adjustment when the California Test of Personality is used. It would seem wise to try some other form of rating scale to determine whether the factor of the mother working causes the child to be anxious, insecure, worried, or emotionally upset. As a final measure, therefore, the students of the sample completed the children's form of Taylor's Scale of Manifest Anxiety for use with fourth, fifth and sixth grade children (31). The scale contains a total of 42 anxiety items and 11 additional items, the L scale, designed to provide an index of the subject's tendency to falsify his responses to the anxiety items.

Castaneda (31: 322) correlated the scores of subjects on the 42 anxiety items with those on the L scale. For the different grade levels and for boys and girls separately, the correlation coefficients are not statistically significant and tend to cluster around the zero value. For group comparisons, it would seem justifiable to omit the scores of the L scale and to use only the scores on the anxiety items.

The norms (31: 230) provided for this scale at the sixth grade level indicate at the .005 level of confidence that the girls give significantly more "yes" responses than the boys.

There is a multiplicity of studies of the adult form of the Taylor Scale of Manifest Anxiety. Taylor (123) and Castaneda (31: 322) studied its reliability. Validation of the scale has been attempted by Taylor (123) using clinical observation as the outside criterion, and by Holtzman et all (60) using a similar scale by Winne.
What precisely does the Taylor Scale of Manifest Anxiety measure? That is difficult to say exactly. Psychologists use it to measure the level of drive of the individual and to determine its role in the performance of children (31: 326). Deese et al. (38) made a study of anxiety, anxiety reduction, and stress in learning. They feel that, to explain their findings, Taylor's interpretation of the effect of anxiety drive is too simple. Matarazzo and Phillips (82) also found low correlations between anxiety level and performance and concluded, "This implies what has long been known, that factors other than anxiety, or intelligence for that matter, are involved in learning ability."

Several studies have been made of the relationship between anxiety level and measures of intelligence (83), (115), (85), (117). Siegman (117) summarizes the validation studies of others and points out that some have found positive correlations, others equivocal or negative findings. Sarason (114) considers that the results thus far have been disappointing. He points out that the most reliable studies reported in the literature did not find that level of anxiety had any demonstrable effect on academic achievement.

Sarason (114) goes on to criticise the Taylor scale on the basis that it ignores the fact "that people are not anxious every minute of the day." He used his own general anxiety scale in his study. He found that the relationship between anxiety and achievement variables depended to an important extent on the nature of the instrument employed to measure anxiety.
Kendall (69) used as an outside criterion to measure anxiety, the judgment of nurses who had known the 93 patients with pulmonary tuberculosis used in this study. He concluded that the validity of the anxiety scale was useful only as a coarse measure of manifest anxiety and for selecting extreme groups. One might question the validity of his outside criterion and his choice of subjects, since, in a sanitarium for tuberculosis patients, great precautions are taken to eliminate anxiety-producing situations.

This review of literature leaves much to be desired in the findings of the usefulness of the adult form of Taylor's Scale of Manifest Anxiety. No studies specifically investigating the Children's form, except that of Castaneda et al (31), were found. Hence the writer is forced to admit that she has used a personality measuring device without proven predictive value or investigated validity.

Next, the writer sought the teacher's opinion about each student. Some writers are very critical of such measures. Laycock (76: 27), Mitchell (89: 306-7, and Wickman (143: 159-60) consider that there is little reliability in teachers' and counsellors' ratings. Monroe (90: 96) considers that judges must have an adequate definition of what is being rated. He and Burt (17) have found evidence that teachers tend to be more reliable in assessing such factors as industry, attainment in school work, and character than in neurotic tendencies. Shen (116) correlated each judge's rating with the average for 26 judges in several separate factors. He found that qualities such as memory, impulsiveness and adaptability had lower correlations than intelligence,
quickness, leadership and scholarship. Asch (90: 961) is reported to have found judges more accurate in assessing whole impressions rather than in rating isolated traits.

The total impression which the writer wished to obtain was attitude to school work. All told, it might be more reliable than the ratings on a list of separate school adjustment factors. In addition, it is well known that teachers are very busy people, especially at the end of the school year, and that long checklists are not really good for public relations.

The writer wished to have some rating that could be treated statistically and yet eliminate as many as possible of the sources of error in rating scales. Monroe (90) includes in these errors, the tendency to overestimate or underestimate in judging a trait, to rate with too much central tendency and too little variability and to be too lenient or severe. It was hoped that by asking teachers to put their students in rank order in attitude to school work, many of these errors would be reduced. Of course, this rank order does not eliminate errors of "halo" effect around some students or logical errors coming from presuppositions in the minds of the teacher and lack of definiteness of the trait rated.

In a few instances, the teachers observed to the writer how difficult it was to give a rank to each pupil and how unreliable her judgment was in doing this. A definition of attitude to school work doubtless varies among teachers. Some teachers consider it synonymous with marks; others take into consideration work habits; still others emphasize behaviour in class. Even careful definition of the term does not
guarantee that teachers accept the explanation as their criterion. There has also been found a bias in favour of ranking girls high and boys low in school work (54). This bias will not affect the chi-square value when girls are compared with girls or boys with boys, but will blur any differences for the combined groups.

Critical Analysis of the Data

On the basis of a statistical analysis of the data, the writer accepted the null hypothesis in all factors studied: there are not significant differences between the samples of boys, girls, or combined groups of the children of working mothers compared with those of non-working mothers. Such a statistical hypothesis should now be translated into theoretical conclusions. This should be done with full recognition of the weaknesses of the survey and of the measuring instruments already considered in this chapter.

The two factors of chronological age and intelligence should be dealt with first since the control group and experimental group ought to be comparable in these two respects in order to make any meaningful interpretation of differences in school achievement and adjustment.

Chronological age. When the differences between means of chronological ages were examined, at the .05 level of confidence, the Moose Jaw children of working mothers were older than those of non-working mothers. A closer examination of the data revealed that 4 boys of the experimental group of 35 cases were over 13-11 years of age, while only 5 of the 106 boys in the control group were in this same age group. For the girls in the experimental group, 3 of the 23 were two years
overage, but in the control group only 3 of the 105 cases were.
Overagedness was more a characteristic of the experimental group than
the control one, and of the boys' groups when compared with the girls.

The mean differences in chronological age for the Saskatoon
sample were very small and lacking in statistical significance (C.R.'s
.67, .23, .60). Among the students with working mothers, 4 of the 52
boys were two years retarded and 1 of the 44 girls. For the control
group, these figures were 18 of the 281 boys and 3 of the 219 girls.
Serious retardation appeared to be about equally characteristic of
the two Saskatoon samples, but more characteristic of the boys'
groups as compared with the opposite sex.

Ypsilantis and Bernert (147: 269) considered the factors which
affect the relative school progress of pupils. They list standards
and facilities of the schools, membership in broken homes, economic
pressures, inadequate attendance due to illness or family dinterested-
ness, changes of residence and of school. They report that backward­
ness in age-grade school progress occurs to a considerably greater
extent among males than among females. This predominately male
character of retardation increases as the degree of retardation
increases.

Intelligence. It would be erroneous to conclude from the data for
the Moose Jaw sample that there is a causal relation between retard­
atation and the child's mother being engaged in an outside job.
Association is not to be equated with causation. There are other re­
lated factors. In fact, of the 26 total cases of two year's retardation
only two had an I.Q. of over 89, (90 and 96). Not only were they older but they were also well below the mean I.Q. of 102.60 for Group A and 108.78 for Group B. The Saskatoon sample also had 26 cases which were two-years retarded. Four of these had Otis I.Q's. in the 100-108 group, 13 in the 90's, 7 in the 80's, and 2 in the 70's. Most of these cases, therefore, had I.Q's. well below the mean of slightly more than 105.

When the factor of intelligence was considered, the data revealed that the mean I.Q. of the Moose Jaw experimental group, as well as that of the boys taken separately, was lower in Laycock I.Q. at the .02 level of confidence. The girls did not have significant differences (t-value .95). In the Saskatoon groups, the critical ratios of the differences between means in Otis I.Q. were not significant, (.40, 1.59, .19), just as they were not in chronological age.

Studies have found quite high correlations between intelligence and achievement. Correlation coefficients of .44 to .63 between intelligence and scores on Stanford Achievement Tests in various subject areas at the grade-four level were reported by Barnes (9). Coleman and Cureton (36) correlated scores on the same achievement tests with forms CM and DM of the Otis Quick-Scoring Test Beta. They concluded from the obtained r's of .84 and .83, that a good school achievement test of reading and arithmetic measures essentially the same combination of functions as a typical group intelligence test.

In order to discover differences in achievement and adjustment which could not be attributed to differences in age or intelligence,
the writer attempted to control these two variables. Cases of the experimental groups were matched with cases of the control groups in chronological age, sex and intelligence quotient. The remaining portion of this chapter will, therefore, deal with interpreting two sets of data regarding differences between means, none significant at the .01 level of confidence.

School attendance. In the factor of school attendance, there were not significant differences between the means of the experimental and control groups either with age and intelligence as uncontrolled or as controlled variables. It would appear that the children of working mothers under study attended school as regularly as their classmates of non-working mothers. The differences varied from less than one school day to about 2.80 days. Certainly such small differences in attendance during a complete school year should not affect school achievement and adjustment appreciably.

Average marks. In the factor of average marks for unmatched groups, the significance of mean differences had the same pattern of values as the factor of intelligence. The boys of the experimental group in Moose Jaw were lower at the .02 level of confidence than the control group, while the total sample was within a second decimal point of having the same significance. The t-value for the girls of this city was only .52. For the Saskatoon groups, the critical ratios were very small (.14, .24, .20). When the groups were matched in age and intelligence, the t-value of the differences between the boys and between total groups in the former city decreased appreciably (t-values 1.27 and .58),
while the t-values for the other groups remained quite small and lacking in significance.

**Reading grade.** As with chronological age, intelligence quotient, and year's average mark, so with the reading grade, the significance of differences between the unmatched groups followed the same general pattern. The experimental group of Moose Jaw had significantly lower reading grades than the control group, but only at the .05 level of confidence. The boys and girls considered separately had t-values of 1.48 and 1.77 respectively. In Saskatoon, the sample had critical ratios which were very small (.05, .45, .26). Once again, when the groups were matched, the differences which had been appreciable became lessened (Moose Jaw t-values: .33, .61, and .06; Saskatoon t-values: .33, .05, and .20).

In the appraisal of basic learnings directly related to the areas of the curriculum, this study yielded conflicting results for the two unmatched samples. Saskatoon samples had very small differences. In Moose Jaw, although none of the differences were large enough to be significant at the .01 level of confidence, however, some were at the .02 level. Nevertheless, it would be folly to regard the lower school grades and reading grades as the result of the mother working when there were large differences in intelligence and in chronological age. The writer found, for example, a Pearson r of .81 between Laycock I.Q. and reading grade of the 35 Moose Jaw boys of working mothers. When the groups were matched to control the age and intelligence variables, the differences were well below the .05 level of confidence. Hence, the
larger differences found in basic learnings could be attributed to the lack of comparability of the unmatched groups in chronological age and intelligence quotients.

When matched in these variables with children of non-working mothers, the grade-six pupils of working mothers of the samples did not have significant differences in year's average marks or reading grades. These were the only two measures used in this study to appraise basic learnings directly related to the areas of the curriculum. In this study, students in grade six appeared to achieve as high marks for their year's work and as high reading grades in the Gates Reading Survey whether their mothers were employed outside the home or not.

**Manifest anxiety.** The second area of the educational program is that of the child's emotional and mental health. Only two measures were attempted in this broad developmental area where the pupil's interests, attitudes, and emotional maturity are of prime importance, but where valid objective measures are well-nigh impossible to obtain.

The differences of levels of anxiety as measured by the Taylor's Scale of Manifest Anxiety for children were the only ones where both cities in the study were similar. The mean differences for the boys, matched or unmatched, were not significant. However, the unmatched girls of working mothers expressed a higher level of manifest anxiety in Saskatoon at the .05 level and in Moose Jaw at the .02 level. When the factors of age and intelligence were held constant, the differences in the Saskatoon sample were below the .05 level, but the
Moose Jaw sample of girls still had mean differences significant at the .05 level.

As has been pointed out, studies have found that girls have higher "yes" responses than the boys. This study also found the same sex difference. In Moose Jaw, the experimental group of girls had a mean of 23.57, the boys 15.74, the control group of girls 18.72, the boys 15.49. Similarly in Saskatoon, the experimental group of girls had a mean of 20.29, the boys 15.88, the control girls 18.27 and boys 16.00. These means were modified only very slightly by matching in age and intelligence.

Since the Taylor scale for children has, as yet, not been validated empirically, one cannot really predict what the differences found in this study mean. This may very well prove to be a field yielding positive results in future investigations.

Attitude to school work. The final measure in the study is attitude to school work. This is not an independent factor, but is related to achievement and ability. The student who does well in school or learns readily is more likely, other things being equal, to have a good attitude toward his school work. Hence, this is not a clear-cut, independent measurement, but rather a help in completing the picture of school adjustment.

An examination of the data discloses a bias in favour of ranking the girls in the upper quartile. The Moose Jaw teachers placed 6 of the 23 girls of working mothers in the top quartile, and only 3 in the bottom one, while they ranked 39 of the 105 girls of non-working
mothers in the upper quartile and only 8 of them in the lowest. These figures were quite different for the boys. Only 5 of the 35 boys of the experimental group were in the top division and 13 in the bottom; 23 boys in the control group were in the top quartile and 33 of 106 in the bottom division. In Saskatoon, with the exception of the boys in the experimental group whose numbers in the top and bottom quartiles in attitude to school work were equal, there were twice as many girls in the upper quartile as in the lowest one and twice as many boys in the lowest one as in the upper.

When the chi-square values in Tables IX and XV are examined, no statistically significant value is recorded. Reasons for lack of wide differences may be the unreliability of teachers' opinions and/or lack of agreement by the teachers on what constitutes good attitude to school work. In any case, the ratings by the teachers in this factor did not differ significantly in this study for the experimental and control groups. As judged by classroom instructors, these groups of children were similar in attitude to school work whether their mothers held a job outside the home or not.

There remains a summary of the study and the implications for further investigations as well as suggestions for future research.
CHAPTER VIII

SUMMARY AND CONCLUSIONS

Summary of the Investigation

Theoretical framework of the study. What are the effects of maternal employment upon the children? Must we expect repercussions in the children's emotional, intellectual or moral development? Is there any relationship between maternal employment and school adjustment problems? This study has tried to discover some of these effects.

Increasingly, women with young children are accepting jobs which take them away from their households during their working day. In the last twenty-five years, the proportion of employed married women in Canada's labour force has risen from one in fifty to one in eight. The causes of this increase are found rooted in the transitions in the family and society. Under the domestic system the mother was an integral part of the production unit. Then she was forced out of the labouring field in the Industrial Revolution. The jobs once done at home moved to factory, school, hospital and other institutions. Today, to regain an economic place in society, married women have to change the location of their work. Other forces which
cause the same trend are increasing technology, changing public opinion, co-education, longer life-span and changes in family size to a small conjugal unit. The dilemma for the mother is created by the fact that the new location of her work makes it impossible to rock the cradle at the same time.

Great amounts of controversial writing can be found discussing the effects of the employment of mothers outside the home. Some writers consider that the results are harmful to the mother herself, the family, the community and particularly to her children. Other writers are equally convinced that the results are beneficial and that any transition brings a need for social adjustments.

It has been a constant source of surprise and regret to the writer that there is so little evidence which has been scientifically collected and examined in the whole field of employment of married women. Most of the writing is based on opinion and prejudice. There are more and more enumerative studies being written, but very few comprehensive investigations dealing with sociological and psychological aspects of the problem.

**Literature.** A careful search of the literature revealed few studies of the effects of maternal employment upon the personality of the child. Such studies as were found dealt with quite small samples and were of the enumerative type. None used measuring instruments of personality with tested empirical validity. One study (42) found grade nine girls were less well adjusted when the mothers worked.
Five other investigations (10), (29), (56), (97), (110) did not find significant differences in personality adjustment. The latter four studies used the California Test of Personality as the measuring instrument. Only one study (93) investigated school success and that in Sweden. No information was available concerning the procedure in the study. Clearly the evidence in the literature was limited and inconclusive.

**Delimitation of the problem.** The writer attempted to compare the school achievement and adjustment of children of working and of non-working mothers. For practical reasons the study was restricted to two prairie cities, Moose Jaw and Saskatoon. The grade-level chosen was grade six where achievement and adjustment had measuring devices readily available. The information to be collected from the school records included chronological age, intelligence quotient, days-attendance for one school year, year's average mark, reading grade, teacher's judgment of attitude to school work, and manifest anxiety according to Taylor's scale for children. In addition, information was needed about the employment of the parents and whether the parents were the real parents and living together.

**Hypotheses.** The majority of the studies in the literature reviewed had not found significant differences between children of employed mothers and those of non-employed mothers. Hence, the general hypothesis of the research was that, at the grade-six level, the factor of the mother being in the labour market does not significantly affect the school achievement and adjustment of her children in compar-
ison with that of children of non-working mothers. Specifically there would not be differences when the sexes were compared separately or combined into single groups in any of the factors under study: chronological age, intelligence quotient, school attendance, average marks, reading grade, attitude to school work, or level of manifest anxiety.

Data collected. In grade six in June, 1957, some 1245 pupils were enrolled in Saskatoon and Moose Jaw. Records were complete in all the factors being investigated for 1024 students in all. It was decided to eliminate all cases where there was an absent parent due to death, desertion or divorce, where there was a step-parent or guardian, and where the mother worked only part-time or for less than twelve months previous to the collection of the data. The final sample in Moose Jaw included 58 children of working mothers and 211 of non-working mothers. In Saskatoon, the numbers were 96 and 500 respectively.

From the school registers, the total attendance was recorded for the school year. From the cumulative record cards, the birthdate was secured, as well as the intelligence quotient (Moose Jaw, Laycock I Q; Saskatoon, Otis Alpha I Q), year's average mark and reading grade obtained on the Gates Reading Survey. The teachers in each grade-six classroom placed their students in rank order in attitude to school work. Finally, the students completed the children's form of Taylor's Scale of Manifest Anxiety. In Saskatoon, the school records and principals and teachers provided information about the home. The pupils
in Moose Jaw completed a questionnaire disclosing who lived in the home and what were the occupations of the parents (See Appendix A).

**First statistical analysis.** In order to determine differences in school achievement and adjustment between the experimental group of pupils of employed mothers and the control groups of those of non-employed mothers, the following factors were treated statistically in the same way: chronological age, intelligence, school attendance, year's average mark, reading grade and number of manifest anxieties. The means and standard deviations were calculated for the boys and girls taken separately and together in the experimental and control groups of both cities. The t-values for Moose Jaw and the critical ratios for Saskatoon were then determined for the mean differences. In comparing the groups in attitude to school work, the teacher's rank order of the pupils was divided into quartiles and chi-square calculated to see if there were significant differences.

This analysis disclosed for Saskatoon no difference significant at the .01 level of confidence, and only the difference in manifest anxiety level for the girls significant at the .05 level of confidence.

The results were different for the Moose Jaw sample. Although there were not differences large enough to rule out chance in 99 cases out of one hundred, the children of working mothers were older chronologically, obtained lower average marks and reading grades, and also had lower intelligence quotients at the .05 level of confidence. The attempt to isolate differences in school achievement and adjustment due to working mothers was foiled in part by the differences in
Second statistical analysis. The writer then carried out a second statistical analysis of the data, matching the children of employed mothers in age, sex and intelligence quotient with pupils in the control group. Once again, means, standard deviations and t-values for mean differences were calculated in the factors of school attendance, year’s average, reading grade and manifest anxieties; in addition chi-square values were found for the quartile rank given the pupils in attitude to school work by the teachers.

From the t-values for matched groups, the writer drew similar statistical conclusions as for the unmatched groups. At the .01 level of confidence, the null hypotheses were accepted: there were not significant differences in total year’s attendance, year’s average standing, reading grade, attitude to school work, or manifest anxiety between the grade-six children of working and of non-working mothers in Moose Jaw and Saskatoon. Except for the girls in Moose Jaw in the factor of manifest anxiety, when the subjects were paired in age and intelligence, the mean differences were all below the .05 level of confidence.

Limitations of the study. Because of the geographical limitation and the restriction to one grade level in a particular school year, generalizations have to be limited. The representativeness of the sample was weakened by incomplete records in a number of cases. Detailed information about the home was not available.

The reliability and validity of the measuring instruments
inevitably affected the findings. In the previous chapters, studies dealing with each instrument in turn were reported. While each device was generally suitable for group comparisons, much more refined instruments would have been desirable. However, these were the best available to the writer for the study.

Conclusions

Value of the findings. This study was based on relatively small samples. Its failure to find differences will have to be checked with future investigations. As yet, there does not appear to be experimental evidence for differences in school adjustment and achievement due to working mothers. The effects of the single factor, maternal employment, if any, may be quite small and hence amenable only to the most refined measuring instruments.

It may well be that significant differences would be found if a refined definition of the working mother were used. Crucial variables need to be held constant. Some of these are: the motivation for working, the socio-economic level of the father's employment, the type of job of the mother, her working hours and holidays, the number of children, the mother substitute, the age of the children when she began working, and the presence or absence of tension between parents.

This research did not find significant differences. In this field, it may require studies of large numbers of children with the sub-variables or components of maternal employment well controlled.
Such research will be expensive and require long-term validation.

**Suggested future research.** Many important questions await scientific study for answers concerning effects of employed mothers upon their children.

A tremendous field for study concerns how early small children can safely give up the permanent stable devotion of one particular person with whom they have formed a close attachment. There is needed scientific research to see when such a break first becomes possible, for what length of time it can be made without harmful effects, and whether such breaks are equally injurious when they form part of an established routine. There is a need for objective investigation of how much of a mother's time and attention is needed by children at different age levels.

One of the important variables is the age of the child when the mother goes out to work. With careful attention to other factors, such as the mother substitute and the emotional climate of the home, a researcher could compare the effects upon the children under three years of age with those upon children of older age groups.

Further studies of school children could be made at various grade levels in different geographical areas. These studies should control, or at least take cognizance of the socio-economic factor, the hours of mother's employment, the number of children in the family, the number of years the mother has worked, and so on. The measuring devices should be extended to determine emotional and social development so that the total adjustment of the child could be evaluated.
The research which in the end might be most revealing would involve long-term studies of a sample of children. Development observed over a period of years would permit the investigator to consider cause and effect of important variables.
APPENDIX A

MY NAME IS __________________________ (Surname) __________________________ (First Name)

MY SCHOOL IS __________________________________________________________

MY AGE AT JUNE 30, 1957 is __________________________ (years) __________________________ (months)

I AM THE OLDEST IN THE FAMILY yes no
I AM THE YOUNGEST IN THE FAMILY Yes no

THE PEOPLE WHO LIVE IN MY HOME ARE THE FOLLOWING:

  FATHER yes no  STEP-FATHER yes no
  MOTHER yes no  STEP-MOTHER yes no
  SISTERS yes no  HOW MANY OLDER?_________ YOUNGER?________
  BROTHERS yes no  HOW MANY OLDER?_________ YOUNGER?________
  STEP-SISTERS yes no  HOW MANY OLDER?_________ YOUNGER?________
  STEP-BROTHERS yes no  HOW MANY OLDER?_________ YOUNGER?________

MY FATHER WORKS AT (place) __________________________________________

MY FATHER'S JOB IS __________________________________________

OFTEN MY FATHER DOES NOT HAVE A JOB yes no

MY MOTHER WORKS AT HOME AND AT (place) ________________________________

MY MOTHER'S JOB OUTSIDE THE HOME IS ________________________________

SHE HAS BEEN WORKING AWAY FROM HOME FOR ________ YEARS

THE SHIFT SHE WORKS IS  days  afternoons  nights  weekends
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