WOMEN'S ROLES AND THE URBAN-RURAL CONTINUUM

by

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ABSTRACT

The hypothesis of urban dominance is a theory of urban-rural differences which posits that the city is the source of social change in modern society, and that such change diffuses from the city into the rural hinterland in a manner consistent with the urban-rural continuum. The degree of urban-influenced change in rural areas is hypothesized to vary directly with the size of the urban center, and inversely with distance to the urban center. It was expected that indicators of social change in the roles of women would be found predominantly in urban areas, and that the incidence of these indicators would decrease from urban to rural along the urban-rural continuum. Women's labour force participation, educational attainment, marriage patterns and fertility patterns in British Columbia were examined in terms of population size, density, distance from the metropolis and distance from the nearest urban center of their place of residence. Data used were from the 1976 Census of Canada, and the units of analysis were the 201 census subdivisions in B.C. Statistical analysis

made use of regression techniques: zero-order correlation coefficients and multiple correlation coefficients were examined to elucidate the relation between women's roles and place of residence. Labour force participation and educational attainment of women were not found to be strongly related to place of residence along the urban-rural continuum. However, place of residence was an adequate predictor of women's roles in the traditional areas of marriage and fertility.

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CHAPTER 1: ON THE NATURE OF URBAN AND RURAL

Introduction

The urban-rural variable has frequently been used by sociologists as an explanatory factor in the analysis of differences between human groups. Inherent in such analyses is the assumption that there are salient differences between the modes of living experienced by urban and rural populations, and that such differences may account for other variations that are of interest to the sociologist. 'Where' a person or group lives, as an indicator of urbanity or rurality, is assumed to influence 'how' that person or group lives and behaves (Willits, et al., 1973:37). The urban location, as opposed to the rural, denotes different sorts of relations with the environment, with technology, with organization and with other human beings.

By virtue of differences in the density and size of the place of residence, populations have been assumed to vary systematically in terms of cultural, social and psychological variables (Willits, et al., 1974). Rural areas are considered to be the strongholds of the traditional lifestyle, while urban areas are often described as sources of social change and innovation. To illustrate, some noteworthy examples of such conditions may be examined: in sociological works rural areas have been characterized as possessing a

lifestyle which is heavily dependent upon the family, so that there appears to be "greater social pressure to marry, to remain married, and to remarry following a divorce or widowhood" (Woodrow, et al., 1978:79) than in urban areas. A tendancy towards early marriage, and a tendancy for almost total adult marriage in rural areas, has also been found to be accompanied by higher fertility rates and concomitant larger family sizes than in urban areas (Bogue, 1969). Further, residents of rural areas have been found to have lower educational attainment than residents of urban areas (Bogue, 1969).

The belief that such variations continue to exist has come under critical examination in recent years. Today, the idea that meaningful differences exist between urban and rural sectors is thought by many to have become obsolete, or at best relatively unimportant. Abu-Lughod (1964), Copp (1964), Dewey (1960), Duncan (1956b), Duncan and Reiss (1956), Hawley (1971), Sjoberg (1964), Webber (1963) and Wirth (1956) are some of those who have formulated such an argument. Abu-Lughod has stated that urbanization and industrialization have become so pervasive that no simple criteria like size of community or density of settlement can serve as reliable predictors of ways of life (1964:489). Duncan (1956b), even though he would not reject the concepts, has stated that the movement of the entire society toward virtually complete urbanization is one of the most important

trends of our time. Hawley goes further than this, stating that "there is no longer a meaningful distinction between urban and rural" (1971:239). These theorists would tend to argue, with another group called the 'mass society' theorists (cf. Olsen, 1963), that we have witnessed a homogenization of the entire culture, resulting in the elimination of all significant differences.

Prior to the technological revolution in Western societies, physical isolation was essentially synonymous with cultural isolation, and therefore significant differences did arise between urban and rural populations. However, in recent years, and especially in Western industrial societies, the means of interaction between urban and rural worlds have been rapidly increasing. Technological developments in transportation and communication have facilitated an increase in the possibility that exposure of the two populations, each to the other, can occur. This increase means that cultural isolation no longer characterizes the relation between the city and the country. Consequently, those who would reject the concepts of urban and rural would tend to believe that:

> "Isolation, which historically permitted the development of differences in lifestyles among various segments of the population, has been replaced by a system of continuous interchange throughout the culture, and the consequent elimination of the distinctive sub-cultural patterns within the society."
> (Willits, et al., 1973:36)

This has led some to conclude that the interaction between

urban and rural populations has virtually eliminated the differentiation of urban from rural.

Such a convergence of urban and rural population characteristics was predicted by Sorokin, et al. (1929) in a historic investigation of urban-rural differences. However, it was also noted that the rural world's approach in social characteristics to those of the urban world would not mean a complete obliteration of all important differences between the two (Sorokin, et al., 1929:624). Urban-rural differences would remain, they argued, as long as there were differences in density of population and size of community, heterogeneity of population and occupational specialization. Indeed, while witnessing some convergence of urban and rural population attributes on a variety of measures, other ecologists and demographers (among them Fischer, 1978; Lowe and Peek, 1974; Tarver, 1969; and Willits, et al., 1973 and 1974) maintain that the concepts of urban and rural remain significant to modern sociological research. A common stance taken is that an emphasis on similarities ought not to be so overwhelming as to lead us to ignore the fact that urban-rural differentiation still exists in modern society (Willits, et al., 1973:43).

Fischer (1978) has made evident the process of social change which explains the continuation of urban-rural differentiation. He argues that the diffusion of social norms from the city to the countryside does not mean that

urban-rural differences ultimately disappear. Diffusion takes time, and as new forms come to be accepted in the hinterland, yet newer innovations are emerging in the urban centers (Fischer, 1978:153). Therefore, a finding of homogeneity in an examination of urban and rural sectors on any one population attribute cannot be interpreted as an indication of homogenization of the culture in general terms. Such a finding may indicate that urban patterns at that point in time, with regard to that particular attribute only, have completely diffused to the hinterland. At that point in time, differences may be great in terms of a host of other attributes, and the process of differentiation, as well as convergence, is in a constant state of rejuvenation.

The argument here formulated, which supports the continued use of the urban-rural variable, is based on the assumption that the city is the source of social change. This would seem to require brief examination. Fischer (1978), Redfield and Singer (1954), Taylor (1968) and Willits, et al. (1974) have discussed this aspect of the relation between urban and rural. Fischer offers a succinct statement on the reasons that social change seems to concentrate in cities:

> "The variety of population types in cities, their concentration at 'critical masses' and their intermingling foster invention and the propagation of invention." (Fischer, 1978:154)

and therefore:

> "new opinions emerge first and fastest in the more urban places, and urban-rural differences widen." (Fischer, 1978:154)

It is assumed that the most prominent trends in modern society are those which indicate that the rural community is changing in the direction of the urban. The process by which urban innovations come to be accepted in rural areas illustrates aspects of the relation between geographical space and social behaviour, and also of the process of social change.

The Hypothesis of Urban Dominance

The theoretical construct which makes lucid the process of diffusion of urban characteristics into rural areas is called the hypothesis of urban dominance. The principle of urban dominance was developed separately by Gras (1922) and McKenzie (1933). An examination of the functional organization of modern society, in terms of economics for Gras and the ecological unit of the 'community' for McKenzie, led each of these to conclude that the large city or metropolis has an integrative function in relation to both its hinterland and to the total organization of society. Vast expanses of rural territory, and the populations living thereon, are expected to be organized with respect to the activities of the metropolis, and integrated with it.

Bogue (1949) was the first to summarize previous

work in the area of urban dominance, and his The Structure of the Metropolitan Community is one of the earlier statements on the spatial patterning of such dominance. Dominance was seen not as an attribute, but as a variable, and Bogue formulated a four-level scale of dominance upon which all places of residence could be placed. His examination leads to the conclusion that the urban-rural variable is more accurately conceptualized as a continuum than as a dichotomy. Bogue further pointed out that not only would economic and labour characteristics become territorially organized through the process of urban dominance, but so also would other less tangible aspects of human culture, such as morals, values and social activities (1949:25).

The three early authors on dominance who have been reviewed to this point actually dealt with a phenomenon which is called 'metropolitan dominance'. That is, the primary focus of these authors was on the very large and complex city: the metropolis. However, since the ability to dominate is posited as a variable, it can theoretically apply to the urban influences of cities beyond the rather restrictive category of 'metropolis', as will be seen from following discussion.

The theory would predict that, by virtue of its larger population size, the metropolis would have a greater influence on its hinterland than the smaller city would have on its hinterland. That is, the population size of a city

is an important factor in the discussion of the urban dominance principle. Size, as an indicator of the urban area's potential to dominate, is based on the proposition that the population size of an urban center co-varies with its technological level (Hawley, 1971; Sorokin, 1929; Stoeckel and Beegle, 1969). As such, this factor enters the exposition of the urban dominance hypothesis in a manner consistent with the following:

> "the extent of urban influenced changes in rural areas varies directly with the size of the city". (Martin, 1957:610)

In terms of the discussed model of social change, it may be said that there exists a:

> "hierarchical diffusion model in which early adoption and/or rate of diffusion are positively associated with community size." (Fischer, 1978:151)

The second factor which specifies the process of urban dominance is that of distance from the urban center. The principle posits that urban influences are distributed in the rural areas surrounding cities so as to form gradients of decreasing influence with increasing distance from the center of the city. Specifically,

> "the extent of urban influenced changes in rural areas varies inversely with distance to the nearest city." (Martin, 1957:610)

This aspect of the model asserts that the rural population, in areas that are remote from urban centers, will differ systematically from the rural population in areas adjacent to urban centers (Duncan, 1956b), and a linear relationship

with distance is expected. It is because of the method by which distance attenuates the relationship between urban and rural that the dichotomous representation proved to be problematic, resulting in the previously discussed conclusion that the concepts were meaningless. That is, since the rural population near to cities (under extreme dominance) was often found to be similar to the urban population, and that such rural population was assumed to be representative of rural populations in general, the conclusion of urban-rural homogeneity was reached.

The principle of urban dominance does not deny the fact that the means of interaction and contact between urban and rural worlds has been increasing, resulting in the weakening of mutual isolation and the diffusion of urban characteristics into rural areas. In fact, the principle is based upon this notion; only through interaction can distance have relevance to the hypothesis of urban dominance. As Hawley has stated, the metropolitan community is:

> "delineated by the frequency with which outlying residents and institutions transact their affairs in the metropolis, whether through direct visitation or indirect means of communication." (Hawley, 1971:149)

These frequencies decline in a gradient fashion with distance from the urban center. The inverse relationship between the incidence of urban characteristics in rural areas is due primarily to:

> "the diminishing range of communications media, transportation facilities, and the amount of interaction between rural and urban peoples." (Stoeckel and Beegle, 1966:347)

As such, the projection of the urban area's influence is not really seen as a one-way process, but as a result of reciprocations between the parts of a system. It is often assumed that:

> "varying degrees of accessibility of hinterland populations represent varying degrees of interaction with the urban center and hence accessibility is taken to be a variable which will co-vary with dominance." (Stoeckel and Beegle, 1969:57)

Accessibility has been found to be equated with distance, which in ecological terms is considered to be a time/cost concept, and therefore distance becomes an integral factor in the analysis of the relation between urban and rural.

In summary, it is felt that the urban-rural variable, while of questionable utility when conceptualized in the dichotomous form, has considerable potential when conceptualized as a continuum. This continuum follows the model outlined here as the principle of urban dominance. The model elucidates the link between the urban-rural variable and the spatial distribution and diffusion of social norms and values. It may be said that:

> "The question of the extension of urban characteristics into rural areas is here viewed as part of the more general problem concerning the variation of societal data by position in regional structures." (Hiller, 1941:242)

Previous Research on Urban Dominance

A considerable volume of research exists which attests to the salience of the urban dominance hypothesis in examining the relation between urban and rural characteristics. The explanatory power of the two components of the dominance principle, city size and distance, has been evaluated using a wide range of dependent variables. While some research has concentrated on only one of these two factors, other studies have incorporated both aspects. The discussion of previous research which follows separates the two factors for the purpose of expositive clarity. As such, an examination of research results for city size as an indicator of dominance will be followed by a similar examination in terms of distance. Some overlap of studies cited therefore becomes inevitable. A general discussion of the dependent variables which have been found to be related to city size and distance will be followed by a brief examination of the empirical evidence regarding the utility of the urban dominance model.

Various studies have found that size of urban place affects patterns of dominance in terms of such economic characteristics as wholesale and retail trade (Bogue, 1949; Vance and Smith, 1954), farm land use, farm size and level of farm living (Anderson and Collier, 1956; Tarver, 1963). The distribution of social and demographic characteristics has been correlated with city size in terms of the age

structure of the population (Duncan, 1956a), fertility (Duncan, 1956a; Kruegal, 1971; Tarver, 1969), density (Tarver, 1966), mobility and socio-economic status (Duncan and Reiss, 1956), farm age and status structure (Stoeckel and Beegle, 1966; 1969) and traditionalism (Fischer, 1978; Willits, et al., 1974). The operationalizations of city size provided in these studies are too numerous to specify here, and are often specifically determined by the size of the cities in the areas selected for study. However, it should be pointed out that a common distinction, based either on size or degree of functional specialization, is made between a metropolitan center and a local urban center, even though the size level of such differentiation varies from study to study.

Generally it may be said that in previous research city size has been found to influence the degree of dominance that an urban center exerts. With regard to such effects, a few additional points need be made. Anderson and Collier (1956) found that the nearest city appeared to have a greater degree of influence on rural hinterlands in terms of farm economic characteristics that did the nearest metropolis, which was the largest city in the study area. Willits, et al. (1974) obtained a similar result, concluding that direct personal contact with local urban life is more important in structuring patterns of urban influence than are secondary contacts with a more distant metropolis.

While such results seem to point to the conclusion that city size may operate in the opposite of the predicted direction (that is, a smaller city has more power to dominate than a larger city), it should be noted that in these cases the distance to the smaller urban center was significantly less than to the metropolis. Therefore, these results do not deny that the larger city may have a greater ability to dominate rural hinterlands, but merely indicate that the second factor of distance is of integral importance, or that the interaction of the two factors is a necessary condition to understanding the process of urban dominance.

Kruegal points out that a city of approximately 10 to 25 thousand residents was not found to differ significantly in fertility patterns from the surrounding rural areas (1971:153). A number of interpretations could be applied to this finding, among them that perhaps a level exists below which an urban area becomes part of the hinterland rather than a dominating force. At any rate, it must be stated that while evidence exists in previous research to support the contention that the extent of urban influence varies directly with the size of the city, this relation has not been found to be universally applicable (Kruegal, 1971; Willits, et al., 1974).

A variety of dependent variables have been examined using distance from the city as the independent variable. We find studies on economic variables such as land values

and size of farms (Anderson and Collier, 1956; Duncan, 1956b; Goldsmith and Copp, 1964; Hiller, 1941; Kish, 1954), on such demographic characteristics as the age and sex structure of the population and fertility (Duncan, 1956a; Hiller, 1941; Kruegal, 1971; Stoeckel and Beegle, 1966; Tarver, 1963; 1966; 1969; Thompson and Jackson, 1940; Whelpton, 1936), on educational attainment and socio-economic status (Stoeckel and Beegle, 1966; Tarver, 1969), and on attitudes such as traditionalism (Willits, et al., 1974). While different operationalizations and different criteria of confirmation abound, in general one can assert that previous research has failed to disconfirm the urban dominance hypothesis with regard to the effect of distance. That is, from previous research findings the extent of urban influence in rural areas has been found to vary inversely with distance to the nearest city. In fact, Tarver (1969) found that distance was the most important factor (that is, had a greater predictive ability than size) in the urban dominance model.

There have been some studies that have examined measures of interaction between rural and urban populations, and have found that the degree of interaction declines with distance, conforming with the dominance principle. Along these lines Park (1929) discussed the spatial distribution of newspaper circulation, as did McKenzie (1933), who also plotted the decline in bus services with distance from the

city, and Tarver (1966) examined the volume of highway traffic. These studies support the contention that distance reflects the interactional accessibility of rural populations to urban centers.

Those studies in which both city size and distance are used to test the urban dominance hypothesis are felt to be the more complete conceptualizations of the model. The research of Stoeckel and Beegle (1966; 1969), Tarver (1963; 1966; 1969), and Willits, et al. (1974) are therefore seen as significant contributions in this area. Using multiple regression techniques, these studies have found that the urban dominance model is able to explain between 20 and 59 percent of the variance in selected dependent variables. It is concluded from such results that the model has sufficient empirical support to warrant further examination.

CHAPTER 2: ON THE CHANGING ROLES OF WOMEN

Women's Role Orientations

Changes in the structure of the family unit and in the role expectations of family members have frequently been ascribed to the increasing urbanization of modern society (Boyd, et al., 1976; Statistics Canada, 1977). In terms of individual role behaviours, it has been noted that the husband-father role has actually undergone the least amount of change, while the roles of the adult female (wife, mother and housewife) have changed radically with increasing urbanization (Boyd, et al., 1976). The most salient indicators of the changing roles of women will be explored in this chapter, resulting in the development of some theoretical hypotheses which synthesize expectations about the spatial distribution of such changes.

Social change in the area of women's roles may initially be approached by examining the typology of Lipman-Blumen (1972), which categorizes female role types as 'traditional' or 'modern'. The 'traditional' female role set may be defined as completely familial; involving the roles of wife, mother and housekeeper. As such, the appropriate behaviours of the 'traditional' woman would be conceived of in terms of marrying, having several children, and caring for husband, children and home for the rest of

her life (Boyd, et al., 1976:27). Concomitant with such behavioural expectations is an ideology which justifies the 'traditional' role as the right and proper role for women. It has been stated that the:

> "'Traditional' view of the female role involves the belief that a woman's primary responsibilities are home-making and child-rearing." (Lipman-Blumen, 1972:35)

The ideology specifies that women belong in the home (as opposed to the wider societal arena), that children require their mother's full-time care, and that the domestic services of a wife are necessary for family survival.

A primary difference between the 'traditional' and the 'modern' female role orientations is the degree to which role behaviours are specified. Marriage, motherhood and career are (ideally) neither proscribed nor prescribed under conditions which foster the 'modern' orientation. As Wrigley and Stokes have pointed out:

> "Women who hold a contemporary view of the feminine role differed greatly from traditional women in their life plans. They aspired to higher educational goals than other women.... they expected to postpone marriage until a later age."
> (Wrigley and Stokes, 1977:398)

The 'modern' female role orientation therefore makes alternatives to familial roles possible, and allows for female participation in activities beyond the family circle. Under conditions which foster the development of alternatives to the familial role, it would be expected that women could choose any combination of work, schooling, marriage or

child-bearing that would satisfy their conception of appropriate female behaviour (Wrigley and Stokes, 1977:398). It is important to note that the majority of adult women are not in the labour force, are married and have children, leading to the conclusion that 'traditional' roles remain the most common roles of women. The most salient indicators of the changing roles of women are believed to be reflected in changing female participation in the labour force, changing female educational attainment levels, changing rates of marriage and/or divorce and changing fertility rates.

As the roles of women change in the direction of less traditionalism or familism, it is expected that rates of female labour force participation would increase and rates of female domesticity would decrease. Participation in the labour force is a sociologically significant change from the domestic role for three reasons: the salary earned offers women a certain degree of economic independence, it offers an opportunity to change the power balance within the family, and it changes the source of a woman's status in society. The ability to earn an independent income curtails the economic dependence which characterizes female domesticity and provides women with opportunities to make alternative decisions with regard to familial behaviour, as well as with regard to a host of other life choices. Pool has discussed the relevance of female employment to

family power structures, and has hypothesized that:

> "the greater the resources of a wife, the more her power, and more egalitarian the marriage." (Pool, 1978:41)

He has argued that the person on whom others depend for 'vital benefits' (food, clothing and shelter) has power in a relationship. The employment of women could remove some of this power from the male family member, potentially providing for a more egalitarian family unit. Finally, the homemaker derives status in society in an indirect manner: it is ascribed to her through her husband's achievements (Arnott and Bengston, 1970). Participation in the labour force offers women the potential to claim a share of social recognition as individuals.

Changing levels of female educational attainment may also be interpreted in terms of women's potential to claim social recognition as individuals (Oakley, 1976). As education is often a criteria of success in modern society, it becomes important in analyzing women's lives to understand their relations with educational institutions (Arnott and Bengston, 1970).

Changes in the proportion of women who are married indicate preferences of adult women with regard to the assumption of familial roles. Havens (1971) has found the proportion of women who are married to be inversely related to the occupational status of women, so that those earning the most are more likely to be unmarried. That is, the

greater the economic independence of women, the less likely they are to be married. With regard to the interpretation of this finding, Havens points out that:

> "If one rejects the common notion that females with high incomes are simply the 'marital rejects' or 'pathetic misfits' of society, then a possible interpretation is that these females are less willing to enter into and/or maintain marital commitments."
> (Havens, 1971:218)

In addition, marriage is a state of legalistic dependence for women, whereas the unmarried state (with certain age restrictions) implies independence in the face of the law.

The final indicator of change in women's roles is that of fertility. Declining fertility rates provide evidence of a curtailment of the mother role, and therefore indicate that less emphasis is placed on familial roles. Desired family size has been found to be inversely related to the extent of nonfamilial activities of wives (Wrigley and Stokes, 1977). Further, the family size preferences of young women was found to be related to sex-role ideology so that:

> "women with a contemporary or modern view of the role of women both desired and expected fewer children than women with a more traditional perspective." (Wrigley and Stokes, 1977:397)

Clearly, the fewer children in a household, the greater would be the opportunities for women to participate in a wider societal arena.

The foregoing brief review provides some rationale for examining female rates of labour force participation,

educational attainment, marriage and fertility as indicators of the roles of women in modern society. In order to actually measure the change in women's roles, a longitudinal research design would be necessary. However, the objective of this study involves an examination of women's roles in terms of the urban-rural continuum, and purports to interpret such findings vis a vis the model of spatial patterning and social change developed in the previous chapter. The expectation that the urban area is the source of social change in modern society leads to the prediction that women's roles will be less familial in urban areas than in rural areas.

Urban-Rural Differences in Women's Roles

The significance of the urban-rural variable in relation to the lives and social behaviour of women has been examined in a number of studies over the past few decades. Most of this research has studied female labour force participation, educational attainment, marital status and fertility in terms of the urban-rural dichotomy. There are a few studies however, which have utilized the model of urban dominance, particularly with regard to fertility, and these shall be given detailed examination. In general terms it may be said that the available studies indicate that the familial roles of wife, mother and housewife are more prevalent in rural areas than in urban areas.

Previous research suggests that urban women are more likely to be in the labour force than are rural women. Bogue (1969) and Taylor (1968) found higher female employment rates in urban areas than in rural areas. Duncan pointed out that "participation of females in the labour force is recognized as an urban characteristic" (Duncan, 1956a:553). The Canadian 1971 labour force participation were found to be 44.2 percent for urban women and 31.3 percent for rural women (Gunderson, 1976:98). Tarver (1969) examined the differentials of female labour force participation in terms of the urban dominance hypothesis and found that the proportion of women who were employed decreased as distance to the metropolis increased, and increased directly with the population size of the urbanized areas. Such support for the urban dominance model leads to the first hypothesis of this study: that the rates of female labour force participation will vary in terms of place of residence. The highest rates of labour force participation are expected in the most urbanized areas, and the lowest rates are expected in rural areas which are most remote from urban centers.

Urban-rural differences have also been found to exist in terms of female educational attainment. The number of years of schooling completed by urban women has been found to be in excess of the number of years of schooling completed by rural women (Bogue, 1969; Taylor, 1968). In

Canada in 1976, 42 percent of urban women over 15 years of age had attained at least a secondary school certificate, whereas the corresponding figure for rural women was only 32 percent (Statistics Canada, 1976:92-827). The urban dominance hypothesis was tested in terms of female educational attainment by Duncan (1956a) and Tarver (1969). The proportionate number of women completing 12 or more years of schooling was found to be directly related to population size and inversely related to distance from the metropolitan center. As a result, it is here hypothesized that the educational attainment of women will vary in terms of place of residence. The highest levels of educational attainment are expected in the most urban areas, while the lowest levels are expected in rural areas that are most remote from urban areas.

Rural women have been found to marry at younger ages and more universally than their urban counterparts, and are more likely to remarry following divorce or widowhood (Gee, 1978; Woodrow, et al., 1978). For example, 44.9 percent of urban women aged 20 to 24 in 1971 in Canada were single, whereas 37.0 percent of rural women in this age category were single (Gee, 1978:12). Although no test of the urban dominance model has been applied to female marital behaviour, Gee has found that:

> "A trend of steady convergence occurs until 1961, but the 1971 and 1976 data indicate some widening in the gap between rural and urban women in terms of singulate mean age at marriage. This widening, a function of

> unchanging rural marriage behaviour in conjunction with decreasing urban nuptiality, suggests that place of residence continues to exert an effect upon the marriage behaviour of Canadian women." (Gee, 1978:16)

This finding, combined with evidence of urban-rural dichotomous differences and knowledge of the intercorrelated nature of familial roles, leads to the expectation that marital status will also prove to be related to place of residence. The lowest percentages of married women are expected to be found in the most urban areas, while the highest percentages of married women are expected in the rural areas that are the most remote from urban centers.

Finally, a significant amount of research exists to support the contention that there are urban-rural differences in women's fertility behaviour. The number of children born to urban women as been found to be considerably less than to rural women (Bogue, 1969). In 1971 the mean number of children born to women residing in urban areas of greater than 30,000 residents, adjusted for age and age at marriage, was 2.16. For rural farm women this figure was 2.85 (Boyd, et al., 1976:39). Support for the urban dominance hypothesis in relation to fertility has been found in the studies of Duncan (1956a), Kruegal (1971), Martin (1957) and Tarver (1969). The number of children born per 1000 women ever married was found to decline as the population size of urbanized areas increased (Tarver, 1969). Fertility ratios were found to grade upward with increasing distance

from cities by Duncan, Kruegal, Martin and Tarver. Kruegal states that:

> "spatial variation in fertility levels appears to decrease as a given area establishes closer communication and integration with the regional or national culture."
> (Kruegal, 1971:144)

That is, Kruegal found fertility levels to converge as the degree of inaccessibility of his study areas decreased. It is expected that this study will find fertility behaviour to be related to place of residence. Fertility rates are expected to be lowest in the most urban areas, and to be highest in the most remote rural areas.

In conclusion, it is expected that the rates of female role participation in terms of the four attributes selected as the most salient indicators of women's roles are expected to vary by geographic position or place of residence. As Copp has pointed out:

> "It has been assumed that most changes in the American family have been developing in urban communities and have been diffusing to rural communities by means of the institutionalized and informal linkages between rural and urban populations."
> (Copp, 1964:160)

The urban dominance model is to be used to test the expectations about women's roles which have been discussed in this chapter.

The Theoretical Hypotheses

The primary purpose of this study is to test the following four hypotheses:

Hypothesis A: The labour force participation of women will decrease from urban to rural along the urban-rural continuum.

Hypothesis B: The educational attainment of women will decrease from urban to rural along the urban-rural continuum.

Hypothesis C: The proportion of women who are married will increase from urban to rural along the urban-rural continuum.

Hypothesis D: The fertility of women will increase from urban to rural along the urban-rural continuum.

CHAPTER 3: METHODOLOGY

The subject matter discussed in this paper is common to the field of human ecology. That is, the relation between environmental and social factors constitutes the subject matter of this research. To this point, certain concepts (population size, density, distance from the urban center, nearest urban center, metropolis and the urban-rural continuum) which are integral to the model of urban dominance have been used. Attributes indicative of women's roles (labour force participation, educational attainment, marital status and fertility) have also been discussed. It now becomes necessary to make explicit the specific hypotheses, the operational definitions and the methods which will be used to analyze the data.

The Data

The data to be used in this study are from the 1976 Census of Canada, and were obtained from the British Columbia Department of Economic Development by special request. These data were gathered on June 1, 1976 and represent a total enumeration of the population. (Error estimates are available in Statistics Canada's published census monographs.) This study makes used of population counts for the Province of British Columbia. The population referred to as 'B.C. women' shall consist of all non-reserva-

tion females over 15 years of age who were enumerated in the 1976 Census. (The population of native Indians living on reservations is excluded from the analysis as it is felt that the reservation as a place of residence is unique in terms of a host of variables that may impinge in unknown ways upon the urban dominance model.) There were 932,955 non-reservation females over 15 years of age in B.C. who were enumerated in the 1976 Census: these are the units of observation for the study.

For the purpose of data collection and presentation, each province in Canada is divided into smaller administrative units by Statistics Canada. One such unit is called the census subdivision. A subdivision is defined as a:

> "General term applying to municipalities, Indian reserves, unorganized territories and subdivisions. In Newfoundland, Nova Scotia and British Columbia, the term also describes geostatistical areas that have been created by Statistics Canada in co-operation with the province as an equivalent for municipalities."
> (Statistics Canada, 1976:92-800:19)

Census subdivisions are classified into various types, the most common in British Columbia are: city, town, village, district municipality, municipality, rural district and Indian reservation. When the Indian reservations are excluded, there remains 201 census subdivisions in the province. These 201 subdivisions are the units of analysis for this study.

Operationalizations

The urban-rural continuum is conceptualized as a composite construct consisting of the population size and density of a subdivision, and the distance the subdivision is from the urban center. High population size, high density and low distance to the urban center characterize the urban end of the continuum: low population size, low density and high distance to the urban center characterize the rural end. The procedure of multiple regression allows these three variables to be statistically combined in such a manner as to examine the effect of place of residence upon the dependent variables.

Population size, the first component of the urban-rural continuum, is operationalized as the total number of residents of a given subdivision. The 201 subdivisions range in size from a population of 253 in the village of Silverton to 410,188 in Vancouver city.

Density is operationally defined as the quotient of the total population divided by the area of the subdivision in square kilometers. The 201 units of analysis range in area from 0.8 square kilometers in the village of New Denver to 163,390 square kilometers in the rural district of Peace River-Liard Sub A. The variable density ranges from 0.1 persons per square kilometer in Squamish-Lillooet Sub A to 3626.8 in Vancouver city.

The metropolis is operationally defined as the city

of Vancouver. With a 1976 population of 410,188 in Vancouver city alone (Statistics Canada, 1976:92-831), it is approximately 6.5 times as large as the next largest city in British Columbia, and is the only city which could qualify for metropolitan status (Kerr, 1968). There are an additional four urban centers with 1976 populations greater than 50,000: Kamloops, Kelowna, Prince George and Victoria. When the term 'nearest urban center' is used, it refers to one of these four cities, or when a subdivision is closer to Vancouver than any of the other four, it refers to Vancouver. The critical level of 50,000 population was selected to test the dominance effect of the nearest urban center for two reasons: 1) Kruegal (1971) and Lowe and Peek (1974) cited this as a significant urban size for testing the urban dominance hypothesis, and 2) the size distribution of B.C. cities has a logical break at this level, as the next largest city has a 1976 population of approximately 40,000 people.

With the metropolis and the nearest urban center so defined, one other hypothesis is to be tested. This hypothesis, while not the primary focus of the research, provides a test of the factor of city size as discussed in Chapter 1. It is expected that distance from the metropolis will prove to be more important in predicting the spatial distribution of women's roles than distance from the nearest urban center.

Distance from the metropolis is operationalized in

two ways. The first method involves calculating the number of kilometers from the estimated population center of the subdivision to Vancouver in a straight line. The second method expresses distance not as kilometers, but as hours. The number of hours required to get from the population center of the subdivision to Vancouver by surface travel (highway and/or ferry) is calculated from information supplied by the B.C. Ministry of Tourism. Time required to travel by air is felt to be a less valid measure, due first, to differential access to airports (some subdivisions do not have any sort of airport), second, to the methodological difficulty encountered because airlines vary in stopover times and third, because access to air travel is felt to depend heavily on socio-economic status.

Distance from the nearest urban center is operationalized in the same manner as is distance from the metropolis. That is, one measure of distance is the number of kilometers in a straight line and the other is the number of hours required to travel from the subdivision to the urban center. A total of 11 subdivisions cannot be used at this point as the nearest urban center is not in B.C. at all, but is Calgary, Alberta. Where analysis requires the variable 'distance from urban center', these 11 are excluded.

Labour force participation is defined as the percent of women aged 15 to 64 years in each subdivision who were members of the labour force; either working or seeking

employment. Specifically, the 1976 Census used the following definition of labour force:

> "the non-inmate population, 15 years of age and over who, in the week prior to enumeration were (a) employed or (b) unemployed.
> (a) The employed consists of persons who, in the week prior to enumeration,
> (i) worked for pay or in their own business, farm or professional practice;
> (ii) helped without pay in a family business or farm; or
> (iii) had a job from which they were temporarily absent because of illness, vacation, labour dispute at their place of work, training course, bad weather, fire, personal reasons, etc.
>
> (b) The unemployed includes persons not classified as employed who, in the week prior to enumeration,
> (i) looked for work and were available to start work. As well, the Census Instruction Booklet asked persons who would have actively looked for work, but did not for certain specific reasons, to answer 'yes' to the 'looking' question.
> (ii) were on temporary lay-off, not exceeding 30 days, from a job to which they expected to return, or
> (iii) had definite arrangements to start a new job at a future date."
> (Statistics Canada, 1976:92-800:26)

Educational attainment is measured as the percent of women in each subdivision who had obtained at least a secondary school certificate. The calculation of this variable involves subtracting the number of women in the four Census 'level of schooling' categories which have less that a secondary school certificate from the total number of women, and then transforming this number into the percentage figure.

Marital status is operationally measured as the percent of women aged 15 to 64 years in each subdivision who are married. The 1976 Census included people living in common-law marriages in the married category, allowing the variable to become a conceptual dichotomy of 'living with a man' and 'not living with a man'.

The fertility ratio used in this study is a form of child/woman ratio. This child/woman ratio is defined as the quotient obtained when the number of children under 15 years of age is divided by the number of women aged 15 to 64 years. While not a conventional measure of fertility, this operationalization does provide the best indicator, given the available data, of the salience of childbearing in a subdivision.

Research Hypotheses

The hypotheses may be stated in testable form as:

Hypothesis A: The percent of women who are in the labour force will vary directly with population size and with density, and inversely with distance to the urban center.

Hypothesis B: The percent of women with a secondary school certificate will vary directly with population size and with density, and inversely with distance to the urban center.

Hypothesis C: The percent of women who are married will vary inversely with population size and with density, and directly with distance to the urban center.

Hypothesis D: The child/woman ratio will vary inversely with population size and with density, and directly with distance to the urban center.

Hypothesis E: The distance to the metropolis will explain more variance in women's roles than will the distance to the nearest urban center.

Methods of Analysis

The analysis of these data follows quantitative multivariate statistical techniques appropriate to interval variables, and available through the SPSS (Nie, et al., 1975) computer programme. The statistical procedure which tests the hypotheses makes use of the regression model, which in its simplest form translates the data into a linear function of the relation between the dependent and independent variables. The regression analysis ultimately results in a value called r^2, which indicates the proportion of the variance in the dependent variable which can be accounted for by its relation with the independent variable (Blalock, 1972). Also used for comparative purposes are the regression coefficients (b and beta) which indicate the relative impact of each independent variable on each dependent variable.

The first step in the analysis involves the production of a correlation matrix of all variables. This matrix produces the zero-order correlation coefficient (r) for the relation between each variable and each other variable, and allows initial decisions regarding the utility of the data to be made. Each of the variables which are to be aggregated to reflect the position on the urban-rural continuum

(population size, density and distance) can be examined in terms of its relation with each of the other two in order to insure that multicollinearity will not invalidate the results. The two types of distance measures (kilometers and hours) can be compared and decisions made regarding the best predictor of the dependent variables. Finally, the direction of the relationships can be examined to yield preliminary decisions about Hypotheses A to D.

The second procedure in analyzing these data is to produce a series of multiple regression equations of the form: $Y = a + b_1X_1 + b_2X_2 + b_3X_3$.
'Y' symbolizes the dependent variable, which is variously the percent of women in the labour force, the percent of women with a secondary school certificate, the percent of women who are married, and the child/woman ratio. 'X_1' symbolizes the independent variable population size, 'X_2' symbolizes the second independent variable, density and 'X_3' symbolizes the third independent variable, distance. The symbol 'a' is an arithmetic constant which theoretically specifies the value of the dependent variable in the absence of the independent variables. Each of the 'b' symbols represents the unstandardized regression coefficients, which indicate the impact of each independent variable on the dependent variable.

As the above description is phrased, four separate multiple regression equations would be expected, one for

each of the dependent variables. In fact, eight multiple regression equations are required, as Hypothesis E is tested at this point. As such, the urban dominance model is first examined statistically using distance from the metropolis in the 'X_3' position of the equation. This requires four equations. Four more equations are required to test the urban dominance model using distance from the nearest urban center as the third independent variable. The resultant R^2 values (the percent of the variance in the dependent variable which is explained by its relation with the independent variables) allows the final decision regarding Hypothesis E to be made: if the R^2 values for the first set of equations are greater than the R^2 values for the second set, then the hypothesis is accepted. The R^2 values for the set of equations using the best distance measure are then examined in order to make decisions regarding the urban dominance model and women's roles.

Tests of significance will not be used with these data as it is inappropriate to perform such analyses when the data represent the total population. This study makes use of the total population of B.C. women, and therefore inferential statistics will not be used.

CHAPTER 4: RESULTS

The preliminary examination of the study data takes the form of a correlation matrix using all nine variables. This matrix reports Pearson product-moment correlation coefficients (r) which are the zero-order measures of association between each single variable and each other variable. These coefficients are presented in Table 1.

TABLE 1: Pearson Product-Moment Correlation Coefficients, 201 Census Subdivisions, B.C. 1976 Census Data

	Child/Woman Ratio	% Married	% with Secondary School	% in Labour Force	Hours to Nearest Urban *	Kilometers to Nearest Urban *	Hours to Vancouver **	Kilometers to Vancouver **	Density
Population Size	-.24	-.31	.15	.17	-.24	-.29	-.29	-.31	.44
Density	-.45	-.56	.08	.13	-.19	-.23	-.25	-.26	
Kilometers to Vancouver	.61	.21	-.27	-.03	.59	.66	.94		
Hours to Vancouver	.59	.22	-.22	-.06	.76	.75			
Kilometers to Nearest Urban	.54	.24	-.11	-.03	.91				
Hours to Nearest Urban	.43	.22	-.06	-.08					
% Women in Labour Force	-.23	-.46	.30						
% Women with Secondary School	-.28	-.07							
% Women Married	.51								

* based on 200 units
** based on 185 units

The first piece of important information to be extracted from Table 1 involves the degree to which the three variables that comprise the urban-rural continuum are intercorrelated. The correlation coefficient for the relation between population size and density is .44. The coefficients for the relation between population size and the distance to Vancouver are -.31 for distance as expressed in kilometers and -.29 for distance as expressed in hours. The coefficients for the relation between population size and distance to the nearest urban center are -.29 for the kilometers measure and -.24 for the hours measure. Finally, the coefficients for the relation between density and distance to Vancouver are -.26 for kilometers and -.25 for hours: for the relation between density and distance to the nearest urban center the coefficients are -.23 for kilometers and -.19 for hours. All of these coefficients are in the expected directions. In the absence of criteria which specify the degree of intercorrelation required of variables thought to reflect composite constructs, it was decided that these coefficients are sufficient. Further, it does not appear that multicollinearity exists to an extent where it could invalidate the multiple regression results.

As the travel time distance measures proved to be highly correlated with the distance in kilometers measures (for Vancouver the correlation is .94; for the nearest urban center it is .91), it was decided that an unnecessary

duplication would result if both types of variables (that is, hours and kilometers) were included beyond this point. These data would seem to indicate that the two measures are interchangeable and reflect essentially the same concept (which is theoretically treated as accessibility). Further, distance in hours and distance in kilometers are similarly related to each of the dependent variables in the study. It was decided that the methodologically simpler measure, distance in kilometers, would be used in subsequent data analysis. This subsidiary finding has important ramifications for further studies of this nature, as it seems to indicate that the complex and time-consuming manipulations required to calculate distance as travel time are unnecessary.

The correlation coefficients between the dependent and independent variables are in the directions predicted by the hypotheses. The percent of women in the labour force and the percent of women with a secondary school certificate are both positively associated with population size and with density, and negatively associated with distance. The percent of women who are married and the child/woman ratio are negatively associated with population size and with density, and positively associated with distance. These correlation coefficients range from the highest of .61 for the relation between kilometers to Vancouver and the child/woman ratio to the lowest of -.03 for the relation between kilometers to Vancouver and the percent of women in

the labour force.

A series of multiple regression equations was produced to illuminate the impact of each independent variable upon the dependent variables when each of the other independent variables is controlled, and also to provide information on the overall utility of the urban dominance model for these data. The results of these eight regression equations are presented in Tables 2 and 3.

In Table 2 the distance to Vancouver measure is the third independent variable, while in Table 3 the distance to the nearest urban center is used. The R^2 column in Table 2 indicates that the three independent variables together account for 13 percent of the variance in the percent of women in the labour force, 7 percent of the variance in the percent of women with at least a secondary school certificate, 44 percent of the variance in the percent of women who are married and 48 percent of the variance in the child/woman ratio.

In Table 3, using distance to the nearest urban center, only 3 percent of the variance in the labour force participation variable, 3 percent of the variance in the educational attainment variable, 33 percent of the variance in the marital status variable and 40 percent of the variance in the fertility variable are accounted for by the three independent variables. This evidence indicates that distance to Vancouver is more useful in the predictive model

TABLE 2: Multiple Regression Results - Percent of Women in the Labour Force, Percent of Women with at least a Secondary School Certificate, Percent of Women who are Married and Child/Woman Ratio BY Population Size (in 1000's), Density (in 100's) and Distance to Vancouver (in 100 km.), 201 Census Subdivisions, B.C. 1976 Census Data

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	b	beta	constant (a)	R^2
labour force	population size	.033	.23		
	density	.19	.22		
	distance to Vancouver	.31	.12	45.3	.13
education	population size	.024	.14		
	density	-.056	-.05		
	distance to Vancouver	-.68	-.22	44.9	.07
married	population size	-.014	-.10		
	density	-.53	-.61		
	distance to Vancouver	.037	.01	73.2	.44
child/woman ratio	population size	.00013	.02		
	density	-.013	-.44		
	distance to Vancouver	.036	.43	.82	.48

TABLE 3: Multiple Regression Results - Percent of Women in the Labour Force, Percent of Women with at least a Secondary School Certificate, Percent of Women who are Married and Child/Woman Ratio BY Population Size (in 1000's), Density (in 100's) and Distance to the Nearest Urban Center (in 100 km.), 190 Census Subdivisions, B.C. 1976 Census Data

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	b	beta	constant (a)	R^2
labour force	population size	.034	.15		
	density	.079	.06		
	distance to urban center	.14	.02	47.1	.03
education	population size	.035	.13		
	density	-.0053	-.003		
	distance to urban center	-.50	-.07	42.1	.03
married	population size	-.011	-.06		
	density	-.53	-.51		
	distance to urban center	.43	.10	72.8	.33
child/woman ratio	population size	.00022	.04		
	density	-.012	-.36		
	distance to urban center	.069	.46	.81	.40

used on these four dependent variables than is distance to the nearest urban center.

Other salient information available in Tables 2 and 3 leads to the conclusion that no single independent variable can be said to be the most important predictor of women's roles. The beta values presented represent the standardized regression coefficients and may be interpreted in terms of the relative impact of each independent variable upon the dependent variable when the other two independent variables are held constant. If the beta column in Table 2 is examined, population size and density may be seen to have almost equivalent impacts on labour force participation (beta = .23 and .22) while the relative impact of distance is about half as much (beta = .12). However, distance has the most pronounced impact on educational attainment (beta = -.22), whereas the relative impact of density is almost negligible (beta = -.05) and the relative impact of population size is intermediate to these two (beta = .14). For both the percent married and the child/woman ratio, the relative impact of density (beta = -.61 and -.44) is greater than for the other two independent variables, but distance to Vancouver has practically no impact on the percent married (beta = .01) whereas it has a rather substantial impact on the child/-woman ratio (beta = .43). Furthermore, the impact of population size on the child/woman ratio is of little consequence (beta = .02).

In summary, the correlation matrix presented as

Table 1 provides three important pieces of information. The coefficients indicate that the three variables which embody the urban-rural continuum are intercorrelated, that the distance in kilometers and distance in hours measures are intercorrelated to such an extent as to be considered interchangeable and that the zero-order measures of association between the independent variables and the dependent variables are in the predicted directions. The multiple regression results presented as Table 2 and Table 3 specify the degree to which the formulation of the urban dominance model is applicable to the four dependent variables and the impact of each of the independent variables when the other independent variables are controlled. When Tables 2 and 3 are compared, the capacity of the metropolis to dominate the hinterland in British Columbia is seen to be greater than the capacity of the nearest urban center to do so.

CHAPTER 5: DISCUSSION AND CONCLUSION

The purpose of this research was to examine the nature of urban-rural variations in women's roles. The theory of urban-rural differences developed in Chapter 1 posited that the city is the source of social change in modern society, and that such change diffuses from the city into the rural hinterland in a manner consistent with the hypothesis of urban dominance. It was expected that indicators of social change in the roles of women would be found predominantly in urban areas, and that the incidence of these indicators would decrease from urban to rural along the urban-rural continuum. That is, it was expected that the most urbanized areas would be characterized by 'modern' female roles, while the most remote rural areas would be characterized by the 'traditional' female roles.

The first level of interpretation of the study results is confined to a discussion of the data and the five hypotheses developed in Chapter 2 and defined in Chapter 3. This initial discussion shall remain 'data-based'. The second level of interpretation has a broader perspective, and rather than being confined to the data, allows for speculation on the meaning of the results. This shall involve a discussion of the research findings in terms of the wider issue of the spatial distribution and diffusion of social norms and values.

Indications of the Data

As Hypotheses A and B were phrased, it was expected that the dependent variables reflecting female labour force participation and educational attainment would be directly relation to population size and density, and inversely related to distance to the urban center. The zero-order measures of association substantiate these predictions. Of the three independent variables, population size is the most strongly related to the percent of women in the labour force ($r = .17$), while distance to Vancouver is the most strongly related to the percent with a secondary school certificate ($r = -.27$). These correlation coefficients, while in the hypothesized directions, indicate that the zero-order relationships are rather weak in terms of labour force participation and educational attainment.

When these first two dependent variables are analyzed in terms of the urban-rural continuum construct, a procedure made possible by using all three independent variables in multiple regression analysis, the results are inconclusive. Labour force participation is not inversely related to either of the distance measures (to neither the metropolis nor the nearest urban center) as predicted. Rather, it appears that population size and density have specified the conditions under which the relationship between labour force participation and distance exists. The direction of the relationship has reversed in the presence

of these other two variables and the strength of the relationship has diminished. The same sort of effect is noted for the relationship between educational attainment and density; the zero-order association is positive as predicted. However, when the effects of population size and density are accounted for, the association becomes negative and almost negligible.

The urban-rural continuum, defined as a composite of population size, density and distance to the metropolis, explains 13 percent of the variance in the percent of women in the labour force and 7 percent of the variance in the percent of women with a secondary school certificate. (Only 3 percent of the variance in these two dependent variables is explained by the model when distance to the nearest urban center is used in place of distance to the metropolis.) While no absolute criteria exist to specify how much variance an explanatory model must predict, these figures are less than expected and it is concluded that Hypotheses A and B should not be considered supported by these data. This is especially true with regard to Hypothesis A, as 21 percent of the variance in the percent of women in the labour force can be accounted for by its relation with a single demographic variable, the percent of women who are married.

It was expected in Hypotheses C and D that the percent of women who are married and the child/woman ratio would be inversely related to population size and density.

The evidence substantiates this prediction. Further, both of these dependent variables are directly related to the distance measures, precisely as predicted. Of the three independent variables, the highest zero-order measure of association with the percent married is density ($r = -.56$) and the best single predictor of the child/woman ratio is distance to Vancouver ($r = .61$). Thus, Hypotheses C and D are supported.

The multiple regression results for the marriage variable and the fertility variable also support the hypotheses. The urban dominance model (using distance to the metropolis) accounts for 44 percent of the variance in the percent of women who are married and 48 percent of the variance in the child/woman ratio. These are believed to be acceptable multiple correlation coefficients for sociological phenomena. It must be noted however, that the impact of the population size of the subdivision, when the other two independent variables are accounted for, is insignificant (beta = .02 and .04).

Finally, the results of the multiple regression analyses lend support to Hypothesis E, and indicate that distance to the metropolis is more effective in the urban dominance model than is distance to the nearest urban center. When the distance to the nearest urban center is used in the regression analyses, the urban dominance model explains 33 percent and 40 percent of the variance in the marriage

and fertility variables respectively (a decrease of 11 percent and 8 percent from the figures given above). These findings lend support to the urban dominance model in general, but the model is a more adequate predictor for these two dependent variables when distance from the metropolis is used. Such results provide confirmation of the aspect of the urban dominance principle which states that the larger the urban center, the greater is its ability to dominate the hinterland.

Interpretation

The fact that female labour force participation does not decrease in a gradient fashion along the urban-rural continuum could be interpreted as an indication that in British Columbia in 1976, the degree of acceptance of the employed role by women is equally dispersed across geographic areas. It might also mean that employment opportunities are distributed in such a way as to disperse participation rates. Put another way, these data could be interpreted as meaning that place of residence is not related to norms about female labour force participation and that economic independence for women is as likely in rural areas as in urban areas. On the other hand, it is important to note that the Census includes those who help without pay in a family business or farm in its definition of the labour force. It is suspected, but cannot be verified

with the available data, that a significant number of women in rural areas are included in the labour force as a result of this aspect of the definition. Working without pay does not seem to have the same ramifications in terms of women's status and independence as does paid employment, and differentiation of the two categories would be advantageous. If those who work without pay could be excluded from the calculation of the labour force variable, it is possible that the urban dominance model might have better predictive ability with regard to female labour force participation.

That the percent of women with a secondary school certificate is not strongly related to the variables which comprise the urban dominance model would seem to indicate that norms with regard to education have completely diffused along the urban-rural continuum. That the urban dominance model has little predictive ability in terms of the education variable could mean that place of residence is not related to women's educational attainment in this province. This might be interpreted as meaning that government attempts to provide equal educational opportunities throughout the province have been successful.

The most significant finding of this study is that the two dependent variables which are reflective of women's participation in the family (the percent married and the child/woman ratio) are spatially distributed in B.C. in a manner consistent with the formulation of the urban-rural

continuum. The data indicate that while the extent of female participation in the wider societal arena may not be related to place of residence, the extent of participation in the family is clearly so related. The degree to which an ecological group of women fulfill the traditional roles of wife and mother can be predicted through knowledge of regional position of their place of residence along the urban-rural continuum.

If social change is occurring in society in terms of the degree to which women are participating in the family, and such change is occurring in the urban centers, then it appears that the acceptance of the change is spatially distributed throughout the province in a manner predicted by the principle of urban dominance. The most highly urbanized areas in the province are those in which women are most likely to live if their behavioural roles are more typical of the 'modern' role orientation. The 'traditional' roles of wife and mother are most predominant in areas that may be categorized as being at the rural end of the urban-rural continuum. Such an argument may not be proposed with regard to employment and educational patterns of women. It is possible that social change in these areas has completely diffused outward from the urban centers to the rural hinterland, or even that 'modern' role orientations on these two factors have not yet begun to become prevalent in urban areas. Due to the pronounced effect of place of residence

on the two familial variables, and the possible interpretation of the other two variables as indicating complete diffusion, it is decided that this research can be interpreted as support for the principle of urban dominance. Certainly the two of the most important (traditionally) of women's roles do vary over the urban-rural continuum.

The factors which have been found not to vary over the urban-rural continuum are those which reflect female role participation in the societal arena beyond the family. There is a qualitative difference between the level at which social change in this area takes place, and the level at which change in family participation takes place. The former involves changes in secondary contacts, and in structural and economic conditions, while the latter involves changes in primary role relations. The data collected cannot indicate why the spatial patterns for each type of change in women's roles differ, but some speculation on this subject is possible.

It may be that the structural conditions of society change as a response to some external variable, and that the norms and values about primary role relations change in response to the structural conditions. The structural changes may be prior to the primary role changes, and a definite time lag between acceptance of each could exist. It may be that the need for clerical and service workers (predominantly female occupations) by the technologically

advanced society requires an educated female labour force, and that this need exists not only in urban centers (as might once have been the case) but also in rural areas. The economic and intellectual independence of women which these changes might imply could be related to changes in primary role relations, but as the latter take time to become accepted, they take time to diffuse from urban to rural. During such a 'lag time' one observes women fulfilling both 'modern' and 'traditional' role sets: there are educated, employed, wives and mothers. There is nothing unusual in corresponding role sets for men, so that educated, employed, husbands and fathers are common. However, the role expectations of 'wife' and 'mother' differ radically from those of 'husband' and 'father'. The role expectations of 'worker' and 'mother' are particularly prone to role conflict, but so also are other behavioural combinations of the 'modern' and 'traditional' formulations. Given the structural conditions which foster the 'modern' role orientation (societal need for female labour force), one would expect that the degree of participation in the female familial roles would decrease to a corresponding level. This seems to be happening in urban areas, and the model predicts that the change will diffuse to rural areas. (It is of course possible, that the roles themselves will change, but the exploration of that possibility is certainly beyond the scope of this paper.)

Limitations of the Study

It is possible that what has been attributed to the effect of ecological and residential characteristics should rather be ascribed to the effects of unexamined cultural and subcultural factors. A possible alternate explanation of the degree of traditional participation in the family along the urban-rural continuum may be found in the demographic characteristics of the populations in the study units. This point has been clearly made by Slesinger (1974) with regard to fertility. She found that the fertility differential along the urban-rural continuum was less a matter of urban dominance and more a matter of the characteristics of the population in those areas. It might be argued that the observed variations in this study are all related to socio-economic status, and that because this latter variable decreases from urban to rural, the measures of women's roles would change as well. However, education is one of the measures that usually is considered as part of socio-economic status, and in this study education only predicts 9 percent of the variance in labour force participation, less than 1 percent of the variance in percent married and 7 percent of the variance in the child/woman ratio. Especially with regard to the familial participation of women, the urban dominance model has significantly greater predictive ability. It is possible however, that other socio-economic variables not controlled in this study, could prove to have profound

effects on roles of women, and this should constitute a focus of future research.

There exist some weaknesses in the research design used in this study which, while not considered serious enough to lead one to disregard the results, do warrant discussion. The first problem, that of unpaid workers being included in the labour force, has been discussed. Second, the percent of women with a secondary school certificate included in its denominator those women over 64 years of age, while the other dependent variables were able to better control for the age factor by excluding this group. In fact, it is felt that more stringent controls for age on all the dependent variables would improve the study, as age is believed to be strongly related to the role orientations of women.

There also exist certain problems with the independent variables. Some subdivisions were assigned distance to the urban center values when in reality they might be considered a part of the urban center. For example, the metropolitan areas of both Vancouver and Victoria extend for many kilometers, and it might be argued that the entire urbanized area should be analyzed as a unit, rather than as separate subdivisions. Finally, population size proved to be a rather inadequate contributor to the urban dominance model, and this could be directly ascribed to a debility of the available data. That is, it was necessary to use

the population size of the subdivision even though the differences between a population of 5000 spread over many square kilometers in a rural subdivision and a population of 5000 in a town provide problems of interpretation. The variable 'density' reflects the difference. For this reason, density proves both theoretically and statistically to be the best measure of urbanization used in this study.

While the advantages to be gained by analyzing secondary data such as that available from the census are many (cost and reliability being the most important), certain limitations also apply. Due to the Statistics Canada requirement regarding confidentiality, the census subdivision is the smallest unit for which complete provincial data are available to an outside user. The use of a geographically smaller unit of analysis might have provided for the detection of subtle differences, especially with regard to the effect of distance, that have been concealed in the larger units. The problems discussed above result from the discrepancy between the form in which the data are available and the form in which the ideal data set for this problem would be presented. That is, had primary research been conducted, the form of the data would have more closely matched the requirements of the study. The cost, however, would have been prohibitive.

Directions for Further Research

This study was prompted by the desire to increase knowledge about the nature of urban-rural differences, about variations in women's roles and about the spatial distribution of social change. The research conducted has provided some illumination in these areas. The data have shown that urban women are more likely to have 'modern' role orientations with regard to participation in the family than are rural women, but have similar role orientations with regard to participation in wider society. Does this mean that rural women lag behind their urban counterparts with regard to their participation in familial roles, and will become more 'urban' in the future? Does it mean that urban women are more independent than rural women, or have greater power over their lives than rural women, or are less oppressed than rural women? These and additional questions await further research.

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WOMEN'S ROLES AND THE URBAN-RURAL CONTINUUM

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Patricia Diane Beatty-Guenter

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