

THE UNIVERSITY OF MANITOBA

THE SOCIAL DETERMINANTS OF ABORTION ATTITUDES:

A SAMPLE OF EDMONTON FEMALES

by

Selina Yee-Kay Lam

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE
STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ARTS

DEPARTMENT OF SOCIOLOGY

WINNIPEG, MANITOBA

THE SOCIAL DETERMINANTS OF ABORTION ATTITUDES:

A SAMPLE OF EDMONTON FEMALES

BY

SELINA YEE-KAY LAM

A dissertation submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
of the degree of

MASTER OF ARTS

© 1979

Permission has been granted to the LIBRARY OF THE UNIVER-
SITY OF MANITOBA to lend or sell copies of this dissertation, to
the NATIONAL LIBRARY OF CANADA to microfilm this
dissertation and to lend or sell copies of the film, and UNIVERSITY
MICROFILMS to publish an abstract of this dissertation.

The author reserves other publication rights, and neither the
dissertation nor extensive extracts from it may be printed or other-
wise reproduced without the author's written permission.

ACKNOWLEDGEMENTS

I wish to acknowledge my debts to several people who have assisted in the completion of this thesis. Special gratitude goes to Dr. A. H. Latif, my advisor, for his constant encouragement, stimulating suggestions and patient guidance.

To Dr. W. Taylor and Dr. F. Chebib, I also extend my thanks. Constructive directions in regard to the analysis of data from Dr. Chebib have been indispensable.

I am also indebted to Dr. K. Krotki and Dr. P. Krishnan of the University of Alberta for permission to use data from their survey. Aid from Dr. L. Roberts in serving as mediator between us is also acknowledged.

I thank Mrs. E. Wong and Mrs. Jill Michalski for their speedy and accurate typing. Their stenographic skills are highly recommendable.

Finally, sincere appreciation belongs to Ron, my husband whose understanding and encouragement have been a source of moral support in times of frustration.

ABSTRACT

Previous research findings indicate that women's abortion attitude differentials are related to certain socio-demographic, cultural and socio-psychological variables. These are: age, rural residency, education, religiosity, religion, parity, ideal family size, perceived demand for abortion services, attitudes toward birth control, work experience, income level and sex-role attitudes. The present thesis attempts to evaluate which of these are the most significant determinants among a sample of 1,045 Edmonton females through stepwise regression analysis. As well, in view of the existence of overlapping relationships among these variables, factor analysis was performed to detect simpler dimensions that might underlie them. Data was taken from Growth of Alberta Family Study of 1973 and 1974.

Results indicate that only 14.9% of the total variance in women's abortion attitudes could be explained by the variables studied. Religiosity and women's sex-role attitudes were found to be the most important predictors. Four dimensions were also identified and termed: life cycle experience, extrafamilial orientation, theological influence and size of residence. Although none of these dimensions stood out as more predictive than the rest among the total sample, comparisons across three religious subgroups revealed interesting results.

In view of the surprising findings rendered by women's sex-role attitudes, it was suggested that further research should be attentive to the role played by this variable in differentiating women's attitudes toward abortion.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

ABSTRACT	i
----------------	---

CHAPTER		PAGE
I.	THE RESEARCH PROBLEM	1
	Introduction	1
	The Research Objectives	5
	The Organization of the Thesis	6
II.	REVIEW OF THE LITERATURE	7
	Introduction	7
	The Social Determinants of Abortion	
	Attitudes	8
	Background Characteristics	9
	Effects of Socio-Economic Status ...	9
	Educational Attainment	10
	Income Level	10
	Effects of Rural Residency	11
	Value, Beliefs and Related Attitudes .	12
	Effects of Theological Values and	
	Beliefs	13
	Religion	14
	Religiosity	14
	Effects of Women's Sex-Role	
	Perceptions	15
	The Concept of Women's Sex-Role	
	Attitudes	15
	Effects of Values and Beliefs Con-	
	cerning Fertility	18
	Ideal Family Size	18
	Attitudes Toward Birth Control ...	19
	Perceived Demand of Abortion	
	Services	19
	Life Cycle Experience	19
	Effects of a Woman's Age	20
	Effects of Women's Parity	21
	Effects of Work Experience	22
III.	RESEARCH METHODOLOGY	24
	Source of Data	24
	Sample Design	24
	Representativeness	25
	Representativeness of the sample to	
	the population	25

Representativeness of survey popula- tion to the universe	27
Operationalization of Dependent Variable.	29
Attitudes Toward Abortion	29
Operationalization of Key Independent Variables Selected for the Analysis ...	30
Background Characteristics	31
Attitude and Value Indicators	32
Life Cycle Variables	38
Technique of Analysis	39
IV. RESULTS OF THE STUDY	40
Introduction	40
The Results of the Correlation Analysis:	
The Study Sample	40
The Results of the Stepwise Regression Analysis	44
Interpretation of Results	49
Principal Component Analysis of Factors Underlying Abortion Attitudes	51
Identification of the Four Extracted Factors	52
The Relationship Between the Four Underlying Dimension and Abortion Attitudes	55
Inter-Religious Group Comparisons	57
V. SUMMARY AND DISCUSSION	63
Discussion	66
BIBLIOGRAPHY	68
APPENDIX	76

LIST OF TABLES

TABLE	Page
1 Ethnic Distribution in Edmonton	25
2 Age Distribution of Married Women in Edmonton	27
3 Per Cent Distribution of Population by Specified Ethnic Groups, Alberta and Edmonton, 1961 and 1971	28
4 Principal Factor Solution for Twelve Items Describing Women's Sex-Role Attitudes	34
5 Matrix of Zero-Order Correlation Coefficients of Fifteen Variables, Study Sample, (N = 1045)	42
6 The Correlation Coefficients and the Percentage of Variance Explained in Women's Pro-Abortion Attitudes for Variables Considered Separately, Study Sample, (N = 1045)	43
7 Summary of Stepwise Multiple Regression Analysis on Study Sample, (N = 1045), Predicting Women's Abortion Attitude Differentials by Fourteen Variables	46
8 Rotated Factor Matrix of Eleven Variables, Study Sample (N = 1045)	53
9 Correlation Coefficients Between Women's Abortion Attitudes and the Four Extracted Components, Study Sample, (N = 1045)	56
10 Mean Factor Scores and Standard Deviations on the Extracted Four Components by Religious Groups	58
11 Zero-Order Correlation Coefficients Between Women's Abortion Attitudes and the Extracted Four Components by the Study Sample and Religious Groups	61

CHAPTER ONE

The Research Problem

Introduction

Much of the recent debate over the "abortion controversy" is stimulated by the introduction of less restricted laws on abortion behavior into society. Britain, Canada and U.S.A. have respectively liberalized their laws on abortion practice in 1967, 1969 (Department of National Health and Welfare, 1970, 1970:1973; Blake, 1973). To some extent, relaxed legal constraints can be taken to denote a wider latitude of acceptability of circumstances under which a woman is permitted to terminate a pregnancy. The conditions that prescribe whether or not a woman should undergo an abortion range from health hazard reasons to socio-economic ones (Arney and Trescher, 1976; Balakrishnan et.al., 1972, 1975; Blake, 1971, 1973; Jones and Westoff, 1973; Henripin and Lapierre-Adamcyk, 1974). These conditions, to some measure, have been taken to reflect the prevailing societal abortion norms (Miller, 1974).

Triggered by the potential impact of more tolerant interpretation of abortion norms upon social institutions such as the family and marriage, a small but steadily increasing number of studies have been carried out during the last decade, attempting to evaluate women's reaction to such norms. The main aim of these studies is to elicit women's opinions

toward justifications under which termination of pregnancy should be allowed.

Past studies have shown that the major determinants of women's attitudes toward abortion are found to be related to their social economic status (Ross, 1969; Rao and Bouvier, 1974; Lipson and Wolman, 1972; Boydell and Grindstaff, 1971; Balakrishnan et.al., 1972, 1975); their rural living experiences (Miller, 1974; Westoff et.al., 1969; Boyd, 1975 and Henripin and Lapierre-Adamcyk, 1974); their religiosity (Clayton and Tolone, 1973; Hertel et.al., 1974; Ryder and Westoff, 1971; Balakrishnan et.al., 1972, 1975; Greenglass, 1974; Henripin and Lapierre-Adamcyk, 1974; Boydell and Grindstaff, (1971); their sex-role perceptions (Miller, 1974); their ideal family size (Renzio, 1975; Balakrishnan et.al., 1972, 1975; Miller, 1974); their perceived demand for abortion services (Miller, 1974); their attitudes toward birth control (Westoff et.al., 1969; Ryder and Westoff, 1971; Hedderson et.al., 1974; Rao and Bouvier, 1971; Blake, 1971, 1973; Pomeroy and Landman, 1973; Boyd, 1975; Arney and Trescher, 1976; Jones and Westoff, 1973); their parity (Hedderson et.al., 1974; Pomeroy and Landman, 1973; Rao and Bouvier, 1974; Balakrishnan et.al., 1972, 1975) as well as their work experiences (Westoff et.al., 1969; Miller, 1974; Krishnan and Krotki, 1976; Jones and Westoff, 1973).

Review of previous studies reveals that much of what has been done was undertaken without the guideline of a generally recognizable theory. Ross (1969) observed this deficiency when she stated that what motivated abortion

investigations thus far, were generally 'problem-oriented' concerns rather than attempts to fill theoretical and empirical gaps. This research trend appears to be associated with the envisioned 'urgent' nature of the abortion issue. Accordingly, attempts to account for variations in abortion attitudes among women generally focused on differences in which certain social, cultural, demographic and socio-psychological variables are best found to explain attitudes toward abortion.

Regardless of the instrument employed, past studies generally resorted to simple cross-tabulation of women's abortion attitudes by each of the above mentioned independent variables (Westoff et. al., 1969; Blake, 1971; Ryder and Westoff, 1971; Jones and Westoff, 1973). This type of analysis left the reader to speculate how much of the total variance in attitudes toward abortion can be explained by the variables considered and which factors have the greatest predictive accuracy. As Miller (1974) suggests, analyses of this nature usually yield general descriptive association rather than delving deeply into interrelationships which explain differentials in abortion attitudes. This type of procedure has little if any theoretical meanings.

To remedy this deficiency, several recent investigations have attempted to adopt a multi-variate technique. Examples are Mileti and Barnett's (1972) analysis of variance; Hedderon et. al.'s (1974) path analysis approach; Westoff et. al.'s (1969) factor analysis and Miller's (1974) employment of multiple regression that attempt to explain abortion

attitude differentials as an integrated system of direct and mediating effects of sets of social factors upon women's judgment toward abortion norms. These types of analyses are generally capable of identifying the variables which have the best predictive power.

Furthermore, such an approach reveals extensive overlapping relationships among the predictive variables, i.e. a high degree of multicollinearity among the independent variables (Miller, 1974). This suggests that these independent variables may indicate the same underlying dimensions. Although attempts have been made to outline the structures that contribute to variations in women's abortion attitudes, there is still a paucity of empirical findings showing which of these dimensions would contribute more than others to the variations in abortion attitudes. For example, Westoff et. al. (1969) were able to delineate several factors that underlie differentials in women's abortion attitudes. However, little discussion of the obtained factors was presented.

Besides, disparate as it may seem of the various variables that have been found to influence variations in women's judgment toward the specific conditions that are acceptable reasons for termination of a pregnancy, research conducted thus far seems to designate certain underlying dimensions that appear to govern women's abortion attitudes differentials. These are their background characteristics; their moral, ethical, political beliefs and fertility values; as well as their life cycle experiences. It appears as if women's

differential attitudes toward abortion can be explained by any one set, two or all three of the above mentioned dimensions.

The Research Objectives

In view of the above mentioned pitfalls and gaps in existing abortion attitudes research, this study is concerned with the following specific problems. (1) What are the most important determinants of abortion attitude differentials among a sample of Edmonton females? (2) To what extent these determinants could be accounted for by some simpler underlying dimensions? (3) To what extent does each of these dimensions contribute more significantly than others to the variations in women's abortion attitudes. (4) To what extent is each dimension affected by the religious affiliation of women?

To satisfy the first goal, stepwise multiple regression was employed to determine which variable(s) provide(s) the best predictive power. This undertaking follows the 'system level' multivariate analysis direction which allows an in-depth view of the interrelationships among the independent variables that explain differentials in attitudes toward abortion among Edmonton females. In order to achieve the second objective, a principal component analysis was used to reduce the number of independent variables to a smaller number of more fundamental and orthogonal components.

Thirdly, the resultant orthogonal components were correlated

to women's abortion attitudes so as to determine each component's relative predictability. Finally, in order to reach the fourth goal, mean component scores for each religious denomination were compared.

The Organization of the Thesis

Chapter One outlines the research problem for the present study and stresses upon the need to identify the variables which have the best predictive power to explain abortion attitude differentials. This is followed by a statement of research objectives aimed at bridging the gaps in existing research.

Chapter Two, a review of the research literature is presented. Several studies which have attempted to identify the socio-demographic, cultural, and socio-psychological determinants of abortion attitudes are outlined. A critical assessment of the inconclusive results of many of these studies is also included.

Chapter Three contains the source of data, the sample design, operationalizations of dependent and independent variables. It concludes with a section on the technique of analysis.

Chapter Four presents the results and an interpretation of the findings. The last chapter begins with a summary of the research and ends with implications and suggestions for further research.

CHAPTER TWO

Review of the Literature

Introduction

As was mentioned in the previous section, differentials in women's judgment toward the various conditions under which an abortion is permissible seem to be governed by varying degrees of impact from three clusters of social determinants. Several investigators view such variations in women's judgment as reflections of pressures imposed upon them by their social environment and certain socio-economic conditions (Arney and Trescher, 1976; Blake, 1971 and 1973; Henripin and Lapierre-Adamcyk, 1974; Hedderson et.al., 1974 and Mileti and Barret, 1972). It is argued that these structural characteristics, in some ways, tend to shape women's outlook on abortion behavior (Miller, 1974).

Other studies conducted by Balakrishnan et.al. (1972 and 1975); Blasi et.al. (1975); Boyd (1975); Clayton and Tolone (1973); Greenglass (1974); Hertel et.al. (1974) and Miller (1974) have also suggested that women's attitudes and value orientation reflected in their perceptions of social responsibilities, attitudes toward religion, political orientations, perceptions of their role in society, and attitude toward family size do in fact affect their attitudes toward abortion. Viewed from this perspective, women's abortion attitudes can be seen as reflecting on a complex meshing of

ethical, moral, and political judgment (Miller, 1974).

The life cycle experiences reflected in women's fertility history, age, and employment status have also been assumed to be related to their attitudes toward abortion. The assumption here is that younger women are at the beginning of their childbearing years and therefore less sympathetic to a woman not wanting a baby. To the contrary, older women who had already been through the rigors of family life would be more receptive to the possible justifications for abortion (Ryder and Westoff, 1971). Another indicator of women's life cycle experience is their work history. It has been hypothesized by several investigators that employment status of females is incompatible with traditional mother-wife role. That is, large families would serve as fetters to a working married woman (Birdsall, 1976).

From this perspective, it seems that differentials in women's judgment toward abortion norms is a function of the above mentioned dimensions. The varying latitude of acceptability of abortion behavior by women is a result of differential impact from their structural characteristics; their values regarding morality, social responsibilities as well as attitudes toward pronatalism and anti-natalism. Also, women's fertility history and family life experiences play a part in affecting such variations.

The Social Determinants of Abortion Attitudes:

As was mentioned in the previous section, women's

attitudes toward abortion are by and large the product of the interaction of their background characteristics; their ethical, and moral values as well as their life cycle experiences. The following review is organized according to these three dimensions:

I Background Characteristics

(1) Effects of Socio-Economic Status:

A number of studies have established that women's socio-economic status affects their attitudes toward abortion in the following manner: the higher the woman's socio-economic status, the more liberal is her attitude towards abortion norm.

Several reasons have been suggested to explain these relationships. Ross (1969) proposed that a greater tolerance of non-conformity has always been detected among the better educated. For instance, they have been found to be more tolerant toward issues such as pre-marital sex, civil liberties and the abortion issue. This observation is in line with Jacob's (1970) that college students are comparatively more flexible in their judgment of human conduct than the rest of their peers.

Perhaps a more salient explanation lies with the fact that the adoption of abortion practice as a means of fertility control has always been a cohort phenomenon. It has been found that women from the upper and middle stratum of society are better motivated in the use of birth control means because they are socially mobile. Small families

work to their advantage (Omram, 1971). Sauer (1974) confirms this in his review of American attitudes toward abortion when he observed that throughout the past centuries, women who went for abortions were in large proportion found in the higher social classes of society. Besides this, financial situations of people within this class allow them to buy the services of skilled physicians. This offers another reason for the relative liberalism in abortion attitudes among this socio-economic group.

(a) Educational Attainment

Of two socio-economic variables, education and income, the influence of education seems to have the most liberalizing effects upon abortion attitudes. Rao and Bouvier (1974), for example, reported education as the most significant variable in causing differences in women's attitudes toward abortion, and that "the positive relationship between educational level and percentage approving is strong and the absolute differentials in abortion approval between those with some college education and those with less than high school education were quite substantial." Similar findings have also been reported in Lipson and Wolman (1972), Boydell and Grindstaff (1971), and Balakrishnan et. al. (1972 and 1975).

(b) Income Level

Closely related to women's educational attainment as an indication of their socio-economic status is their income

level. In general, women's financial situation is evaluated in two ways. These are: women's personal income bracket if they are single and income levels of women's husbands are taken to reflect their financial situation if the women were married. The relationship between women's income level and their abortion attitudes seems to be consistent with that reported for education. Balakrishnan et. al. (1972 and 1975), for example, found in his Toronto study that the husband's annual income level was directly related to a woman's favourable attitude towards abortion. Similar results were echoed by Lipson and Wolman (1972), who generalized from a national sample that those earning higher income had the most favourable attitudes toward abortion.

(2) Effects of Rural Residency:

Another important structural characteristic that accounts for the differences in abortion attitudes of women is the influence of their rural residential backgrounds. Miller (1974) has shown that the place of residence generally reflects special group interests, variations in life styles, general ideological differences as well as diversified fertility values, which all account for women's abortion attitude differentials.

There are three indicators used to measure the effects of residential background on women's abortion attitudes. These are (a) the size of the place of the woman's residence; (b) whether or not the woman has lived extensively in a rural or urban setting; and (c) in which region of the country the

woman resides (Westoff et al., 1969; Boyd, 1975; Henripin and Lapierre-Adamcyk, 1971). As a result of the limitation on data availability, our study will choose rural residency only as an indicator.

Several studies have documented the relationship between women's attitudes toward abortion and their type of residency. Westoff et al., (1969) reported that women who lived in or near the most populated areas were most receptive to the abortion norms, whereas those residing in small towns or rural areas were much less favourable to those norms. Henripin and Lapierre-Adamcyk (1974) also observed that women from rural Quebec, were more conservative than their metropolitan-residing counterparts. Similarly, Boyd (1975) attributed the anti-abortion tendency among the population of Quebec, the Maritimes and the Prairies to the fact that there were higher concentrations of rural residency in those provinces.

II Value, Beliefs and Related Attitudes

Attitudes toward abortion are not only a production of structural characteristics such as income level, educational attainment and age; they are also a meshing of women's perception of their obligations, their views toward personal vested interest, their fertility values as well as their theological beliefs. Previous research pointed out that women's religious affiliation and their religiosity are predictors of how theological values and beliefs influence their judgment on abortion norms. Women's sex-role attitudes have

been suggested as a measure tapping into women's evaluations of the relative importance of their familial obligations versus extrafamilial interests.

(1) Effects of Theological Values and Beliefs:

One of the most dominant factors contributing to the long standing tradition of rejecting abortion as a morally acceptable social norm stems from values associated with theological teachings. Specifically, Knutson (1973) identified these values as:

"those concerning what defines a new human life and what the primary criterion of a human life is. These entail the philosophical question of whether or not a human soul exist, and the time of ensoulment as well as beliefs about the locus of control over a human life."

It has been suggested by some investigators (Mace, 1972; Knutson, 1973) that values like these influence women's value judgment on abortion in varying degrees depending upon the dogmatic nature of their religious denomination. Catholicism represents the most extreme of these positions. As observed by Nooman (quoted in Mace, 1972) "the Catholic Church has never departed significantly from the view that abortion must be regarded as a form of homicide or murder." Protestants and Jewish religious theologies represent the liberal end of this continuum (Clayton and Tolone, 1973; Hertel et. al., 1974, Ryder and Westoff, 1971).

Since theology taught by the religious denomination to a large extent influences one's moral conscience with respect

to beliefs and values of human life (Knutson, 1973), it is not difficult to understand how a woman's value judgment towards abortion is affected by her religious affiliation.

Generally speaking, there are two indicators which denote religious affiliation of a woman: (a) her declared religious denomination, and (b) her degree of involvement, that is, her religiosity. Both of these indicators have been reported to be significant determinants of women's abortion attitudes.

(a) Religion

Nearly all social scientists who have investigated into comparative abortion attitudes among Catholic and non-Catholic women found Catholics to be more conservative in their acceptance of abortion justifications (Arney and Trescher, 1976; Blake, 1971, 1973; Boyd, 1975; Hedderson et. al., 1974; Henripin and Lapierre-Adamcyk, 1971; Hertel et. al., 1974; Westoff et. al., 1969).

(b) Religiosity

Some researchers take issue with the simplicity of women's declared religious denominations as denotation on their theological values. Others argue, however, it is women's degree of involvement of commitments to theological teachings, that determine the scope of influence the Church has upon their judgment toward abortion norms.

Religiosity has been found to be a consistent predictor of women's value judgment of abortion norms. Clayton and

Tolone (1973) reported a significant relationship between abortion attitudes and religiosity. When religiosity was measured in terms of one's frequency of church attendance, it was found to be the most important correlate of abortion attitudes. This relationship remained true even after the introduction of control variables. Balakrishnan et. al. (1972, 1975) utilizing religiosity to determine religious influence on women's attitudes toward abortion, found that women who did not attend church scored a mean abortion attitude index of 6.02 out of a maximum of 9. This was opposed to only 3.57 for those who attended church regularly. That conservatism towards abortion practice is related to one's religious devotion was also reported by Greenglass (1974), Henripin and Lapierre-Adamcyk (1974) and Boydell and Grindstaff (1971).

Our study will employ both variables as indicators of the influence of theological values of women upon their attitudes toward abortion norms.

(2) Effects of Women's Sex-Role Perceptions:

The degree of importance a woman feels about her role position in society also appears to be a major determinant affecting her attitudes toward abortion norms. Since sex-role perception of women is a newly explored factor that affects women's attitudes toward abortion, it is necessary, therefore, to discuss this concept in some details.

The Concept of Women's Sex-Role Attitudes

Yorburg (1974) defines sex-role attitudes as

"expectations in the performances of one's role in society on the basis of one's sexual identity" and "sexual identity is the image of the self as a male or female and convictions about what membership in that group implies." In other words, sex-roles refer to roles performed by oneself by virtue of one's role position in society. Such self conceptions can include beliefs about how one ought to think, act and feel. It can also include learned ideals of masculine and feminine behavior and the proper authority relationship between sexes, as well as standards for judging emotion and behavior, privileges and limitations. In essence, sex-role attitudes refer to beliefs and values one possesses on the basis of one's membership in the gender group.

In western society, traditional sex role differences are manifested most obviously in the division of labour within the family. They are mostly concerned with "the gender-based bread-winner versus homemaker specialization" (Mason et. al., 1976). On the basis of their sexual identities, women are traditionally socialized to play the role of a nurturant mother and that of a supportive wife. Women who play such roles are often found to hold values that are family oriented which means they subscribe to the saliency of sex-based division of labour as the best arrangement that would also emphasize the importance of their maternal role and would derive social and psychological gratifications from their role positions (Brogan and Kutner, 1976; Mason

et. al., 1976).

It is evident nowadays, however, that our society is witnessing a revival of the feminist movement which represent a social movement that has direct impact upon the revision of women's sex-role structures in society. For instance, more women have been assuming employment outside their homes since World War II (Schmid, 1972). In addition, it appears that some women in society have been changing their traditional sex-role perceptions. Many studies have shown that there has been a prevailing changing process whereby women no longer subscribe to the values and beliefs that have supported the traditionally sex-based division of labour in the family (Bayer, 1975; Feree, 1974; Parelious, 1975; Mason and Bumpass, 1975; Mason et. al., 1976). In other words, some women in society are assuming a 'modern' outlook in their sex-role perceptions. This has been taken to imply that some women have perceived their roles as extending beyond their familial duties. They value their opportunities outside of the home and seek individualistic self gratifications in an extrafamilial setting. One obvious example is seeking self actualization in the labour market (Birdsall, 1976; Geile, 1972).

From the above discussion, it can be asserted that women today are divided in their opinion toward their own sex-role definitions. Could such differences in perceptions be conducive to their judgment on abortion attitudes? Blake (1971) speculated on a possible theoretical link between

women's traditional sex-role outlooks and their abortion attitudes. This can be maintained by accounting for their conservatism in terms of protection of their ascribed roles which supply them with social and psychological gratifications. Miller (1974), on the other hand, rationalized the 'modern' oriented attitudes of some women as a function of the incompatibility of these women's self actualization activities. In view of the above, it seems that women's attitudes toward their role in society should be considered as a determinant of their judgment toward abortion norms.

(3) Effects of Values and Beliefs Concerning Fertility:

It is generally recognized that women's attitudes toward abortion are also shaped by convictions they hold in regard to other aspects concerning fertility and birth control (Balakrishnan et. al., 1972, 1975; Renzio, 1975; Westoff et. al., 1969). Specifically, these are: (a) women's ideal family size, (b) their attitudes toward birth control, and (c) their perceived demand of abortion services among other women. Our study will include these variables in the analysis.

(a) Ideal Family Size

A general proposition relating women's ideal family size to their abortion attitudes states that liberalism decreases as family sizes increases (Renzio, 1975; Balakrishnan et. al., 1972, 1975; Miller, 1974). For example, Renzio (1975), in his study on the differential effects of ideal family size upon judgment towards abortion norms, found ideal

family size to be influencing women's abortion attitudes. People who prefer small family sizes were consistently reported to be more liberal.

(b) Attitudes Toward Birth Control

Westoff et.al. (1969) also indicated that women's attitudes toward contraception influences their decisions toward abortion. It was found that both of these covaried in the same direction when cross-tabulation techniques were used.

(c) Perceived Demand of Abortion Services

Women who believe that only a small subset of the female population had ever thought about having an abortion would have conservative views on abortion justifications (Miller, 1974). Our study proposes to empirically verify this relationship.

III Life Cycle Experience

As mentioned in the introduction, diversities in women's abortion attitudes are also affected by their life cycle experience. The concept of life cycle refers primarily to those successive statuses people experience as they go through different stages in the course of their life. For a woman, these successive stages include birth, puberty, marriage, motherhood, occupational specialization (where applicable) and death (Cain, 1964). Depending upon which stage of her life a woman is in, her perceptions toward abortion norms

will be affected by those specific life experiences. For example, women who had more experience with unwanted pregnancies will have different perceptions toward abortion than those who have just started their child-bearing cycle (Westoff et.al., 1969; Ryder and Westoff, 1971; Hedderson et.al., 1974).

In general, indicators that tap the effects of life cycle experience upon women's abortion attitudes are:

(1) women's age; (2) their parity¹, and (3) their work experience (Balakrishnan et.al., 1972, 1975; Westoff and Ryder, 1969; Miller, 1974).

(1) Effects of a Woman's Age:

The effects of the age of a woman on her attitudes toward abortion has been a controversial point in previous studies. Westoff et.al. (1969) and Hedderson et.al. (1974) reported that a woman's age was directly related to her pro-abortion attitudes. The explanation put forth was that younger women were at the beginning of their child-bearing years whereas older women who had already been through the rigors of family life, would be more receptive to abortion. On the other hand, a Rhode Island Survey conducted by Rao and Bouvier (1974) showed that the age of women and their abortion attitudes were negatively related. Blake (1971, 1973), Pomeroy

¹ Parity refers to the number of children ever born to a woman (Hedderson et.al., 1974).

and Landman (1973), Boyd (1975) and Arney and Treshcer (1976) confirmed Rao and Bouvier's findings. Again, life cycle experience of unwanted pregnancies of older women was offered as a possible rationale for this relationship. In this case, however, their pregnancy experiences were not seen to have a liberalizing effect on their attitudes toward abortion. On the contrary, their experiences tended to have induced them to disapprove an "easy way out" for younger women (Hedderson, 1974).

A third category of studies repudiate previous findings and suggest that age is no longer a significant determinant of abortion attitude differentials (Jones and Westoff, 1973). Our study will re-examine the "age" variable and its relationship to abortion attitudes. Based on Boyd's observation (1975) of public opinion in the 1960's which showed that younger Canadians are more liberal in abortion attitudes, our study takes the position that age is negatively related to pro-abortion attitudes.

(2) Effects of Women's Parity:

Another factor used in connection with age and work experience as specifications of women's experience at a certain stage of her life is her parity. Inconclusive results have been reported on the relationship between woman's parity and their abortion attitudes. Some found a positive linear relationship between parity and anti-abortion attitudes (Pomeroy and Landman, 1973), others found

the connections between the two to be curvilinear. That is, both childless women and women with large family size are more conservative than women with small family size (Rao and Bouvier, 1974; Balakrishnan et. al., 1972, 1975). Still others, reported a non-significant result (Miller, 1974).

In view of such inconsistent findings on parity as a determinant of women's attitudes toward abortion norms, we propose to include it in our analysis. For it seems reasonable to postulate that women's experience with child nurturing may have an impact upon their judgment on abortion norms.

(3) Effects of Work Experience:

Another indicator of women's life cycle experience is their work history. It has been hypothesized by many that the employment status of females is incompatible with their traditional mother-wife roles. That is, large families would serve as fetters to working married women (Birdsall, 1976). A logical extension is that working females would, therefore, favor abortions (Westoff et. al., 1969; Miller, 1974; Krishnan and Krotki, 1976). Research conducted to investigate this relationship is limited, but what has been achieved so far, does not lead to conclusive results. For instance, Miller (1974) and Krishnan and Krotki, (1976) reported insignificant effects of women's work experience upon their abortion attitudes. On the other hand, women's work history was found by Westoff et. al. (1969), Jones and

Westoff (1973) to have some bearings upon their judgment on abortion norms.

In recapitulation, thus far we have identified women's age, parity and work experience as indicators of their life cycle experience. Previous investigations, however, reported inconclusive results of these variables as predictors of women's value judgment toward abortion norms. Our study proposes to include these variables in order to re-examine their functions as abortion attitude determinants.

CHAPTER THREE

Research Methodology

Source of Data

The data for the present study was obtained from the Growth of Alberta Families Study (GAFS) which was conducted in Edmonton, Alberta between November 1973 and February 1974 by Krishnan and Krotki (1974). The study sample consisted of 1,045 women between the ages of 18 and 54 who were living in the city of Edmonton at the time of the interview.

Sample Design

Stratified sampling techniques were used to obtain a representative cross section of the target population of females between the ages of 18 and 54 regardless of marital status. Stratified sampling was employed to ensure that census enumeration areas with high concentration of certain ethnic groups would be sampled. Sixty enumeration areas were chosen. Systematic sampling was then used to draw approximately 38 contacts per enumeration area for a total of 2,300 households. The data were gathered through personal interviews using a questionnaire at the selected addresses. The portion of the questionnaire used is presented in the Appendix. The completed interviews of 1,045 women only represent 45.4% of the initial sample due to either refusals or ineligibility (Krotki and Krishnan, 1976).

Representativeness

(1) Representativeness of the sample to the population:

The sample selected for the GAFS study has been reported to be representative of Edmonton females (Krishnan and Krotki, 1976). Two population characteristics available in the 1971 census and GAFS survey were chosen for comparison: ethnicity and age distribution.

Table 1 reveals the ethnic distribution of the sample and of population from these two sources.

TABLE 1
Ethnic Distribution in Edmonton

Ethnic Groups	1971 Census	GAFS Survey
British (including Irish)	44.2	38.1
German	12.4	13.8
French	6.7	8.6
Other W. European	10.7	14.0
Ukrainian	13.3	11.8
Other E. European	5.3	6.8
Others	7.4	6.9
Total	100.0	100.0

Source: Beaujot, Roderic P., Ethnic Fertility Differentials in Edmonton, unpublished Ph.D. Dissertation, Edmonton: University of Alberta, 1975 Table 2, p. 41.

Comparison between the sample distribution and the distribution of the 1971 census indicated a general agreement on this characteristic. Although the sample underestimated the British (including the Irish), Ukrainian and "Others" groups while overestimating the remaining four ethnic groups, an index of dissimilarity¹ that was computed to compare the closeness of percent distribution of the two data sources amounted to 8.1 percent, which may be interpreted as one of the distributions has to change 8.1 percent to become the other. Since the rule of thumb was that 10 percent or more of change was considered high, it was concluded that the survey had provided a representative sample of the ethnic group.

Another characteristic that was available for comparative purposes between the 1971 census and the survey sample was the age distribution of married women as shown in Table 2.

¹ The index of dissimilarity is obtained by the formula $\frac{\sum |a - b|}{2}$, where a represents the percentage distribution of the ethnic categories in the 1971 Census Population, and b represents the percentage distribution of the ethnic categories in the sample population.

TABLE 2

Age Distribution of Married Women in Edmonton

Age Groups	1971 Census	GAFS Survey
15-19	2.6	4.9
20-24	16.9	18.9
25-29	17.4	16.3
30-34	14.8	15.0
35-39	13.9	10.3
40-44	13.1	14.8
45-49	12.1	9.8
50-54	9.2	10.0
Total	100.0	100.0
Size	95,252	736

Source: Krishnan and Krotki, 1976: Table 2.5

The index of dissimilarity between the two distributions was found to be 7.0 percent. Thus it was concluded that the GAFS sample was a reasonably representative sample of the married females in Edmonton.

(2) Representativeness of survey population to the universe:

It has been noted that although Edmonton is not representative in any formal sense of the province of Alberta yet it shares many of the characteristics of the province as a whole.

An indication of this is the comparative distribution of ethnicity between Edmonton and Alberta.

TABLE 3
Per Cent Distribution of Population by Specified
Ethnic Groups, Alberta and Edmonton, 1961 & 1971

(1) Ethnic Groups	(2) <u>Alberta</u> 1961	(3) <u>Edmonton</u> 1961	(4) <u>Alberta</u> 1971	(5) <u>Edmonton</u> 1971
British Isles	45.2	46.8	46.8	44.2
French	6.3	6.1	5.8	6.7
German	13.8	12.2	14.2	12.4
Italian	1.1	1.6	1.5	2.0
Jewish	0.3	?	2.4	0.6
Netherlands	4.2	3.5	3.6	3.3
Polish	3.0	4.0	2.7	3.5
Russian	1.3	?	0.6	0.5
Scandinavian	7.2	5.2	6.1	4.8
Ukrainian	8.0	11.6	8.3	13.3
Other European	5.4	?	?	?
Asiatic	0.9	1.0	?	?
Native Indian & Inuit	2.1	?	2.7	1.0
Other not stated	1.1	?	?	?
Total	100.0	100.0	100.0	100.0

Source: Krishnan and Krotki, 1976 Table 3.1

From reviewing the proportionate distribution by ethnic groups, we can conclude that there is considerable similarity between Edmonton and Alberta (Krishnan and Krotki, 1976).

Operationalization of Dependent Variable

Attitudes Toward Abortion:

For the dependent variable, questions concerning attitudes toward abortion were selected to construct an attitudinal scale. Respondents in the GAFS' study were asked to react to a question about abortion under different situations. They are:

Q. If you became pregnant and abortions were legal and available, would you have an abortion under the following conditions:

	Yes	No	Don't Know
a) if pregnancy seriously endangered your physical health?	1	2	3
b) if the child is likely to be abnormal?	1	2	3
c) if you were unmarried?	1	2	3
d) if you had been raped?	1	2	3
e) if you could not afford another child?	1	2	3
f) if you had all the children you wanted?	1	2	3
g) if it interfered with your career?	1	2	3

The measure of abortion attitudes was taken as the number of positive responses to the above seven questions giving each anti-abortion response a score of zero and each pro-

abortion response a score of one, thus creating a scale of zero to seven. Similar procedures have been adopted by a number of investigators (eg. Hedderson et. al., 1974, and Balakrishnan et. al., 1972, 1975, Westoff et. al., 1969).

Operationalization of Key Independent Variables Selected for the Analysis

Findings pertaining to abortion attitude differentials of women suggest that they may be associated with certain socio-economic characteristics, attitudes and value orientations, and life cycle experience variables. The preceding review of the literature provides guidelines for selecting the variables to explain abortion attitude differentials. The variables considered are organized into the following three groups:

I Background Characteristics:

- (1) Educational attainment
- (2) Income level
- (3) History of rural residency

II Attitude and Value Indicators:

- (1) Religion
- (2) Religiosity
- (3) Sex-role attitudes
- (4) Ideal family size
- (5) Perceived demand for abortion services
- (6) Attitude toward birth control

III Life Cycle Variables:

- (1) Age
- (2) Parity
- (3) Working experiences

The above listed independent variables were selected for the final analysis and have been operationalized as follows:

I Background Characteristics:

(1) Educational Attainment:

Education is operationalized as the number of years of attendance in elementary, secondary and post secondary institutions.

(2) Income Level:

Income level of the respondent was measured by response to a pre-categorized sets of income brackets that was self-reported to represent the married respondent's husband's income level or unmarried respondents' own income bracket before taxes in 1973. The categories were:

- | | |
|------------------------|----------------------|
| 1. Under \$3,000 | 2. \$3,000 - \$4,999 |
| 3. \$5,000 - \$6,999 | 4. \$7,000 - \$9,999 |
| 5. \$10,000 - \$14,999 | 6. \$15,000 and over |

(3) History of Rural Residency:

History of rural residency is operationalized as whether the respondent has lived most of the time until the age of twelve in a community of size less than 500.

II Attitude and Value Indicators:

(1) Religion:

Religion is indicated by the self-reported religious denomination of the respondent. Four categories are employed:

A. Catholics

Greek Orthodox

Roman Catholic

Ukranian Catholic

B. Conservative Protestants

Baptist

Mennonite

Pentecostal

Salvation Army

B. Liberal Protestants

Anglican

Presbyterian

United Church

Protestants

D. Jewish

Jewish

For the purpose of this analysis, each religious category was treated as an individual dichotomous variable because religion itself is a nominal variable. A total of four dichotomous variables were created.

(2) Religiosity:

Religiosity is operationalized as the respondent's self-reported 'actual' frequency of attendance of religious services in the month proceeding the interview.

(3) Sex-Role Attitudes:

Several scales on the attitudes of women's toward their sex roles were found in the sociological and psychological literature (Brogan et. al., 1976). Some of the best

known scales which measure traditional versus non-traditional sex roles are: Motz's Role Perception Inventory (1952), Kirkpatrick's Women's Liberation Scale (1936), Levison and Huffman's Traditional Family Ideology Scale (1955). More recent examples are those devised by Westoff et. al. (quoted in Miller, 1974), Mason et. al. (1976), Scazoni (1976), and that of Borgan et. al. (1976).

In general, the main focus of sex-role attitudes in the social sciences literature is the concept of traditionalism versus modernism. Traditional orientation is defined as having familial interests, that is, greater preference for the interests on a woman's children and husband rather than that of her own. Modern outlook, on the other hand, is seen as possessing extrafamilial interests, that is, having greater preference for individualistic interests for the woman herself rather than that of her family.

GAFS contained sixteen Likert type items which might be utilized for developing a scale measuring women's sex-role attitudes. Based on previous constructed scales mentioned before (Kirkpatrick, 1936; Levinson and Huffman's, 1955; Westoff et. al., 1974; Mason et. al., 1976; Scanzoni, 1976; Borgan et. al., 1976), eleven items that were previously found to be most appropriate indicators of women's modern versus traditional outlooks were selected from the final analysis. These items are listed on pages 35-37.

In order to validate the internal consistency of the scale, these twelve items were subjected to principal factor

analysis followed by a varimax rotation. This particular analysis was performed on responses collected from the entire sample (N = 1045). The purpose was to examine the clustering effect among the several indices which would warrant the use of smaller conceptual variables of "traditional versus modern orientation."

TABLE 4
Principal Factor Solution for 12 Items
Describing Women's Sex-Role Attitudes

Items	Factor I
*Traditional a(i)	.38
Traditional a(ii)	.69
Traditional a(iii)	.66
Traditional b(i)	-.34
Traditional b(ii)	.44
Traditional c(i)	.642
Traditional c(ii)	-.59
Traditional c(iii)	.55
Modern a(i)	-.34
Modern b(i)	-.53
Modern b(ii)	-.42
Modern b(iii)	-.55
Eigen Value	3.3
% Variance Explained	27.5

* For definition of these items refer to pp. 35 to 37.

Table 4 contains the subsequent relevant statistics. The twelve items appear to factorially validated and represent one common factor. This factor can be clearly interpreted as traditional oriented. This factor has an eigenvalue above unity and explains 27.5% of the total variance. The direction of the factor loadings on the twelve items are consistent with what were predicted. Items that were expected to measure modern orientations were found to have negative loadings while those measuring traditional orientations have positive loadings. Thus the twelve items constitute a scale that is internally consistent.

Recodings were also carried out on items Ta(i) to Ta(iii), Tb(ii) and Tc(i) so that positive responses to traditional oriented items were assigned higher scores. The subsequent scale is as follows:

Traditional Orientation

T (a) Beliefs about traditional gender-based division of labour

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Don't Know</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
(i) A man can make long term plans for his life, but a woman has to take things as they come.	5	4	3	2	1
(ii) It is better for everyone involved if the man is the achiever outside the home, and the woman takes charge of children and the family.	5	4	3	2	1

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Don't Know</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
(iii) Women are happier if they stay home and take care of their children	5	4	3	2	1

T (b) Beliefs about traditional mother role system

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Don't Know</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
(i) Young girls are entitled to as much independence as young boys.	1	2	3	4	5

(ii) You usually find the happiest families are those with a large number of children.	5	4	3	2	1
--	---	---	---	---	---

T (c) Beliefs about the consequences of maternal employment

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Don't Know</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
(i) A pre-school child is likely to suffer if the mother works.	5	4	3	2	1

(ii) A working mother can establish just as warm and secure a relationship with her children of elementary school age as a mother who does not work.	1	2	3	4	5
--	---	---	---	---	---

(iii) If anything serious happened to one of the children while the mother was working, she would never forgive herself.	1	2	3	4	5
--	---	---	---	---	---

Modern Orientation

M (a) Self actualization

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Don't</u> <u>Know</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>
(i) There should be free day care centres so that women can work.	1	2	3	4	5

M (b) Beliefs about women's rights in the labor market

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Don't</u> <u>Know</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>
(i) Women in authority should have the right to fire men.	1	2	3	4	5
(ii) A woman's job should be kept open for her when she is having a baby.	1	2	3	4	5
(iii) Women should be considered as seriously as men for jobs like executives or politicians.	1	2	3	4	5

Each respondent's sex-role attitude is indicated by the sum of her scores on the scale which has a range of 18 to 60. Thus, the higher the respondent's scores on the scale, the more she is considered traditionally oriented. Conversely, the lower her scores, the more she is modern oriented in sex-role attitudes.

(4) Ideal Family Size:

Ideal family size is operationalized as the actual

number of children indicated by the respondent as the ideal for an average Canadian family.

(5) Perceived Demand for Abortion Services:

This variable is operationalized as the actual number indicated in response to the following question:

"As you know, many women choose to end a pregnancy by having an abortion. Out of 100 women you might see on the street, about how many of them would you guess have wanted at some time to get an abortion?"

(6) Attitude Toward Birth Control:

Attitude toward birth control is operationalized as responses to a question about whether the respondent approves or disapproves the use of some methods of birth control to delay or prevent a pregnancy. A score of 1 was assigned to positive responses, while a score of 0 was assigned to negative responses.

III. Life Cycle Variables

(1) Age:

Age is operationalized as the chronological age of the respondent at the time of enumeration (1973).

(2) Parity:

Parity is operationalized as the number of children ever born to the respondent.

(3) Work Experience:

Work experience is indicated by the number of jobs of more than six months' duration held by the respondent in past years.

Technique of Analysis

The fourteen independent variables and the dependent variable were subjected to stepwise multiple regression analysis. This statistical technique was employed to determine the most predictive variable or the 'best' set of predictor variables that explain(s) variation in women's abortion attitudes. 'Best' in this sense implies the ability to explain the maximum amount of variation in the dependent variable with a minimum number of linearly related independent variables. The stepwise multiple regression analysis to which the fourteen independent variables and the dependent variable were subjected using the SPSS computer package.

Also, a principal component analysis and a varimax rotation for eleven independent variables followed by a correlation of factor scores with the abortion attitudes for the whole sample and for each of the three religious groups was performed. The purpose of the principal component analysis was to identify the common underlying dimensions.

A comparison of the three religious groups as to the mean factor scores was later obtained.

CHAPTER FOUR

Results of the Study

Introduction

The results of the statistical analysis are reported in this chapter. The presentation of findings are organized according to the following five types of analyses:

- I. The results of the correlation analysis is first analyzed.
- II. The results of the stepwise multiple regression analysis, in which the relative predictability of social determinants of abortion attitudes is investigated.
- III. The results of the principal component analysis, in which an attempt was made to define simpler dimensions underlying some of the independent variables.
- IV. The relation of each of these underlying dimensions to attitudes toward abortion is shown.
- V. The results of the comparison of the three religious groups as to the mean of factor scores is interpreted.

Data for the above five types of statistical analyses are presented in Tables 5 to 12.

I. The Results of the Correlation Analysis: The Study Sample

Table 5 presents the Spearman Product-moment correlation coefficients between all possible pairs of the fifteen vari-

ables which were used as basis for all subsequent analyses.

Presented in Table 5 is the zero-order correlation coefficients (r) and coefficients of determination (r^2) between pro-abortion attitudes and each predictive factor. The zero-order correlation coefficients indicate the degree of association among these variables. The directions of the relationships are designated by the (+) signs. The coefficient of determination indicates the proportion of the total variance in attitudes toward abortion which is determined by the independent variable. It gives an indication of which independent variable is, by itself, most important in explaining variations in acceptable reasons for terminating a pregnancy.

In general the direction of association in the influence of each variable upon women's abortion attitudes appear to confirm previous findings. Table 6 reveals a general pattern of direction of association between each variable and abortion attitudes. Among these variables, rural residency, higher educational attainment, liberal religious affiliation, perception of a higher degree of demand for abortion, favourable attitudes toward the utilization of birth control methods, more frequent experience in employment are found to be positively related to pro-abortion attitudes. On the other hand, Catholicism, higher religiosity, higher parity, higher ideal family size, higher income and conservative sex-role attitudes are associated with anti-abortion attitudes.

TABLE 5

Matrix of Zero-Order Correlation Coefficients of Fifteen Variables, Study Sample (N = 1045)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Age	1.00														
(2) Rural Residency	-.12*	1.00													
(3) Education	-.25*	.15*	1.00												
(4) Catholic ^a	.03	-.05	-.15*	1.00											
(5) Conservative Protestants ^a	.04	-.05*	-.01	-.13*	1.00										
(6) Liberal Protestants ^a	.00	-.08	.11*	-.59*	-.15*	1.00									
(7) Religiosity	.18*	-.10*	-.03	.09*	.25*	-.27*	1.00								
(8) Parity	.40*	-.08*	-.20*	.12*	-.00	-.11*	.21*	1.00							
(9) Ideal Family Size	.10*	-.05	-.23*	.12*	.03	-.08*	.16*	.31*	1.00						
(10) Perceived Abortion Demand	-.01	.03	.02	.02	-.11*	.02	-.03	.07	-.03	1.00					
(11) Birth Control Attitude	-.21*	.02	.28*	-.17*	-.06*	.14*	-.11*	-.11*	-.20*	.02	1.00				
(12) Work Experience	.09*	-.00	.15*	-.05*	-.01	.02	.01	-.06	-.16*	.03	.10*	1.00			
(13) Income	.16*	.02	.18*	-.08*	-.04	.09*	.06*	-.07	-.09*	.02	.13*	.10*	1.00		
(14) Role Attitudes	.26*	-.11*	-.44*	.10*	.07*	-.06*	.16*	.23*	.25*	-.04	-.26*	-.13*	-.06*	1.00	
(15) Abortion Attitudes ^a	.05	.08*	.17*	-.16*	-.10*	.12*	-.21*	-.04	-.16*	.07*	.12*	.02	.13*	-.23*	1.00

*significant at .05 level or lower.
a not included in the Principal Component Analysis.

TABLE 6

The Correlation Coefficients and the Percentage of Variance Explained in Women's Pro-Abortion Attitudes for Variables Considered Separately, Study Sample (N = 1045)

Variables	r	r ² %	
Age	.05	0	
Rural Residency	.08*	1	
Education	.17*	3	
Religion	Catholics	-.16*	3
	Conservative Protestants	.10*	1
	Liberal Protestants	.12*	1
Religiosity	-.21*	4	
Parity	-.04	0	
Ideal Family Size	-.16*	3	
Perceived Abortion Demand	.07*	0	
Birth Control Attitudes	.12*	1	
Work Experience	.02	0	
Income	-.03*	0	
Role Attitudes	-.23*	5	

* significant at .05 level or lower.

Although the direction of association between the various predictor variables on abortion attitudes show a conformity with previous findings, the degree of association (r) of each predictor variable and pro-abortion attitudes is

generally weak. As a result, the amount of variance (r^2) explained by each individual predictor variable on abortion attitudes differentials among women is rather low. Among the twelve variables, the variable that has the strongest predictive power is women's sex-role attitudes. As indicated by Table 6, women's traditional sex-role attitudes is negatively related to pro-abortion attitudes ($r = -.23$). It only explains 5% of the variance in differential abortion attitudes. This is followed by women's degree of involvement with religious services. This variable has a r of $-.21$ and a r^2 of 4%. The next set of variables are education ($r = .17$, $r^2 = 3$) and ideal family size ($r = -.16$, $r^2 = 3$). Women's work experience shows almost no significant effect in explaining abortion attitude variations. In sum, in terms of individual predictive power of each determinant of women's abortion attitudes, simple correlation analyses reveal that women's abortion attitudes, simple correlation analyses reveal that women's sex-role attitudes is first, their religiosity is second, following these are education and ideal family size. The rest of the variables show little or no predictive power.

II The Results of the Stepwise Regression Analysis

In order to obtain some indication of the variables' relative weights, the various determinants were subjected to a stepwise regression analysis. Prior to the application of regression analysis, an arbitrary "F value to enter" and

a degree of "Tolerance" were selected. In this study, somewhat generous ones were chosen. Both of these parameters were set at 0.1. Such a parameter for F values indicates the minimum F for permission of inclusion of certain variables into the regression equation. The degree of tolerance specifies the proportion of the variance of the dependent variable not explained by the independent variables already in the equation (Nie et. al., 1975). Generally, none of the variables failed to meet both criteria of inclusion. That is, all variables were entered in the production of the final regression solution.

Presented in Table 7 are the multiple correlation coefficients (R), the coefficients of multiple determination (R^2), the partial regression coefficients (B) and their standard errors, as well as beta coefficients (Beta) for the various steps. Similar to simple bivariate correlations, multiple correlation coefficients (R) show the correlation of the actual score on the dependent variable and their predicted ones rendered by certain independent variables. The distinctive advantage of (R) over (r) is its provision for consideration of joint effects of several independent variables upon the dependent variable simultaneously. The strength of correlation is indicated by a scale that ranges from 0 to 1.00. Like the r^2 the coefficient of multiple determination (R^2) designates the proportion of variation in the dependent variable which is explained by the various independent variables operating together. R^2 change indicates the increment of variance explained with each additional

TABLE 7

Summary of Stepwise Multiple Regression Analysis
 On Study Sample, (N = 1045), Predicting Women's
 Abortion Attitude Differentials by Fourteen Variables

Variables	Multiple R	Multiple R ²	% R ² Change	B	Beta	Standard Error (B)	F
Role Attitudes	.233	5.41	5.41	-.049	-.173	.016	9.35*
Religiosity	.288	8.27	2.86	-.152	-.181	.045	11.23*
Age	.321	10.3	2.00	.254	.154	.009	7.12*
Catholic	.343	11.8	1.51	-.546	-.150	.231	5.57*
Education	.356	12.7	.88	.055	.083	.039	2.09*
Income	.363	13.2	.55	.102	.074	.070	2.10*
Ideal Family Size	.368	13.6	.35	-.149	-.073	.109	1.87*
Conservative Protestants	.373	13.9	.32	-.601	-.062	.506	1.41
Work Experience	.376	14.2	.29	-.083	-.057	.073	1.30
Perceived Abortion Demand	.380	14.4	.25	.194	.047	.203	.92
Lib. Protestant	.383	14.6	.22	-.220	-.062	.228	.93
Rural Residency	.384	14.8	.13	.135	.038	.173	.60
Parity	.385	14.9	.09	.036	.034	.060	.36
Birth Control Attitude	.368	14.9	.05	.076	.023	.171	.20

* Significant at .05 level or lower.

independent variable added to the equation while the partial regression coefficient shows the amount of change in the independent variable which is associated with a unit change on the dependent variable when the other independent variables are taken into account. The beta enables one to evaluate the relative effect on the dependent variable of each independent variable.

In general, the fourteen variables examined here do not exhibit an impressive effect on women's abortion attitudes. The multiple correlation coefficient is .386, and the total percentage of variance explained by these fourteen abortion determinants taken together amounts to 14.9%. With regard to the ordinal relationship in terms of predictive power, it appears that two variables stand out as most prominent. These are women's sex-role attitudes and their religiosity. These two variables together account for 8.27%, which is more than half of the total explained variance.

Next in magnitude are the age and Catholic religion variables. An additional 3.51% of the variance is explained when these additional variables are added. Beyond this, the inclusion of the remaining ten variables only brings the amount of total variance up another 3.1%. Variation in women's abortion attitudes explained by each independent variable is provided by the statistics listed in the R^2 change column. Women's sex-role attitudes has a R^2 value of 5.41%. Religiosity increases this amount by 2.86%. Age accounts for an additional 2% and Catholic religion increases the total variance explained by 1.51%. As shown

in Table 7, beyond the above mentioned variables, the increment of variance explained rendered by any of the remaining variables is less than 1%, which is considered negligible. These variables are education (.9%); income (.6%); ideal family size (.4%); conservative Protestant denomination (.3%); work experience (.3%); perceived abortion demand (.3%); liberal Protestant denomination (.2%); rural residency (.1%); parity (.1%); and attitudes toward birth control (.1%).

Beta weights can be taken as the effects of each independent variable upon women's abortion attitudes, with adjustments made for all other variables included in the equation. It appears, therefore, that the most important independent variable is religiosity which carries a beta weight of $-.181$, followed by women's sex-role attitudes ($-.173$). Next in rank are both age and Catholicism. The former has beta weight of $.154$ while the latter has weight of $-.150$. All these variables are significant at the $.05$ level or lower. Some variables although show minimal direct effects upon abortion attitudes, nevertheless are significant. These are educational attainment ($.083$), income ($.074$) and ideal family size ($.073$).

It can be concluded that a woman who holds a favorable attitude toward abortion is likely to be among those who are liberal in their sex-role attitudes; less religious, not a Catholic, have slightly higher educational levels, and desire smaller family size.

Interpretation of Results

It can be seen that, in general, the variables appear to display very moderate effect on abortion attitudes. The overall variance amounts to only 14.9% in explaining abortion attitudes differentials. Religiosity and women's sex-role attitudes account for most of the variance explained in abortion attitudes (8.3%). Although the amount of variance explained by these variables are not impressive, their meaningfulness is worth nothing. To-date, within a Canadian context, moral influences rendered by religious involvement and commitment seem to have positive effect upon women's abortion attitudes. Parallel to study results conducted elsewhere in Canada, our study findings confirm this trend. Those conducted in Ontario (Greenglass, 1974), Toronto (Balakrishnan et. al., 1975) and Quebec (Henripin et. al., 1974) designate women's religiosity as an important abortion attitude determinant. Therefore it can be concluded that women's religiosity was and still is an important determinant. Also parallel to earlier findings with regard to the influence of religious affiliation upon women's abortion attitudes is the comparatively lesser degree in magnitude of the religious denominational variable. This is indicated by the prior order of inclusion of religiosity variable than anyone of the denomination categories. Thus, confirming former findings that women's degree of commitment towards religious services is a better predictor than other determinants of abortion attitudes (Miller, 1974, Clayton and Tolone, 1973).

A somewhat striking result is exhibited by the explanatory power of women's sex-role attitudes which has a beta coefficient almost parallel to that of religiosity. Since this variable is a recently discovered one (Miller, 1974), and this study is the first one ever to investigate the operation of this particular variable within a Canadian context, its contribution is therefore worth emphasizing. In spite of the non-impressive contribution of women's sex-role attitudes in explaining abortion attitude differentials ($R^2 = .054$), nevertheless, it is the most important single contributor to the variation in abortion attitudes among the variables included in the study. It can be seen that women's perception on where their interests and their responsibilities has had a strong effect upon their judgment on acceptable conditions for abortion. The (+) signs pertaining to beta weights denote the direction of the relationship. In our sample, modern oriented sex-role attitudes are positively associated with pro-abortion attitudes. Thus confirming the hypothesis that extrafamilial interests of women are incompatible with high fertility ideals. These women therefore tend to favour liberal judgment on abortion norms.

One interesting point to note is that women's sex-role attitudes seem to subsume all the variance that previous research findings discovered to be accounted for by various indicators of life cycle and fertility values. With the exception of age, variables such as parity, ideal family size, birth control attitudes fail to contribute significantly to the increment of total amount of variance explained.

This is due to the intercorrelations between the independent variables as may be seen in Table 5. It can be seen, for example, that the correlation coefficients between sex-role attitudes on one side and age, education, parity, ideal family size, birth control attitudes on the other, are (.26), (-.44), (.23), (.25), (-.26) respectively. Therefore much of the individual variance usually attributed to this set of variables are explained away by women's role attitudes.

III Principal Component Analysis of Factors Underlying Abortion Attitudes

The second major question to which the present study has addressed itself is whether there are simpler dimensions underlying a set of socio-demographic variables that account for variations in women's abortion attitudes. The variables of interest here have been identified in previous research to be related to women's abortion attitudes. The variables included in this analysis were the original independent variables: age, rural residency, educational level, religiosity, parity, ideal family size, perceived abortion demand, attitudes toward birth control, work experience, income level and sex-role attitudes.¹

The zero-order correlation coefficients among the eleven variables have been shown in Table 5. Of the fifty-five possible correlation coefficients included in the analysis,

¹ the variable 'religion' was deleted from the analysis.

thirty-eight were significant at the .05 level. While the matrix of correlation coefficients shows the intercorrelations among the variables, it does not provide us with any meaningful structure. In view of this, a principal component analysis on the eleven variables was performed. Four components, each with an eigenvalue greater than unity were extracted from the correlation matrix. They account for 53.3% of the total variation in the sample. A varimax rotation was performed for the factorial decomposition of the variables.

Table 8 shows the rotated factor loading matrix, the eigenvalues and the percentage of variance explained by each factor. Factor loadings measure the partial effect of each variable on each individual factor when all other variables are taken into consideration. Interpretations for these are presented in the following paragraphs.

Identification of the Four Extracted Factors:

The first Factor, which explains 22.1% of the total variance may be identified with age (-0.43), education (+0.80), favorable attitude toward birth control (+0.55), and traditional sex-role attitudes (-0.66). This factor appears to be characteristic of a sub-population of young females, well educated, more favorable to birth control and more liberal in their perception of sex-role attitudes. This factor, then, appears to describe a "life cycle experience" among Edmonton females.

Factor II shows high factor loadings on work experience (+0.66), age (+0.51), ideal family size (-0.43), income (+0.49),

TABLE 8
 Rotated Factor Matrix of Eleven Variables, Study Sample (N = 1045)
 (Varimax Solution)

Variables	Components*			
	I	II	III	IV
1. Age	(-.427)	(.507)	.150	.078
2. Rural Residency	.368	-.330	.035	-.374
3. Education	(.799)	.084	-.003	-.005
4. Religiosity	.043	.060	(.697)	-.225
5. Parity	-.302	.030	(.632)	.266
6. Ideal Family Size	-.242	(-.426)	(.556)	.032
7. Perceived Abortion Demand	-.007	.100	-.041	(.874)
8. Birth Control Attitudes	(.545)	.140	-.111	-.005
9. Work Experience	.120	(.664)	-.117	.065
10. Income	.344	(.493)	.279	-.047
11. Role Attitudes	(-.664)	-.044	.241	-.068
Eigenvalues	2.43	1.37	1.05	1.01
% Variance Explained	22.1	12.5	9.5	9.2

* Decimal points removed.

and lower loading on rural residency (-0.33). This factor therefore characterizes that segment of the female population who are relatively old, have more work experience, have higher income levels, who prefer small family size and are urban-oriented. This dimension can, then be termed as "extra-familial orientation" or "career orientation" factor.

The third component, which shows high factor loadings on religiosity (+0.69), parity (+0.63), and ideal family size (+0.55), suggests that religious behavior influences reproductive ideals. This factor can, then, be identified as "theological influence". This dimension explains only 9.5% of the total variance.

The fourth component, which accounts for 9.2% of the variance, shows a very strong loading on perceived abortion demand (+0.87) but on no other variables. There is also a small negative loading on rural residency (-0.37). This factor seems to characterize that segment of the female population who were urban residents and who believed that demand for abortion services were widespread. We can identify this independent dimension as "effect of size of residence". Empirical findings have documented that realistic evaluation of the latitude of abortion requests is a function of the availability of such services. Large urban centers are places where access to abortion is relatively easier (Miller, 1974). Therefore, this factor can be seen as the impact of metropolitan environment upon women's perception towards abortion service demand.

In summary, the results of the foregoing analysis seem to reveal four underlying dimensions existing among the eleven variables that have been found to predict abortion attitude differentials. These dimensions seem to reflect women's life cycle experience, their extrafamilial orientation, the type of theological influence they receive, and the effects of the size of their place of residence upon their perception toward abortion.

IV The Relationship Between the Four Underlying Dimension and Abortion Attitudes

The factor scores for each case on each component can be treated as raw data which represent each woman's position with regard to the four extracted dimensions. By relating women's position on each of the four dimensions to their attitudes toward abortion justifications, it is possible to evaluate the relative predictability of each component on abortion attitude differentials. The correlation coefficients between women's abortion attitudes and each of the four components are presented in Table 9.

It is important to remember that since the four components are orthogonal which implies that the components are independent of each other (i.e., uncorrelated), the simple correlations between each of the components and abortion attitudes will measure the net or partial effect.

The correlation coefficients between the four dimensions and abortion attitudes are significant, though their magnitudes are relatively low. Life cycle experience is positively

TABLE 9

Correlation Coefficients Between Women's Abortion Attitudes and the Four Extracted Components, Study Sample, (N = 1045)

	Pro-Abortion Attitudes
Life Cycle Experience	.16*
Extrafamilial Orientation	.12*
Theological Influence	-.10*
Effects of Size of Residence	.11*

* Significant at the .001 level.

associated with abortion attitudes: the more advanced a woman is on her life cycle stages, as defined by this factor, the more she adopts a pro-abortion attitude. This finding appears to support the thesis of Miller (1974). The positive relation between the second factor, extrafamilial orientation, and pro-abortion attitudes does not seem difficult to explain: the more diversified the roles women play outside of their homes, the more they tend to have no objection to abortion. The negative relation between the third factor, theological influences, and pro-abortion attitudes also supports the often repeated results that religion appears to have a strong influence upon anti-abortion attitudes. Also, the effect of size of residence, as defined by the fourth factor, is shown to exercise a significant influence upon pro-abortion attitudes. That is, easier access to abortion services in metropolitan centers makes women believe that abortion

activities are widespread. Therefore more urbanized women recognize a wider range of justifications.

V Inter-Religious Group Comparisons

Given the analyses reported in the present study, women's religious denomination appears to be an important element in differentiating their attitudes toward abortion. Previous findings reported by Arney and Trescher, 1976; Blake, 1971, 1973; Boyd, 1975; Hedderson, et. al., 1974; Henripin and Lapierre-Adamcyk, 1974; Hertel, et. al., 1974; and Westoff, et. al., 1969, appear also to be consistent with our findings. In view of this, it can be concluded that religious groups are expected to vary in their position on each of the extracted four dimensions.

A comparison of means of factor scores and the standard deviations are presented in Table 10. The means show the position of each religious group on the extracted four dimensions.

By comparing the three religious groups on their mean scores on the first factor, it appears that Catholics seem to score lowest followed by the Conservative Protestants and the liberal scoring the highest. Given our previous interpretation of this factor, it would appear as if the liberals have a more pronounced perception of abortion demands.

With regard to Extrafamilial Orientation as defined by age, ideal family size, work experience, and income (see

TABLE 10

Mean Factor Scores and Standard Deviations on the Extracted Four Components by Religious Groups¹

	Life Cycle C ₁ Experience		Extrafamilial C ₂ Orientation		Theological C ₃ Influence		Effects of Size C ₄ of Residence	
	Mean	Std.Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Catholics (N = 328)	-.232	1.05	.066	.928	.083	.910	.010	.891
Conservative Protestants (N = 32)	-.123	1.02	.019	.803	.762	1.03	-.810	1.11
Liberal Protestants	.072	.863	.088	.959	-.182	.720	.098	.892

¹ Jewish subgroup was excluded from this analysis because its sample size is too small (N = 8) to yield any informative results.

Table 8), the data reported in Table 10 reveal that Conservative Protestants seem to score the lowest followed by the Catholics and, again, the liberal scoring the highest.

The component that appears to render the most differentiating impact upon the various subgroups is Theological Influence. Liberal Protestants appear to score the lowest on this component with a mean factor score of $-.182$. The Catholics and the Conservative Protestants, on the other hand, score high on this factor. It is worth noting that the Conservative Protestants tend to be more influenced by this factor than the Catholics. The mean factor scores for the Conservative Protestants is $.762$ while that of the Catholics is only $.083$.

With regard to the fourth factor, i.e., Effect of Size of Residence, the Conservative Protestants appear to score less on that component. This means that they have a lesser perception of abortion demand even though they come from a larger size of residence (urban residence). The Liberal Protestants, on the other hand, appear to perceive a high demand for abortion compared to the Catholic population.

In conclusion, it appears that the three religious groups differ in their perception of abortion demand relative to their position on the Four extracted dimensions. With regard to life cycle experience; extrafamilial orientation and the effect of size of residence, the Liberal Protestants score the highest compared to the other two religious groups. It would appear as if their perception of abortion demand

is a function of their positions on these three dimensions rather than the Theological Orientation as is the case with regard to the other conservative groups.

The relationship between each of these four factors and abortion attitudes are shown in Table 11.

For Catholics, the "extrafamilial orientation" appears to be the most important factor in influencing their abortion attitudes. Given the interpretation of this factor reported earlier, it would appear as if Catholics who are urban oriented, relatively old, have work experience, have higher income, who prefer smaller family size are likely to perceive high demand for abortion services independent of influences exerted upon them by their religion. That is, the more the Catholics are exposed to extrafamilial experiences the more they perceive high demand for abortion services. This finding seems to be inconsistent with the often repeated conclusion that Catholic women are more likely to be influenced by their theological beliefs when abortion is considered (Westoff, et. al., 1969; Bardis, 1972; Lipson and Wolman, 1972, Balakrishnan, et. al., 1975, and Boyd, 1975). The religious influence on abortion attitudes for Catholic women in our study is still operating, but is not significant.

The zero-order correlations between abortion attitudes and the extracted four Factors clearly show that theological influence appears to be the most important dimension influencing their attitudes toward abortion. This finding

TABLE 11

Zero-Order Correlation Coefficients Between Women's Abortion Attitudes and
The Extracted Four Components by the Study Sample and Religious Groups

	Pro-Abortion Attitudes				Effects of Size C ₄ of Residence
	Life Cycle C ₁ Experiences	Extrafamilial C ₂ Orientation	Theological C ₃ Influence		
Study Sample (N = 952)	.16*	.12*	-.10*		.11*
Catholics (N = 328)	.01	.12*	.09		.01
Conservative Protestants (N = 32)	.32	-.29	-.44*		.20
Liberal Protestants (N = 408)	.21*	.12	.03		.13*

* Significant at the .05 level or lower.

appears to be consistent with our discussion in the previous section in that theological teachings among fundamentalistic Protestant sects seem to exert a greater impact in shaping their members' abortion attitudes.

As for the Liberal Protestants, two dimensions appear to influence their abortion attitudes significantly. As the data in Table 11 clearly indicate, women's life cycle experiences and size of residence are the most important factors in influencing this group's abortion attitudes. The results of the principal component analysis reported in Table 8 generally reveal that this sub-population are mainly composed of young female population, well educated, show more favorable attitudes toward birth control and are urban-oriented.

In the following Chapter, we shall devote our attention to discussion of research findings and the research implications.

CHAPTER FIVE

Summary and Discussions

Conditions that prescribe whether or not a woman should undergo an abortion to some extent reflect the prevailing norms regarding abortion behavior in a society. Such norms can be restrictive as well as liberal. Previous studies indicate that the number and the nature of conditions that were permitted by society as legitimate reasons for abortion seeking behavior is an indication of how relaxed social norms are regarding such activities. The acceptance of socio-economic reasons for abortion in addition to medical ones has always been taken as a sign of liberalized abortion norms. Events seem to indicate that recently more and more Canadians are accepting socio-economic reasons for abortion. Thus it appears that Canada is experiencing a trend towards liberalization in their attitudes towards abortion. Forseeing the potential impact of tolerant interpretation on such norms upon social institutions, this thesis attempts to shed light upon this phenomenon through delineation of social factors that determine women's opinions toward justification under which abortion behavior should be allowed.

A review of previous reserach literature identifies certain socio-demographic, cultural and socio-psychological variables as major social determinants of women's abortion attitude differentials. More specifically, these refer to

women's background characteristics, their value orientations and their life cycle experiences. These various aspects have been reported to shape women's attitudes toward abortion in a variety of ways. For instance, aspects of women's life cycle experience such as experience with more pregnancies and participations in the work force had been found to liberalize women's attitudes toward abortion.

This thesis employs a multi-variate approach in its analysis. The main focus is on identifying the best predictors of abortion attitude differentials. Previous research has revealed overlapping relationships among the various determinants, i.e. a degree of multi-collinearity among the variables. This suggests the possible existence of simpler dimensions underlying the various determinants. The present thesis also attempted to test this hypothesis through the employment of principal component analysis. Pearson correlation analyses were performed to determine the relative predictability of each resultant dimension and variations in women's opinion on abortion justifications for the total sample as well as for the three religious subgroups.

Data were taken from the Growth of Alberta Family Study (GAFS) which was conducted in Edmonton, Alberta between November 1973 and February 1974. The study sample consisted of 1,045 women between the ages of 18 and 54 who were living in the city of Edmonton at the time of interview. The variables that were entered into the final analysis are: age, work experience, parity, rural residency, educational

attainment, income level, religion, religiosity, sex-role attitudes, ideal family size, attitudes toward birth control, and perceived demand for abortion services.

The results of the analysis can be summarized as follows: the twelve variables we looked at explain only 14.9% of the total variance in abortion attitude differentials. Variables such as work experience, parity, rural residency, educational attainment, income level, ideal family size, attitudes toward birth control and perceived demand for abortion services are ineffective in accounting for variation in women's abortion attitudes. Slightly more significant are education and age, while topping the list are religiosity and women's attitudes toward their sex-roles.

With regard to the exploration of factors underlying the eleven variables, some interesting results are found. Contrary to suggestions derived from previous studies that three underlying dimensions exist guiding women's abortion attitude differentials, we discovered four only one of which approximates what was hypothesized. This is women's life cycle experiences. The rest of the dimensions were termed as women's extrafamilial orientation, theological influence and effects of city size. It was also found that women's religious denominations appeared to be significant elements in differentiating their attitudes toward abortion. When inter-group comparisons were investigated, it became clear that religious groups' perception for abortion demand varied according to their position on the extracted four components.

Discussion

The present thesis identifies two elements as most influential in differentiating Edmonton females' abortion attitudes: religiosity and sex-role attitudes.

That religiosity is an important predictor replicates previous results found in other parts of Canada (Greenglass, 1974; Henripin and Lapierre-Adamcyk, 1974; Balakrishnan, *et. al.*, 1972, 1975; Boydell and Grindstaff, 1971). Our results indicate that women's value orientation and beliefs that are colored by religion is an important factor in inducing conservative attitudes toward abortion liberalization. This indeed confirms suggestions forwarded by investigators such as Knutson (1973) that values associated with theological teachings can influence women's attitudes toward abortion. For example, the belief that the time of ensoulment of human beings begin at conception appears to influence anti-abortion attitudes in women.

One interesting fact uncovered by this thesis is that Conservative Protestants are found to be affected more by their religious beliefs in their attitudes toward abortion than Catholics. In general this represents a departure from previous findings that view the dogmatic nature of Catholicism as more conservative in nature. The hypothesis that a secularization process is occurring among the Catholics may be offered as a possible explanation for this finding.

Whereas religiosity works to enhance women's anti-

abortion attitudes, women's modern sex-role attitudes are found to liberalize their attitudes toward abortion. Closely tied in with this aspect is the factor Life Cycle Experience which reinforces the idea that the more a woman perceives her role as non-familial oriented, the more she experiences the burden of child bearings and raisings, the more work experiences she has, the more liberal will her attitudes be.

Since the factor is a newly discovered one (Miller, 1977) replications are strongly urged across Canada. Moreover, the discovery of the significance of this factor in determination of abortion attitudes differentials indicates changing value systems in our society. It appears that traditional values embodied in religious disciplines and pronatalisitic pressures are giving way to new ones which are being ushered in through changing role structures of women.

BIBLIOGRAPHY

- Arney, William R. and William H. Trescher
1976 "Trends in attitudes toward abortion, 1972-1975".
Family Planning Perspectives 8:117-124.
- Babbie, Earl E.
1973 Survey Research Methods, Belmont: Wadsworth
Publishing Company, Inc.
- Balakrishnan, T.R., S. Ross, J.D. Allingham and J.F. Kantner
1972 "Attitudes toward abortion of married women in
Metropolitan Toronto". Social Biology 19:35-42.
- Balakrishnan, T.R., J.F. Kantner and J.D. Allingham
1975 Fertility and Family Planning in a Canadian
Metropolis Montreal: McGill-Queen's University
Press.
- Bayer, Allan E.
1975 "Sexist students in American colleges: a descriptive
note". Journal of Marriage and the Family
37:391-397.
- Bardis, P.D.
1972 "Abortion and public opinion: a research note".
Journal of Marriage and the Family 34:111.
- 1972 "A technique for the measurement of attitudes toward
abortion". International Journal of Sociology of the
Family 2:1-7.
- Barrett, Michael
1973 "Student opinion on legalized abortion at the
University of Toronto". Canadian Journal of Public
Health 64:295-300.
- Beaujot, Roderic Paul
1975 Ethnic Fertility Differentials in Edmonton.
Edmonton: University of Alberta. (Ph.D. Thesis)
- Birdsall, Nancy
1976 "Women and population studies". Signs 1:699-712.
- Blake, Judith
1971 "Abortion and public opinion: the 1960-1970 decade".
Science 171:540-555.

- 1972 Coercive Pronatalism and American Population Policy.
Berkeley, California: International Population and
Urban Reserach.
- 1973 "Elective abortion and reluctant citizenry:
research on public opinion in the United States",
in H.J. Osofsky (eds.) The Abortion Experience.
Harper and Row, pp. 447-467.
- Blasi, Anthony, Peter J. MacNeil and Robert O'Neil
1975 "The relationship between abortion attitudes and
Catholic Religiosity". Social Sciences 50:34-39.
- Boyce, R.M. and R.W. Osborn
1971 "Therapeutic abortion in a Canadian city," in
Craig Boydell, C. Brindstaff and P.C. Whitehead (eds.)
Critical Iddues in Canadian Society. Toronto: Holt,
Rhinehart and Winston of Canada, Ltd.
- Boyd, Monica
1975 "Canadian attitudes on abortion: results of the
Gallup Polls". Paper presented at the Fertility
Session of the 1975 Canadian Population Society
Meeting, Edmonton, Alberta.
- Boydell, C.L. and C.F. Grindstaff
1971 "Public attitudes toward legal sanctions for drug
and abortion offences". Canadian Journal of
Criminology and Corrections 13:209-232.
- Brogan, Donna and Nancy G. Kutner
1976 "Measuring sex-role orientation: a normative
approach". Journal of Marriage and the Family
38:31-40.
- Cain, Leonard D.
1964 "Life course and social structure," in Robert E.L.
Faris (ed.) Handbook of Modern Sociology.
Chicago: Rand McNally, pp. 272-309.
- Callahan, D.L.
1970 Abortion, Law, Choice and Morality. London:
The McMillan Company.
- Chebib, F.S., S.B. Helgason and P.J. Kaltsikes
1973 "Effect of variation in plant spacing, seed size
and genotype on plant-to-plant variability in
wheat". Z. Pflanzenuchtg 69:301-332.

- Clayton, Richard and William L. Tolone
1973 "Religiosity and attitudes toward induced abortion:
an elaboration of the relationship". Sociological
Analysis 34:27-39.
- Cohen, Jacob and Patricia Cohen
1975 Applied Multiple Regression/Correlation Analysis
for the Behavioral Sciences. Toronto: John Wiley
and Sons.
- Corman, Louise
1973 "Population growth and family planning". Journal
of Marriage and the Family 35: 89-92.
- Davis, Kingsley
1967 "Population policy: will current programs succeed"?
Science 158:730-39.
- De Vak, Alphonse
1974 Morality and Law in Canadian Politics. Montreal:
Palm Publishers.
- Elahi, Virginia
1973 "A family planning survey in Halifax, Nova Scotia".
Canadian Journal of Public Health 64:515-520.
- Feeree, Myra Marx
1974 "A woman for president? Changing responses:
1958-1972". Public Opinion Quarterly 38:390-9.
- Furtenburg, Jr., Frank F.
1972 "Attitudes toward abortion among young Blacks".
Studies in Family Planning 2:66-69.
- Giele, Janet Zollinger
1972 "Changes in the modern family: their impact on
sex-roles", in Helen Wortis and Clara Rabinowitz
(eds.) The Women's Movement: Social and Psycholo-
gical Perspectives. New York: AMS Press Inc.
pp. 65-77.
- Greenglass, Esther
1974 "Attitudes toward abortion," in Benjamin Schlesinger
(ed.) Family Planning in Canada. Toronto:
University of Toronto Press. pp. 207-213.

- Hedderson, John; Lynne Gershenson Hodgson; Mark Bogen and Timothy Crowley
1974 "Determinants of abortion attitudes in the United States in 1972". Cornell Journal of Social Relations 9:261-276.
- Henripin, Jacques et Evelyne Lapierre-Adamcyk
1974 La Fin de La revanche des berceaux: qu'en pensent les Quebecoises? Montreal: Les Presses de l'Universite de Montreal.
- Henripin, Jacques
1971 "The status of women in Canada: abortion", in Craig L. Boydell, C.F. Grindstaff and P.C. Whitehead (eds.) Critical Issues in Canadian Society. Toronto: Holt, Rhinehart & Winston. pp. 53-54.
- Hertel, Bradley, Gerry E. Hendershot and James W. Grimm
1974 "Religion and attitudes toward abortion: a study of nurses and social workers". Journal for Scientific Study of Religion. 13:23-34.
- Hunter, A.A.
1972 "Factorial ecology: A critique and some suggestions". Demography 9:107-117.
- Hunter, A.A. and A.H. Latif
1973 "Stability and social change in the ecological structure of Winnipeg: A multi-method approach", Canadian Review of Sociology and Anthropology 10:308-333.
- Jacob, Philip E.
1970 "Value-outcomes of a college education", in William Crotty (ed.) Public Opinion and Politics. New York: Holt, Rhinehart and Winston, Inc.
- Jones, Elise F. and Charles F. Westoff
1973 "Changes in attitudes toward abortion: with emphasis upon the National fertility data", in H.J. Osofsky and J.D. Osofsky (eds.) The Abortion Experience. New York: Harper and Row. pp. 468-481.
- Knutson, Andie L.
1973 "A new human life and abortion: beliefs, ideal values and value judgements", in J.T. Fawcett (ed.) Psychological Perspectives on Population. New York: Basic Books, Inc. pp. 371-390.

- Kerlinger, Fred and Elazar J. Pedhazur
1973 Multiple Regression in Behavioral Research.
Toronto: Holt, Rinehart and Winston, Inc.
- Krishnan, P. and K. Krotki
1976 Growth of Alberta Families Study (GAFS).
Population Research Laboratory. University of
Alberta, Edmonton.
- Kirkpatrick, Clifford
1936 "The construction of a belief pattern scale for
measuring attitudes toward feminism". Journal
of Social Psychology 7:421-437.
- Lipson, Gerald and Dianne Wolman
1972 "Polling Americans on birth control and population".
Family Planning Perspectives 4:39-42.
- Loether, Herman J. and Donald G. McTavish
1974 Descriptive Statistic for Sociologists: An
Introduction. Boston: Allyn and Bacon, Inc.
- 1974 Inferential Statistics for Sociologists: An
Introduction. Boston: Allyn and Bacon, Inc.
- Levinson, Daniel J. and Phyllis E. Huffman
1955 "Traditional family ideology and its relation to
personality". Journal of Personality 23:251-273.
- Mace, David R.
1972 Abortion: The Agonizing Decision. Nashville:
Abingdon Press.
- MacRae, Jean
1974 "A Feminist view of abortion" in Judith Plaskow
and Joan Arnold Romero (eds.) Women and Religion.
Missoula: The Scholar Press.
- Mason, Karen Oppenheim and Larry L. Bumpass
1975 "U.S. women's sex-role ideology, 1970". American
Journal of Sociology 80:1212-1219.
- Mason, Karen, John L. Czajka and Sara Arber
1976 "Change in U.S. women's sex-role attitudes,
1964-1974". American Sociological Review
41:573-596.

- Miller, Joanne
1974 "The social determinants of women's attitudes toward abortion: 1970 analysis". Working Paper 74-8. Laboratory of Socio-environmental studies, National Institute of Mental Health, Bethesda, Maryland, U.S.A.
- Mileti, Dennis S. and L.D. Barrett
1972 "Nine demographic factors and their relationship toward abortion legalization". Social Biology 19:43-50.
- Mirande, Alfred
1974 "Premarital sexual permissiveness and abortion: standards of college women". Pacific Sociological Review 17:485-503.
- Moore-Cavar, Emily C.
1974 "Induced abortion and contraception in sociological perspective", in Henry P. David (ed.) Abortion Research: International Experience. Toronto: D.C. Heath and Company. pp. 117-127.
- Motz, Annabelle B.
1952 "The role conception inventory: a tool for research in social psychology". American Sociological Review 17:465-471.
- Mudd, Emily
1973 "Thoughts on the sociological and the psychological aspects of abortion", in H.J. Osofsky and J.D. Osofsky (eds.) The Abortion Experience. New York: Harper and Row. pp. 542-550.
- Nie, Norman H., C. Hadlai Hull, Jean G. Jenkins, Karen Steinbrennen and Dale H. Bent
1975 Statistical Packages for the Social Sciences. (Second Edition) Toronto: McGraw-Hill Book Company.
- Omran, Abdel
1971 "Abortion in the demographic transition", in Rapid Population Growth: Consequences and Policy Implications. Volume II, National Academy of Sciences. Baltimore: The John Hopkins Press.
- Parelius, Ann P.
1975 "Emerging sex-role attitudes, expectations and strains among college women". Journal of Marriage and the Family 37:146-53.

- Perline, Eleanor W.
1971 Abortion in Canada. Toronto: New Press.
- Pomeroy, R. and L.C. Landman
1973 "American public opinion and abortion in the Early Seventies", in H.J. Osofsky and J.D. Osofsky (eds.) The Abortion Experience. New York: Harper and Row. pp. 482-495.
- Rao, S.L.N. and L.F. Bouvier
1974 "Socioeconomic correlates of attitudes toward abortion in Rhode Island: 1971". American Journal of Public Health 64:765-774.
- Renzio, Mario
1975 "Ideal family size as an intervening variable between religion and attitudes toward abortion". Journal for the Scientific Study of Religion 14:23-27.
- Report of the Royal Commission
1970 "The Status of Women in Canada". Sections 226-243, pp. 281-287. Information Canada.
- Ross, Shirley
1969 "Attitudes of married women toward abortion". M.A. Thesis. Canadian Public Archives. No. As 1994.
- Ryder, Norman and C.F. Westoff
1971 Reproduction in the United States, 1965. Princeton: Princeton University Press.
- Saucer, R.
1974 "Attitudes to abortion in America, 1800-1973". Population Studies 28:53-67.
- Sarvis, Betty and Hyman Rodman
1973 The Abortion Controversy. New York: Columbia University Press.
- Scanzoni, John
1976 "Sex role change and influences on birth intentions". Journal of Marriage and the Family 38:43-58.

- Schmid, Carol
1976 "The changing status of women in the United States and Canada: an overview". Sociological Symposium No. No. 15:1-27.
- Schur, Edwin M.
1970 "A sociologist's view", in Robert E. Hall (ed.) Abortion in a Changing World. Volume II. New York: Columbia University Press. pp. 197-206.
- Van der Tak, Jean
1974 Abortion, Fertility and Changing Legislation: An International Review. Toronto: Lexington Books.
- Westoff, C.F., E.C. Moore and N.B. Ryder
1969 "The structure of attitudes toward abortion". Milbank Memorial Fund Quarterly 48:11-37.
- White, Richard
1968 "Toward a theory of religious influence". Pacific Sociological Review 11:23-28.
- Yorburg, Betty
1974 Sexual Identity: Sex Roles and Social Change. Toronto: John Wiley and Sons.
- Young, William G. and Farouk S. Chebib
1970 "Factor Analysis of Objective Tests in Oral Pathology" Journal of Dental Education 34:61-72.
- Zelnik, Melvin and John Kantner
1975 "Attitudes of American teenagers toward abortion". Family Planning Perspectives 7:89-91.

Government Publication

- Department of National Health and Welfare Research and Statistics Directorate
1970 Research and Statistics Memo: Review of Abortion Legislation and Experience in Selected Countries, 1970.

APPENDIX

SURVEY QUESTIONNAIRE*

*

Only that portion of the original survey questionnaire which is relevant to the present study is presented.

THE GROWTH OF ALBERTA FAMILIES STUDY
POPULATION RESEARCH LABORATORY
THE UNIVERSITY OF ALBERTA

Address: _____

Next Address: _____

Sample Number:

Is the next address reasonable:

E.D. E.A. No. FA MH

(If not, record details on back page under COMMENTS).

Is this address live? _____
Or dead? _____

How many Households are there at this address? _____

How many Found Addresses are there? _____

Time: Entered household: _____

Begin interview: _____

HOUSEHOLD LIST:

First Name	Relation-ship	Age	Sex	Marital Status	Mother Alive	Father Alive	Eligibility	Selection No.*
1			M F	NM M S D W	Y N	Y N		
2			M F	NM M S D W	Y N	Y N		
3			M F	NM M S D W	Y N	Y N		
4			M F	NM M S D W	Y N	Y N		
5			M F	NM M S D W	Y N	Y N		
6			M F	NM M S D W	Y N	Y N		
7			M F	NM M S D W	Y N	Y N		
8			M F	NM M S D W	Y N	Y N		
9			M F	NM M S D W	Y N	Y N		
10			M F	NM M S D W	Y N	Y N		

* CIRCLE THE SELECTED NUMBER

Selection Table Number _____

Type: only long form 1
 mail-back 2
 Random response 3

PART I

"First of all I would like to ask you some questions about your background".

1. In what year were you born? _____

7. Where did you live most of the time while you were growing up (Say up to age 12)?
 In a Rural community or farm 1
 Town 2
 City 3

10. What is your present marital status? (READ CATEGORIES)

1. Single 4. Married or living with someone IF 4, CIRCLE APPROPRIATE CATEGORY
 2. Separated
 3. Widowed 5. Divorced

12. I would like to make a list of all the regular jobs that you have held and that have lasted more than six months.

job no.	(i) What kind of job was it?	(ii) What date did you begin? What date did you leave?*		SPACE RE-SERVED FOR CODING	(iii) Was it full time or part-time?	
		From month year	To month year		FT	PT
1					FT	PT
2					FT	PT
3					FT	PT
4					FT	PT
5					FT	PT
6					FT	PT
7					FT	PT
8					FT	PT
9					FT	PT
10					FT	PT
11					FT	PT

*

IF RESPONDENT UNABLE TO RECALL DATES ASK THE DURATION OF THE JOB AND RECORD IT.

17. What is the highest grade or year of elementary or secondary school you ever attended?
- | | |
|-------------|------------|
| None | 0 |
| Yr or Grade | 1 2 3 4 5 |
| | 6 7 8 9 10 |
| | 11 12 13 |
18. How many years of schooling have you had since (elementary or secondary) school?
- | | |
|------------|-----------------|
| University | 0 1 2 3 4 5 6 + |
| Other | 0 1 2 3 + |
21. What is your religion or denomination?
- | | |
|---------------------|-----------------------|
| 01 Anglican | 07 Pentecostal |
| 02 Baptist | 08 Presbyterian |
| 03 Greek Orthodox | 09 Roman Catholic |
| 04 Jewish | 10 Salvation Army |
| 05 Lutheran | 11 Ukrainian Catholic |
| 06 Mennonite | 12 United Church |
| 00 None Other _____ | (specify) |
22. In the last month how often did you attend religious services (other than weddings, funerals, etc.)? # of times _____
31. How many children of your own - those that you have actually borne - now live with you in your own household? _____
32. How many of your children now live somewhere else? _____
33. How many of your own children have died? _____
114. What do you think is the ideal number of children for the average Canadian family today? _____
117. Many couples use some method of birth control to delay or prevent a pregnancy. Do you approve or disapprove of such conduct?
- | | |
|-------------------------------|---|
| Approve | 1 |
| Disapprove | 2 |
| Neither approve or disapprove | 3 |
154. As you know, many women choose to end a pregnancy by having an abortion. Out of 100 women you might see on the street, about how many of them would you guess have wanted at some time to get an abortion? _____

157. If you became pregnant and abortions were legal and available would you have an abortion under the following conditions?

	<u>Yes</u>	<u>No</u>	<u>Don't know</u>
- if the pregnancy seriously endangered your physical health?	1	2	3
- if the child was likely to be abnormal?	1	2	3
- if you were unmarried?	1	2	3
- if you had been raped?	1	2	3
- if you could not afford another child?	1	2	3
- if you had all the children you wanted?	1	2	3
- if it would interfere with your career?	1	2	3
- if your husband seriously objected to the child?	1	2	3

175. Here is a card showing amounts of income. Please indicate by number what group would apply to your husband's income before taxes in 1973?

Don't know	1
Refused to answer	2

176. What group would apply to your income before taxes in 1973?

Don't know	1
Refused to answer	2

- | | |
|--------------------|--------------------|
| 1. Under 3,000 | 2. 3,000 - 4,000 |
| 3. 5,000 - 6,999 | 4. 7,000 - 9,999 |
| 5. 10,000 - 14,000 | 6. 15,000 and over |

PART II

We would like to get your opinion on some matters concerning family life and the status and rights of women. Please tell me if you strongly agree, agree, don't know, disagree, or strongly disagree with the following statements.

The first is:

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	Depends on Circum- stances Uncertain Don't know	<u>Dis-</u> <u>agree</u>	<u>Dis-</u> <u>agree</u>	<u>Strongly</u> <u>Dis-</u> <u>agree</u>
	(CIRCLE NUMBER)					
198. A man can make long range plans for his life, but a woman has to take things as they come.	1	2	3	4	5	
<hr/>						
199. A pre-school child is likely to suffer if his mother works.	1	2	3	4	5	
<hr/>						
200. A working mother can establish just as warm and secure a relationship with her children of elementary school age as a mother who does not work.	1	2	3	4	5	
<hr/>						
201. It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family.	1	2	3	4	5	
<hr/>						

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Depends</u> <u>on</u> <u>Circum-</u> <u>stances</u> <u>Uncertain</u> <u>Don't know</u>	<u>Dis-</u> <u>agree</u>	<u>Strongly</u> <u>Dis-</u> <u>agree</u>
	(CIRCLE NUMBER)				
203. Women are much happier if they stay at home and take care of their children.	1	2	3	4	5
204. Young girls are entitled to as much independence as young boys.	1	2	3	4	5
206. Women should be considered as seriously as men for jobs as executives or politicians.	1	2	3	4	5
207. If anything serious happened to one of the children while the the mother was working, she could never forgive herself.	1	2	3	4	5
209. You usually find the happiest families are those with a large number of children.	1	2	3	4	5
211. There should be free child-care centers so that women could take jobs.	1	2	3	4	5
213a. Women in authority should have the right to fire men.	1	2	3	4	5