A COMPARATIVE GEOGRAPHICAL STUDY OF CULTURAL LANDSCAPE FORMS RESULTING FROM SELECTIVE CULTURAL CHARACTERISTICS BETWEEN THE SOUTH POPLAR AREA, MATSQUI MUNICIPALITY, BRITISH COLUMBIA, AND THE SUMAS-BORDER REGION, WHATCOM COUNTY, WASHINGTON

by

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B.A., California State College at Hayward, 1968

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in the Department
of
Geography

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SIMON FRASER UNIVERSITY

APPROVAL

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Degree: Master of Arts

Title of Thesis: A Comparative Study of Cultural Landscape Forms Resulting from Selective Cultural Characteristics between the South Poplar Area, Matsqui Municipality, British Columbia, and the Sumas-Border Region, Whatcom County, Washington.

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ABSTRACT

Two agricultural groups, one Mennonite and the other of non-ethnical American characteristics, located in the Lower Fraser Valley of British Columbia and Whatcom County, Washington are the subject of this comparative study. An investigation into the different cultural landscape forms and the causative social value characteristics comprise the body of this thesis. Methodologies from historical geography are utalized in investigating the problem.

An analysis is made of the physical environment in order to establish similar physical environments, and of the distinctive backgrounds of the settlers in the two areas. The research was accomplished primarly through interviews and the results of the findings were compiled by groups and aligned one against another.

In the Sumas- Border area, all the migrations had several factors in common. All migrants were white, Protestant, and American and all were from the corn-belt. As a result of these migrations, a distinctive cultural landscape was developed.

The Mennonites of the South Poplar region of British Columbia, descendents of Mennonites who moved from Holland to Prussia to Russia and finally to Canada, created an equally distinctive cultural landscape.

The two hypotheses of this study: different cultural landscapes occur in areas of similar physical environments where two distinct groups have settled; and these different cultural landscapes are a result of variations in social characteristics of the groups of people occupying that environment, have been tested and tentatively proven.

In chapter two, two areas of similar physical environments and the distinctiveness of the two groups occupying the areas has been shown. Part of the findings recorded in chapter three have established that the cultural landscape forms are different in the two areas. This, then, leads to the conclusion that the first hypothesis is verified.

In chapter three, different cultural landscape forms as a result of value characteristics distinct in each group has been shown. The beliefs of the two groups were organized under the categories of individualism, egalitarianism, and particularism. These categories were compared one against another and it was concluded that the second hypothesis was verified.

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ACKNOWLEDGMENT

This thesis was originally titled " We must transcend the bullshit" from Thomas Wolfe's *The Electric Kool-Aid Acid Test*, but Dr. Mike Roberts, who thank God has left this University, did not like it. And then there is the Dean of Graduate Studies who continually change the rules and regulations, i.e. hurdles, enough to confuse anyone. Least of all, the library should not be forgotten, if at all possible; with its 3 books and one magazine this University is going far.

But anyway, I should thank Ian Joyce, another crazy graduate student who helped me on this thing, and Bob Kieran, some nut-stoned-freak for his time. My advisors' time and help is remembered as well. Bob Dylan's appropriate remarks on his numerous records can not go unnoticed. "Everybody must get stoned."

CHAPTER 1

INTRODUCTION

> Every passing hour brings the solar system forty-three thousand miles closer to Globular Cluster M 13 in Hercules - and still there are some misfits who insist that there is no such thing as progress.[1]

The experiences that groups of people bring to a particular space at a particular time may affect any subsequent action on their part. This theory has been demonstrated a number of times in the social sciences. Evon Vogt's study of Frontier Communities exemplifies this theme.[2] Others, including Robert Beck,[3] C.A. Dawson,[4] and Allan Rees-Powell[5] have used it a number of times, producing a well tested theory. Although similar in theory, these studies are marked by overwhelming differences in their methodological approach and in their specific content.

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[1]Kurt Vonnegut Jr, *The Sirens of Titan,* New York: 1959, p. 5.

[2]Evon Vogt, *Modern Homesteaders: The Life of a 20th Century Frontier Community,* Cambridge, Mass.: 1955.

[3]Robert Beck, "Spatial Meaning and the Properties of the Environment," in D. Lowenthal, *Environmental Perception and Behaviour,* University of Chicago Geography Series #109, Chicago: 1967, pp. 18-41.

[4]C.A. Dawson, *Group Settlement, Ethnic Communities in Western Canada,* Toronto: 1936.

[5]Allan Rees-Powell, "Differientials in the Integration Process of Dutch and Italian Immigrants in Edmonton," Unpublished M.S.W. Thesis, University of Alberta, Edmonton: 1964.

PROBLEM AND LITERATURE:

The purpose of the present study is to examine whether differences exist in the impact of differing agricultural peoples on the cultural landscape in areas of similar physical environments. In order to implement this study certain terms must be operationally defined.

The term agricultural peoples means groups of people who are involved in some sort of agricultural practices, whether they be commercial or supplementary income types. Cultural landscape is discussed by Hartshorne[6] at great length, but for this thesis the Sauer approach to cultural landscapes as man-made features will be used.[7] Sauer describes the cultural landscape as ". . . the geographic area in its final meaning. . . . Its forms are all the works of man that characterize the landscape. . . . The cultural landscape is fashioned out of a natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape is the result."[8] Lastly, the term 'similar physical environment' is a problem of degree and therefore is difficult to define, but reference to it in chapter 2 will demonstrate similar physical environments within the chosen areas of investigation.

This study reflects a topic frequently discussed within American cultural geography. It appears from a review of the literature that two aspects of cultural geography, settlement and historical geography, offer relevant material.

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[6]Richard Hartshorne, *The Nature of Geography*, Lancaster Pennsylvania: 1939, pp. 149-174.

[7]Carl Sauer, "Recent Developments in Cultural Geography," in E.C. Hayes, ed, *Recent Developments in the Social Sciences*, Philadelphia: 1927, pp. 154-212.

[8]Carl Sauer, "The Morphology of Landscape," *University of California Publications in Geography*, Vol. 2, 1925, p. 46.

The cultural geographer, being concerned with man in his environment, would have little reason for restricting the search for explanations so as to exclude human behaviour and social organization. But this restriction has been a tradition within the mainstream of cultural geography, apparent in any survey of the literature.

That aspect of settlement geography which could broadly be characterized as being within the realm of cultural geography frames the general theory in terms of the processes of settling and the pattern of settlement.[9] Kohn sees settlement geography as "having to do with the facilites men build in the process of occupying an area. These facilites are designed and grouped to serve specific purposes, and so carry functional meanings."[10]

Explanations in settlement geography are generally sought in environment and environmental resources,[11] not in human behaviour. Annaert[12] provides an excellant discription of settlement patterns and house types in the Congo, but was unable to do more than call attention to the possible significance of customary institutions or human behaviour. Dickinson,[13] Trewartha,[14] and Platt,[15]

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[9]Clyde F. Kohn, "Settlement Geography," in Preston James and Clarence Jones, eds, *American Geography, Inventory and Prospect,* Syracuse: 1964, pp. 125-141.

[10] *Ibid.* p. 125.

[11] *Ibid.*

[12] H.C. Brookfield, "Questions on the Human Frontiers of Geography, *Economic Geography,* Vol. 40, 1964, p. 283.

[13] R.E. Dickinson, "Rural Settlements in the German Lands," *Annals of the Association of American Geographers,* Vol. 39, 1949, pp; 239-263, cited in Brookfield, *Op. Cit.*

[14] G.T. Trewartha, *Japan: A Physical, Cultural, and Regional Geography,* Madison: 1945, cited in Brookfield.

[15] R.S. Platt, ***Latin America:*** *Countrysides and United Regions,* New York: 1942, cited in Brookfield.

exemplify the entire field in their failure to analyse the relation of landscape form to land occupance and use by studying the location of individuals in relation to all their activities and interests. Kniffen[16] recognizes that behavioural norms and social conformity are important factors in house styles, but he does not examine these in any depth. Still others, exemplified by Galpin[17] and Christaller,[18] compound this failure in studies of central place.

Two other significant drawbacks persist in settlement geography. Firstly, differences in objectives amoung particular studies result in an inability to compare data and thus prevents a broadening of our knowledge. Secondly, a lack of comparative studies creates a situation of unique case studies, again preventing a broadening of our knowledge and understanding of the theme.

Among American historical geographers concerned with a similar purpose as that advanced here, the most coherent single group are those trained at the University of California mainly under Carl Sauer. In some of the essays produced by this group, the purpose was the historical reconstruction of the geography of an earlier period. Sauer[19] and West[20] exemplify this theme, but Gordon's[21] monograph can be best used to illustrate the problem of this approach.

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[16] Fred B. Kniffen, "Folk Housing: Key to Diffusion," *Annals of the Association of American Geographers*, Vol. 55, 1965, pp. 549-577.

[17] C.J. Galpin, *The Social Anataomy of an Agricultural Community*, University of Wisconsin Agricultural Experiment Station, Bulletin 34, 1915.

[18] Brookfield, p. 283.

[19] Carl Sauer, "Colima of New Spain in the Sixteenth Century," *Ibero-Americana*, Vol. 29, 1948.

[20] Robert C. West, "The Mining Community in Northern New Spain: The Parra Mining District," *Ibero-Americana*, Vol. 30, 1949.

[21] B. Le Roy Gordon, "Human Geography and Ecology in in the Sinu Country of Columbia," *Ibero-Americana*, 1937.

Gordon says that ". . . to contend that differing cultures influenced the physical environment in different ways is possible only if persistent differences in culture can be found."[22] But his method leads to a description of the material culture of the peoples, not the behavioural characteristics differing by culture.

Alexander's [23] work on the densely populated island of Margarita was concerned with the evolution of the economic base, but ". . . he does not ask how so dense a population is supported in so inhospitable an environment, nor how the use of scarce productive resources is organized."[24]

The objectives of West,[25] Wagner, [26] and Simoons,[27] are more clearly set out, and major criticisms of their approaches are easily recognizable. Brookfield suggests that Wagner's statement may speak for all three.

Wagner attempts to "show the particular possibilites of the environment which are realized by these folk as manifested in the cultural landscape."[28] But land tenure,

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[22] *Ibid.*

[23] Charles S. Alexander, "The Geography of Margarita and Adjacent Islands, Venezuela," *University of California Publications in Geography,* Vol. 12, 1958, pp. 85-192.

[24] Brookfield, p. 289.

[25] Robert C. West, "The Pacific Lowlands of Colombia," *Louisiana State University Studies, Social Science Series,* Vol. 8, 1957.

[26] Philip L. Wagner, "Nicoya: A Cultural Geography," *University of California Publications in Geography,* Vol. 12, 1958, 195-250.

[27] Frederick Simoons, *Northwest Ethiopia: Peoples and Economy,* Madison: 1960.

[28] Wagner.

work organization, and social grouping receive scant treatment. Wagner concludes his essay stating that ". . . variations in social features may produce effects in the spatial environment, and therefore in the cultural landscape, as changes in the physical environment or in the technique of its exploitation may be reflected in social change. It is not proper, however, to assume any inevitable causal relations between social change and alterations of landscape and technique."[29] But the differences Wagner observes are clearly expressed in religion, language, clothing and political institutions. Thus Wagner's conclusion is but a further question, one that can only be answered by treating separately the various elements that make up a culture, that is, by seeking explanations in the field of social organization and human behaviour and attitudes.[30]

As well as these major criticisms, two other problems persist, i.e. the lack of comparable studies and the lack of comparative study.

Cultural geographers in the United States can be characterized then as having "an overtly chorographic purpose," and "scarcely ever seek explanations in matters of human behaviour, attitudes and beliefs, social organization, and the characteristics and interrelationships of human groups . . . ."[31]

There appears then to be a notion that material cultural features and livelihood are fitting areas of investigation in geography. But the workings of society and the reasons for human behaviour are not. Wagner and Mikesell exemplify this problem. "The cultural geographer is not concerned **with** the inner workings of culture or with describing fully

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[29] *Ibid.*

[30] Brookfield.

[31] Brookfield, p. 283.

patterns of human behaviour even when they affect the land, but rather with assessing the technical potential of human communities for using and modifying their habitats."[32]

Although cultural geography has lacked studies on human behaviour and the effects of that on the landscape, methodologies for studying such a problem can be found within historical geography. These methodologies will be dealt with later in this chapter, following a discussion of the problem and hypotheses of this study.

The problems that have developed from studies in the characteristics of areas and not people's behaviours and attitudes leads this study into a search for some cultural behavioural characteristics of people affecting the cultural landscape. And the problems arising out of the lack of comparative studies leads to a conclusion that a comparison between two areas of similar physical features must be employed.

Therefore, this study asks the following question: what in measurable amount are; 1) the differences in cultural landscape forms in the two areas, and 2) some behavioural characteristics of the people who occupy the areas that lead to those forms?

HYPOTHESES AND METHODOLOGY:

Two hypotheses advanced in this study are:

1) Different cultural landscapes occur in areas of similar physical environments where two distict groups have settled; and

2) These different cultural landscapes are a result of variations in social characteristics of the groups of people occupying that environment.

There are certain underlying premises which must be

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[32]P.L. Wagner and Marvin Mikesell, eds, *Readings in Cultural Geography, Chicago:* 1962, p. 5.

stated before these hypotheses can be tested. The four are:[33]

1) That adaptation to the environment and adaptation of the environment by peoples are not random. They arise from motives, i.e. something makes them happen. These motives in a philosophical sense may be seen as values, or in a psychological sense as drives. In this study, the something that makes them happen will be viewed as characteristics, or collective experiences and behavioural norms of the people.

2) That throughout history, everywhere, people regard some particular sort of environment as the most conducive to the good life.

3) A landscape imperfectly substantiates a group's ideal environment.

4) Culturally induced changes in the landscape by a given group will be considered part of the characteristics of that group at a given time and point in space.

It can be postulated upon these premises that the relationship between a human group and the landscape it creates would appear as figure 1.

Although cognizant of the feedback mechanism, this study is considering the characteristics of the people at a point in time and space, and not the day to day exchange between landscape form and characteristics, represented in category 6, figure 1. In addition, local condition 'n' is considered to occur at the present time and place and therefore category 7, figure 1, is a furture relationship between characteristics of peoples and landscape form, and therefore cannot be included.

In order to test the hypotheses, a methodology is obtainable from historical geography, despite the disadvantages previously discussed. From historical geography, three methodologies have been used: the vertical approach; sequent

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[33]The first three premises are taken from P.L. Wagner, "Cultural Landscapes and Regions: Aspects of Communication," unpublished manuscript.

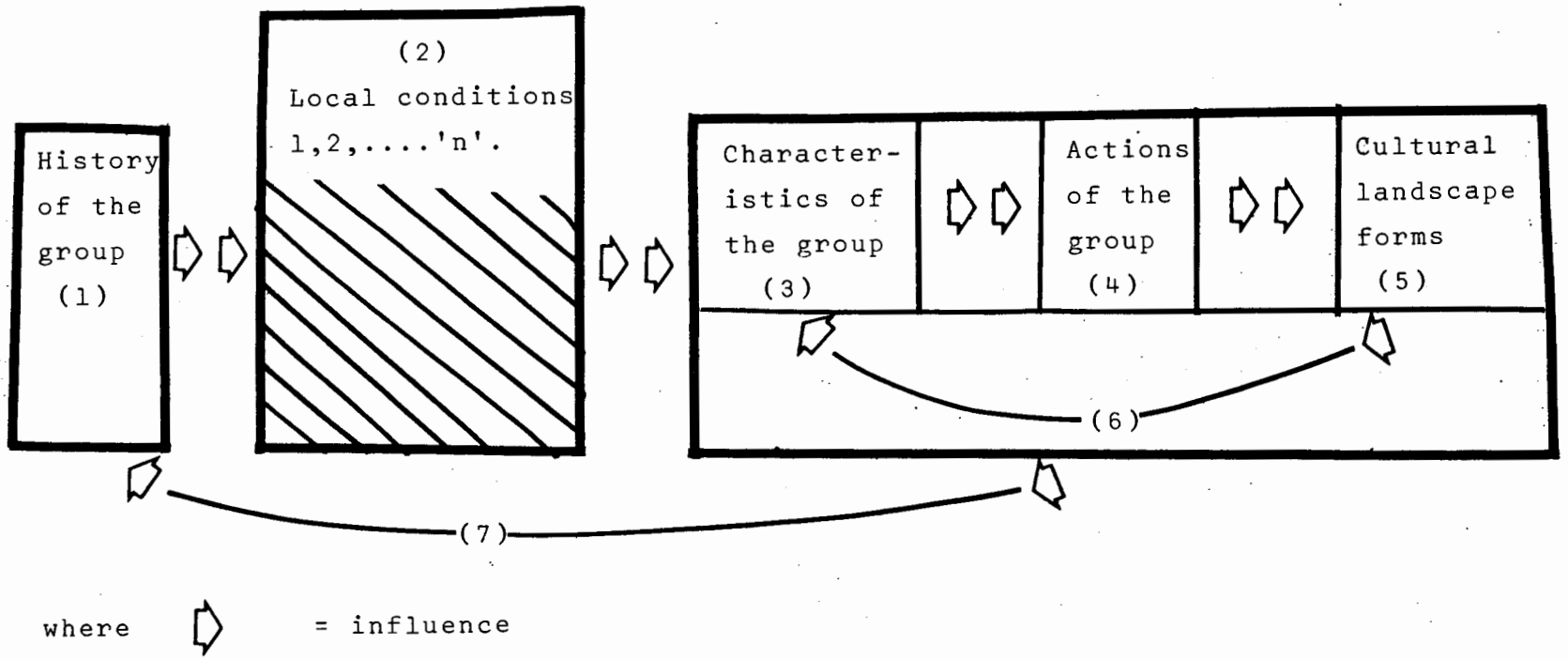
History of the group (1)
(2) Local conditions 1,2,....'n'.
Character-istics of the group (3)
Actions of the group (4)
Cultural landscape forms (5)
(6)
(7)
where = influence

Figure 1.

occupancy; and man's role as an agent of landscape change.[34]

The purpose of the vertical theme in historical geography is to deal with the dynamics of change in, and evolution of, a landscape. In describing the idea of the vertical approach, Newcomb suggest that ". . . if the entire landscape complex cannot be managed in terms of its long history, the selection of one or a few pertinent themes and their depiction... is a practicable alternative."[35] It is the contention of this study that human behaviour, attitudes and beliefs, social organization, and characteristics and interrelationships of human groups can be defined as pertinent themes affecting the cultural landscape, and thus could be considered as valuable topics of investigation within the vertical approach.

These elements are not random, but are of a rational nature and thus systematic study of the problem is justified. This contention is verified by the 'man's role' approach, about which Newcomb states; "That moral and religious precepts are associated with the conservative husbanding of resources and the acceptance of the thesis that man is above all a rational and responsible creature are conventions which appear here."[36]

Sequent occupancy allows us to define the place where man's response to the above characteristics can be found, i.e. the cultural landscape. "Human occupance of area . . . carries within itself the seed of its own transformation."[37] Thus the cultural landscape form should reflect behavioural characteristics.

This methodology centres in the causal approach. Not

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[34]The vertical and man's role approaches are discussed in Robert Newcomb, "Twelve Working Approaches to Historical Geography," *Yearbook of the Association of Pacific Coast Geographers*, Vol. 31, 1969, pp. 27-40, and sequent occupance in D. Whittlesey, "Sequent Occupancy," *Annals of the Association of American Geographers*, Vol. 19, 1929, pp. 162-167.

[35]Newcomb, p. 30.

[36]*Ibid.*

to be confused with philosophy, the methodology is just an approach to a problem. This approach in no way reflects the philosophical concept of determinism often associated with causality, but rather is a reflection of a degree of cause. To this, Harvey suggests:

> . . . The methodologist, therefore is concerned with the 'logic of justification' rather than with the philosophical underpinnings of our beliefs with respect to geography. The philosopher and the methodologist therefore have rather different tasks. The former is concerned with speculation, with value judgements . . . . the latter is concerned primarily with the logic of explanation, with ensuring that our arguments are rigorous, that our inferences are reasonable, that our method is internally coherent . . . . It is important to recognize . . . that the adoption of a methodological position does not entail the adoption of a corresponding philosophical position.[38]

STUDY AREA:

In order to test the hypotheses, an area of 'similar physical environments' had to be found. The area of the lower Fraser Valley, British Columbia, including Northwestern Whatcom County, Washington is such an area. Although local variations in land forms and soils exist, this is a profitable area to search for specific locations in order to test the hypotheses.

Crossing the border between the United States and Canada at the Huntington, British Columbia--Sumas, Washington border station,(see map 1) one is quickly aware of the overwhelming evidence of differences in the settlement forms in the area. Upon detailed examination, it is evident that within this area there is a continuous stretch of land spanning the international border where physical conditions are virtually the same.[39]

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[37]Whittlesey, p. 162.

[38]David Harvey, *Explanation in Geography*, London: 1969 pp. 6-7.

A particular area, small enough for a detailed survey, but large enough to prevent misleading conclusions had to be obtained. Certain external influences had to be overcome, so that each area of study had to fall within one municipality or county, and each area had to have a history of occupance that was not to diverse. Two areas which satisfied these requirements were found, the South Poplar region of Matsqui Municipality, British Columbia, and an area referred to here as the Sumas-Border area in Whatcom County, Washington. (see map 2)

From a consideration of physical features it can be seen that the study area consists of one continuous physical landscape, divided into two distinct parts by the international border. This border acts as a physical barrier. The 'natural' flow of goods and 'natural' economic growth within a continuous physical region is prevented by tariffs and differences in local laws.

Platt[40] suggests this in his description of the Dutch-German border. He believes that ". . . although the forms of areal organization may be similar on opposite sides of the boundary, the organizations themselves, the units of organization, political, economic and social, as they have developed through years of human activity, are generally separate.[41] The studies by Platt have shown that international boundaries may lie through identical cultural landscapes or mark significant changes of land-use and economic activity. Prescott suggests that he ". . . would agree that, however similar the borderlands, the two sides have a human distinctiveness which is difficult to measure, but which nevertheless is real to people living in the

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[39]Detailed examination of the study area establishing similar physical environments is made in chapter 2.

[40]R.S. Platt, *A Geographical Study of the Dutch-German Border*, Munster; 1958.

[41]*Ibid.*

borderland."[42]

Rose studied a section of the boundary between New South Wales and Queensland, and found that it coincided with landscape differences which had arisen since the boundary was delimited, and which could not be explained in terms of environmental differences.[43]

Prescott suggests that a review of border studies leads to the conclusion that international boundaries " . . . do influence the development of cultural landscapes . . ."[44] Thus the border in this study area can be seen as a physical barrier separating two areas, a barrier equivalent to an unpenetratable mountain range, and thus as in any physical barrier, the flow of ideas is further reduced and filtered beyond the normal filtering process, and economic development follows independent courses of development.

The boundaries of the study area enclose an area of approximately two miles North-South, by four and a half miles East-West. The northern boundary, approximately one mile North of the international border, lies along what is now Huntington Road, Matsqui Municipality. This was chosen because of its historical significance to the area. Not until 1924 was the land between Huntington Road and the international border opened for settlement. Prior to that, the land was held by the Crown, whereas settlement began over fifty years earlier in the area North of Huntington Road. By drawing the boundary at this point, a greater degree of clarity and control in the study area was obtainable.

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[42]J.R. Prescott, *The Geography of Frontiers and Boundaries*, London: 1965, p. 99.

A.J. Rose, "The Border Zone between Queensland and New South Wales," *Australian Geographer*, Vol. 6, 1955, pp. 3-18.

[44]Prescott, p. 101.

Physical, political, and historical considerations were taken into account in selecting an eastern border. Physically, the elevation of the area rises quickly to a small range of hills some 200 feet above the study area. This might alter settlement patterns enough to cause physical considerations to be taken into account. In addition, this was the boundary of the Crown land opened in 1924. Politically, the boundary corresponds to the boundaries between Sumas and Matsqui Municipalities. This serves to ensure that politically related differences within the area are controlled, e.g. uniformity in agriculturally oriented problems such as availability of municipal water and uniformity of municipal by-laws.

The western boundary is defined solely by physical features in Canada, and is a continuation of that line into the United States. At this point, when moving East to West, the Mt. Lehman range of hills begins, reaching a height of some 300 feet above the study area. By the time the range of hills has crossed the international border, it has veered West enough that it no longer serves as a physical border. But for the sake of uniformity in size of the two areas, the border of the study area was extended due South.

The southern border, one mile South of the international boundary, is the only arbitrarly drawn boundary line. The purpose in using this point as the southern border was to ensure unifornity in size between the area in the United States and Canada. This then produces an area of two miles by four and a half miles with the international border serving to divide it into two separate and distinct sectors, each one mile by four and a half miles.

DATA COLLECTION TECHNIQUES AND PROBLEMS:

The techniques employed in data collection are that of comparing land-use, organization, and social and historical characteristics. The methods for the collection of

data were two, field interviews using questionaires, and library and archive research.

In March, April, and May 1970, an attempt to contact each head of household in the research areas by phone or in person was undertaken. Of the 201 household heads in the areas, 149 or approximately 75% were contacted. A survey of those who were contacted was undertaken, of whom 130, or approximatley 60% of the total responded. For later data-gathering purposes, a grouping analysis was done to find if the population could be significantly grouped in any way. At this time, information as to the location of the household was not considered. From the analysis, six groups became apparent. Only one group, non-agriculture, contained members within both areas. This only involved 12 individual households, or approximately 5%. Since this study deals with agricultural people, those not invloved in agriculture were eliminated. However, since non-agricultural activity will affect landscape formation, further interviews were conducted with this group.

This grouping analysis revealed two Canadisn and three American groups. One of the Canadian groups, 11% of the population, 13 individuals, is all non-Mennonites. In this case, eight families lived on the borders of the area, and five of these were concentrated on one street and were merely continuations of the same family, i.e. land divided from father to sons. Of the five remaining non-Mennonite farms within the Canadian sector, four were exceptionally larger than the norm, by two standard deviations. Although the last non-Mennonite in the area fell within the norm of farm size, his tenure within the the area was less than one year and he had bought his farm from a Mennonite. It was then concluded that these 11% were anomalies within the Canadian sector of the study. It should be noted here that although they were considered anomalies, they were further interviewed and considered

within the findings. The remaining farms on the Canadian sector of the study were Mennonite owned. Thus the Canadian part of the study area was designated Mennonite.

The three remaining groups were in the United States. Of these three groups, the grouping analysis showed that the differences between the two groups was less significant than the differences between the two areas of study. Thus it was concluded that the American side was a single non-Mennonite group comprised of three sub-groups. The characteristics of the three groups was studied in detail, and for interviewing purposes the three sub-groups were considered distinct. This was done to prevent any possibility of misleading conclusions. The designation of Mennonite and non-Mennonite groupings as the universals, corresponding to the Canadian and American areas, provided for a clearer, more precise, and more easily definable basis for comparison.

From each group and sub-group, 25% were chosen at random for a more detailed interview. From this second interview the vast majority of data involved in the descriptive study of the form of the landscape and the social characteristics of those within the area was collected.

For analysis, the questionaire was divided into two parts, discriptive and socio-cultural values. An adaptation of the Kerlinger Social Attitudes Scale,[45] Hartmann Liberalism-Conservatism Scale,[46] and Harper's Social Belief and Attitudes Test[47] was used in analysing the socio-

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[45]F. Kerlinger and E. Kaya, "The Construction and Factor Analytic Validation of Scales to Measure Attitudes Toward Education," *Education and Psychological Measurement*, Vol. 19, 1954, pp. 13-29.

[46]G. Hartmann, "The Differential Validity of Items in a Liberalism-Conservatism Test," *Journal of Social Psychology*, Vol. 9, 1938, pp. 67-78.

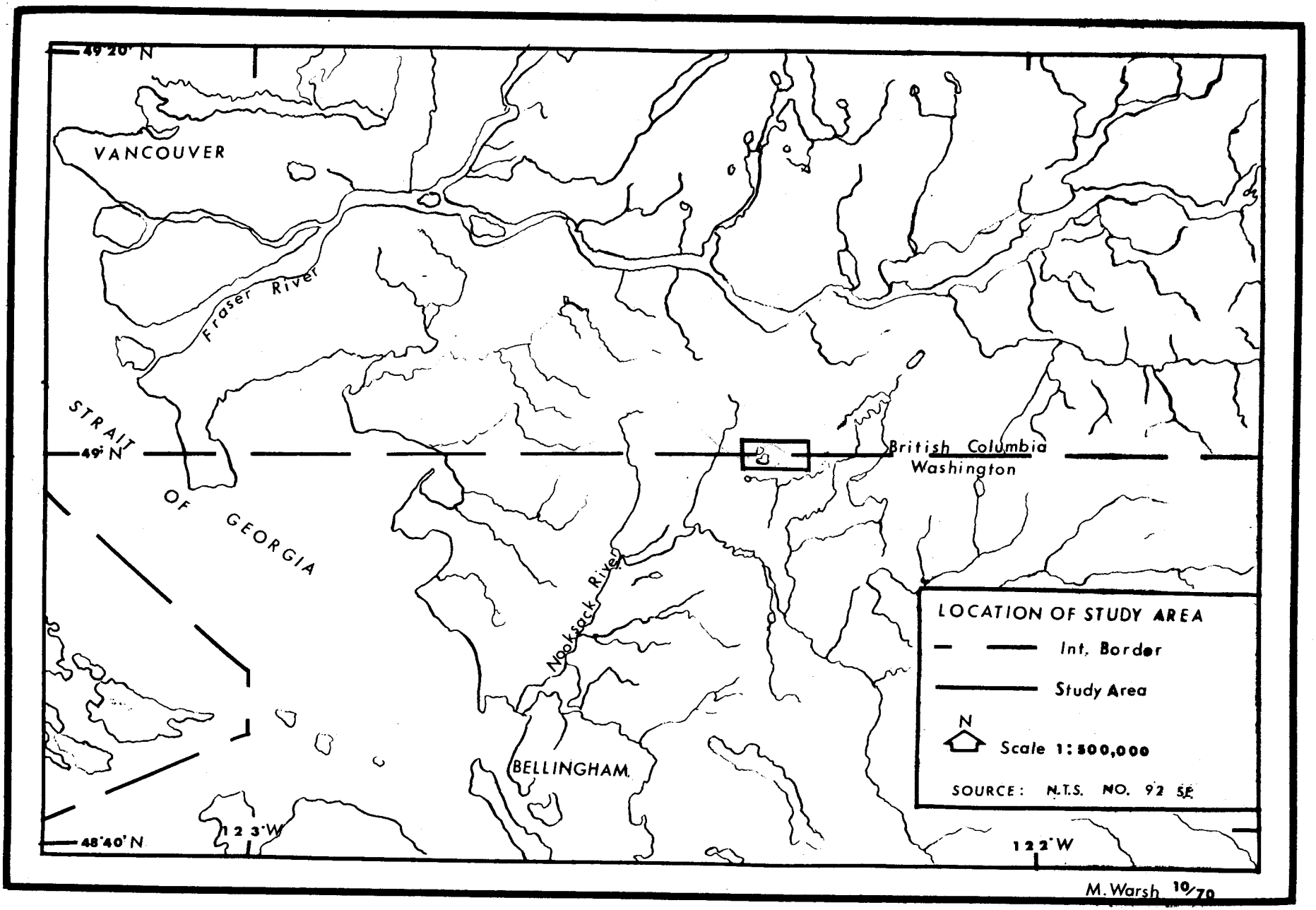
[47]W.J. Boldt and J.B. Stroud, "Changes in the Attitudes of College Students," *Journal of Educational Psychology*, Vol. 25, 1934, pp. 611-619.

cultural values of the two groups. A Chi square test of significance was applied to the null hypothesis (H_o) in order to test the significance of the data. This will be discussed in more detail in chapter three.

Further interviews were conducted with businessmen, representatives of various co-operatives, and representatives of agricultural based companies doing business within the area.

The second method of obtaining data was through library and archive research. This was undertaken to provide greater objectivity, especially in dealing with historical considerations, and to provide data not obtainable from field interviews. Library research was undertaken at the University of British Columbia, University of Victoria, Simon Fraser University, University of Washington, Washington State at Pullman, Fraser Valley Regional Library, and the Bellingham City Library. The archive research for British Columbia was undertaken at the Provincial Archives in Victoria, and for Washington at the State Archives in Olympia.

This study is divided into several sections. Besides the introductory and concluding chapters, two others are included. In the first of these, chapter two, two conditions for testing are described. The detailed physical characteristics of the area are described in order to establish 'similar physical environments,' and the sequent occupance of the two areas and the history of the Mennonites and non-Mennonites is recounted in order to show distinctiveness of the two groups. Chapter three will consider the landscape forms in the two areas and thus test the first hypothesis, and attempt to relate social characteristics of the people in the areas to those landscape forms, and thus testing the second hypothesis.


49°20' N
VANCOUVER
Fraser River
STRAIT
OF GEORGIA
49° N
British Columbia
Washington
Nooksack River
BELLINGHAM
48°40' N
123° W
122° W
LOCATION OF STUDY AREA
Int. Border
Study Area
N
Scale 1:500,000
SOURCE: N.T.S. NO. 92 SE
M. Warsh 10/70


MAP 2
STUDY AREA
LAXTON LAKE
JUDSON LAKE
CANADA
UNITED STATES
49°00'00" N.
122°20'00" E.
200
250
100
150
50
Int'l. Border
Paved Road
Unpaved Road
N
SCALE 1:12,000
0 1/8 1/4 mile
Contour Interval 50 Feet
Base Map:
N.T.S. Aldergrove 92G/1d
Abbotsford 92G/1c
U.S.G.S. Sumas 7.5 Minute
Lynden 7.5 Minute
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CHAPTER 2

THE PHYSICAL AREA AND THE OCCUPANTS

The area is one of rolling terrain. With a maximum local relief of 100 feet, all the area lies at elevations of from 175 to 200 feet, except where small rises and gentle hills reach 250 feet. With the center of the area falling at 49° 0' 15" latitude, and 122° 31' 0" longitude, it all shares a marine west coast, cool summer climate.

CLIMATE:[1]

The relationship of agriculture to climate is very close. In the study areas, the climate is uniform. It is a mid-latitude, west coast marine type with cool summers, rather mild winters, moist air, and a small daily and annual temperature range. Some of the basic controls of the climate in this area are the Pacific Ocean, coastal mountain ranges on the Olympic Peninsula and Vancouver Island, and the Cascade Mountains. It is affected by the southerly migration of storms moving out of the Gulf of Alaska during the winter and a return of the storms along a more northerly path in the summer.

The coastal mountains of Vancouver Island and the Olympic Peninsula protect the area from the main force of storms moving eastward from the Pacific Ocean. Breaks in the coastal mountains and the Straits of Georgia and Juan de Fuca permit large amount of moist air from the

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[1]Unless otherwise noted, the climatic information is from Province of British Columbia, Department of Agriculture, *Climate of British Columbia,* report for 1934, 1944, 1950, 1956, and 1957, Washington State Department of Agriculture, *Whatcom County Agriculture,* Olympia, 1965,

There is a pronounced rainy season and considerable cloudiness during the winter. About three-forths of the annual rainfall is received from October through April. The area receives about 59 inches of precipitation each year. Precipitation increases in October, reching a peak in mid-December, then decreases in the spring with a rather sharp drop in July and August. Most of the winter precipitation occurs as rain, but snow has fallen as early as November and as late as March. A snow cover seldom remains on the ground for longer than a few days or reaches a depth in excess of 4 to 8 inches.

Climatically the area is congenial to a wide variety of crops although irrigation is usually required. Hay, small grains, vegetables, potatoes, and berries are favored in the area. In the larger Fraser Valley and Western Whatcom County regions, the climate allows for great assortment of crops. These include: clover-timothy hay, alfalfa, barley, wheat, rye, hops, green peas, sweet corn, cucumbers, carrots and other vegetables, potatoes, raspberries, strawberries, marijuana, blackberries, blueberries, apples, pears, cherry, prunes, filberts, english walnuts, cut flowers, potted plants, florist greens, budding plants, and nursery products (trees, shrubs, vines, and oramentals).

Climate only partly determines the possible crops in a region. Coupled with climate, soils further limit the range of crops possible among the wide variety of cultivable plants known to man.

SOILS:[2]

Generally, most of the top soils in the area were

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[2]Soil data is from C.C. Kelley, and R.H. Spilsburn, *Soil Survey of the Lower Fraser Valley,* Dominion Department of Agriculture, Publication No. 650,Technical Bulletin 20, 1939, and United States Department of Agriculture, *Soil Survey of Whatcom County Washington,* Washington: 1953.

ocean to reach the area. This marine air is usually warmer in the winter and cooler in the summer than the air over the interior of the continent at this latitude.

The Cascade and Coast Mountains shield the area from cold air in the interior during the winter and warm air in the summer. However, occasional cold air from the interior of Canada moves through the Fraser River canyon and spreads southward, bringing low temperatures to the two areas. The lowest temperatures in the winter and the highest in the summer are usually associated with easterly or northeasterly winds. The lowest humidity is observed when easterly winds are blowing down the western slope of the Cascades.

During the late spring and summer, the large high pressure area over the north Pacific spreads northward towards the Gulf of Alaska. A clockwise circulation of air around the "high" brings a prevailing flow of air from a westerly and northwesterly direction into the area. Air from over the ocean is cooler and somewhat drier than the surface of the land, and becomes warmer and drier as it moves inland resulting in a dry season and pleasant temperatures during the summer. The driest weather usually occurs between the middle of July and the middle of August. During the late summer and fall, low clouds or fog frequently form at night and dissappear before the following noon.

The frost free period is the same in the two areas. It usually extends from the first of May to the end of September, about 150 days, but there is enough inconsistency by five or ten days both in May and September to cause some agriculturalists in the area concern, and usually mid-May to late September is considered safe for planting, a period of 140 days.

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and United States Weather Bureau, *Climatological Data, Washington,* Annual Summary, 1952, Vol. LVI, No. 13, Kansas City, 1953.

formed under forest cover, and are characteristic of those found in regions of wet climate. These soils are acidic and are high in organic matter. Soluble minerals have been removed through natural leaching. Lime and phosphates must be added by farmers to produce good crop yields. The terrain, which ranges from flat to rolling, averages between 175 and 200 feet in elevation, and was formed by the deposition of glacial outwash by the Pleistocene ice and subsequent alluvium of the Fraser River in glacial or post glacial times. The result has been a thin, reddish-brown topsoil of silty alluvium underlain by gravels, The silty solum originally contained no gravel, but by now the two layers are intermixed, thanks to the roots of falling trees. There is a low content of nitrogen and organic matter, and the surface soil is highly acidic. Altogeather the Lynden Gravely Silt Loam type of soil covers about 10,000 acres in the South Poplar and Sumas-Border areas, with a few occassional outcrops not of this type. The type is subject to excessive drainage, owing to the open and porous nature of the subsoil. This excessive drainage is attested to by the almost complete absence of ditches in the area.

NATURAL VEGETATION:

The natural vegetation of this marine west coast, cool summer, climate is coastal coniferous forest. Douglas fir, cedar, hemlock, and some alder are predominant in the area. Wild berries are abundent and salaal, reflecting the acidity in the soil, is prominent.

Little of the natural vegetation can be seen in the area today. Where there is any forest cover at all, a secondary growth of cedar, poplar, and alder is predominant with a large variety of deciduous growth encroaching. Prior to 1924, the entire South Poplar region was virgin forest. After 1924, and for about 5 years, logging was extensively practiced in the area. The early Mennonite

settlers were "greatly impressed by the large trunks on the stumps remaining after logging stopped" in the area.[3]

In the Sumas-Border region, logging began in the 1870's and persisted until the 1910's. Because of the time lag between logging operations in the two areas, forest cover today appears entirely different between them.

Although in both, cedar, alder, and poplar are predominant species remaining from the past, the South Poplar region appears much more barren in respect to forest growth. Close to the border, small stands of forest dominate the landscape looking across from South Poplar to Sumas-Border area. But even this counts for less than 15% of the vegetation in the area.

The natural vegetation has been mainly replaced by domesticated plants. These are basically divided into the hays and grasses, grains, vegetables, berries, and nuts.

It can be concluded that the two areas are not only of 'similar physical environments,' but are of the same physical environment. This is an important consideration in the testing of the hypotheses. In addition to showing the uniformity of the environment in the two areas, the distinctiveness of the settlers must also be shown. The next four sections will attempt to do so, beginning with the history of the South Poplar Mennonites, the sequent occupance of South Poplar, the history of the Sumas-Border area non-Mennonites, and lastely the sequent occupance of the Sumas-Border area.

HISTORY OF THE SOUTH POPLAR MENNONITES:[4]

The Mennonites who settled in the South Poplar area were part of a group which had migrated from West Prussia

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[3]John Krahn,"A History of the Mennonites in British Columbia," Graduate thesis in the Faculty of Medicine, University of British Columbia, 1955

[4]Unless otherwise noted, the history of the South Poplar Mennonites is from the following sources: C. Henry Smith, *The Story of the Mennonites*,Newton, Kansas:

to Russia at the end of the eighteenth and nineteenth centuries. In Russia, they attempted to continue their traditional pattern, and their partial success was due to the fact that they lived in near isolation for nearly one-hundred years.[5] This section deals with some of the distinctive history of this ethnic group during the Prussian and Russian settlement and is followed by the history of the South Poplar settlement.

The Mennonites are a Protestant denomination, followers of Mennon Simmons (1492-1559) after whose Christian name they have been called since 1542. His teachings, by which the Mennonites can still be distinguished, include rejection of infant baptism, swearing under oath, and the shedding of human blood, and assert subservience to God and not to the state. The rejection of shedding human blood has really been the important factor in causing the Mennonites to migrate from one country to another, because they usually have prefered migration to submitting to military service. Followers of Simons were found in Switzerland and the Netherlands in the first half of the 16th century, and descendents of the latter group eventually found their way to South Poplar.

During the military despotism and religious persecution of the Duke of Alva in the Netherlands (1568-1573) many religious refugees left the Low Countries. Poland permitted considerable religious freedom at the time, and many sects, including the Mennonites settled on the Vistula-Nogat Delta. Here these Frieslanders, experienced in construction of drainage works, were a decided asset because the delta had to be drained before it

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1957; E.K. Francis, "Mennonite Institutions in Early Manitoba-A study on their origins," *Agricultural History*, Vol. 22, 1948, pp, 145-155; E.K. Francis, "The Russian Mennonites: From Religious to Ethnic Group." *The American Journal of Sociology*, Vol. 44, 1948, pp. 101-107; John Krahn, *Op. Cit.*; D.P. Reimer, *The Mennonites in British Columbia*, Unpublished M.A. Thesis, University of British Columbia, 1946; Calvin Redekop, *The Old Colony Mennonites*, Baltimore, 1969: and Frank H. Epp, *Mennonite*

could be farmed. But still the Mennonites were molested. They prospered, and therein lay their difficulty. At frequent intervals, expropriations of their properties and restriction of their business activities was common. There was no religious persecution as such, but the Mennonites were insecure, and never free of exploitation. Conditions deteriorated further after the first partition of Poland (1772), when the Mennonites came under Prussian rule. A few switched to the Lutheran belief to escape Prussian restrictions, but most began to think of finding a new home. At this time, an invitation arrived from Russia to come and settle there (1786).

The southern part of Russia was populated by a few nomadic people, and the Russian leaders felt they contributed nothing to the Russian economy. They felt the only way to establish stability to the land was to settle it with a permanent agricultural population. Not having enough people of her own to colonize the area, Empress Catherine II decided to issue manifestoes inviting foreigners to migrate to Russia and develop the lands.

Like most others, the Mennonite migrations have always been motivated in two ways; by an impelling force generated by local conditions, and by an attractive force, generated by the promises of the rulers of the new land and by economic potentialites. The first force has usually been the most important for the Mennonites.

The Prussian Mennonites settled in two large settlements in South Russia, but were not entirely satisfied with the lands they had been granted. However the Russia government turned a deaf ear to the complaints and they had to survive as best they could in the totally unfamiliar environment.

The Russian government did not grant land to individual Mennonites in the original settlements. It remained the

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Exodus Altona Manitoba, 1962.

[5]Francis,"Mennonite Institutions. . ." p. 146.

property of the state, but was used as though it was the common property of the inhabitants of each colony or village. Each farmer had only a right to a share of the colony or village land, not a definite plot. It is reported that the first settlements established in Russia by the Mennonites were copied from those in Holland and Prussia, but marauding bandits soon forced the Mennonites into communial arrangements for protection. This system ensured the continued existence of the colony, because no farmer could disrupt the village by taking land out of the colony. At the same time it lead to some distinct problems, including the eventual unavailability of land for new settlers or children of the original settlers.

The Mennonites lived in near isolation for nearly 100 years in Russia. In the 1870's, pressure for Russification of the Mennonite schools, and a Russian requirement for military service from all inhabitants resulted again in a push-type migration of many Mennonites. Delegations were sent throughout the world to seek a new home. A new site in Manitoba was found, and many of the most conservative Mennonites left. But those who remained behind were able to reach a compromise with the Russian leadership. Non-Combatant military service was obtained as a concession, and German language and cultural education was taught along with the new Russified education, the schools being still controlled by the Mennonites.

Mennonite institutions and life survived the Russification program for another 40 years. But with the coming of the Revolution, the group was once again faced with new demands. Churches were closed, German language was outlawed, and the land was re-divided. Many of the Mennonites remained in Russia by turning Communist, adjusted to new conditions, or securing concessions from the Bolshevik government. But still many more went in search of new homes. It was the latter group which so profoundly influenced the South Poplar area.

The Mennonites in Canada embarked on a difficult task

of persauding public officals to allow a mass Mennonite migration to the country from Russia. After a series of setbacks, in 1923 mass migration began. In that year, 2759 Mennonites came, with another 4000 in 1924, 3772 in 1925, and 5940 in 1926.

The problem was relocation of the Mennonites in Canada. The first scheme was for the Mennonites to settle in the land then being vacated by 'old colony' Mennonites who were in the process of moving to Mexico. The original plan was for one-half cash and one-half credit, but as conditions turned out, the old colony plan was not as favorable as had been anticipated. The price had jumped from $ 20.00 per acre to $ 32.00 per acre including buildings. Moreover, the old colony wanted cash, for it needed money to make a start in Mexico. The conditions of purchase put the land beyond the reach of the penniless immigrants.

A second scheme proved more favorable. The Canadian Pacific Railroad made land available in Rostren at $ 8.00 to $ 20.00 per acre, with no payment or interest for the first four years, and 30 years to pay for the land at 7% interest. At the same time, another delegation found homestead lands available for $ 410.00 a quarter section in the Meadow lake district of Saskatchewan, and although this was 60 to 70 miles from the nearest railway, the price was reasonable. As well as the Rostern and Meadow Lake schemes, private deals and negotiations took place elsewhere in Saskatchewan and Alberta. Eventually these and other smaller settlements were taken up by the large numbers of Mennonites entering, but in all cases the large debts the settlers incurred remained a burden.

As the new settlements were just beginning to enjoy prosperity, the depression began. The falling of cash crop prices, the outstanding debts for land and transportation, and the lack of work off the farm severly affected the Mennonite settlements. A drought in the early 1930's increased the hardships in the Prairies. Attempts at reducing the debts were partialy successful, but not enough

to relieve the burden. Committees were formed to examine new locations and new oportunites throughout Canada, as most Mennonites were reluctent to leave the country. A number of communites were established, one such being the South Poplar settlement in British Columbia

Mennonite immigration dwindled during the 1930's. Both hardships in the Old World, and the reluctance on the part of Canada to accept new immigrants during the depression seem to have been responsible. With the outbreak of World War II in Europe, Mennonite migration to Canada ceased.

The Mennonites in the Ukraine were severly affected by the war. Germany occupied the area early in the struggle with Russia. At first, the Mennonites favored the German control to Russian domination. The occupation forces granted privileges, particulary to German speaking groups like the Mennonites. In economics, in education, and in religion, a temporary reversal of policies brought new life to the settlements, but soon it became evident that the aggression of Communism had only been replaced by the oppression of Nazism. The civilian labor force was treated in a particularly miserable fashion by the Germans, and expropriation of Mennonite crops and livestock left little for the people to live on.

As the Russians began to regain lost groupd in the Ukraine, the evacuation of German speaking peoples began. Several thousand Mennonites began a trek by wagon to Germany, and 1200 were evacuated by rail cars. Of the 35,000 Mennonites to leave Russia, only 12,000 were later registered in the Allied occupation zones of West Germany after the war.

Initially the Soviet Union, with the cooperation of the United States, France, and Great Britian began to repatriate former Russian subjects, both the willing and unwilling, but after initial cooperation with the Russians, the Allied occupation government soon began to be uneasy

about forcing the unwilling to return. A Board of Colonization had been established by the Mennonttes in Canada in an attempt to persuade the government to allow immigration by the Mennonites in Germany. In 1947, an Order in Council allowed for a wholesale migration to begin. At first, lack of transport presented another problem, but this was quickly overcome and in 1947, 542 refugees came to Canada. In 1948, 4227 immigrants came, and in 1949, 1635 arrived. By 1949 the Mennonite migration to various parts of the world was almost complete. But where were the immigrants to go in Canada? Many dispersed through older settlements and many more started their own new settlements. Some 1515 migrants came to British Columbia and many were aided by relatives in the South Poplar region. There is no way of knowing exactly how many Mennonites did come to the area, but in the years from 1946 to 1951, the Mennonites in South Poplar believe the population grew by a third.

This, then marks the second change in migration to the South Poplar area, the first in the early 1930's being a result of depression and drought, and the second a result of World War II. The particular history and sequent occupancy of the South Poplar region will be examined in more detail in order to further establish the distinctiveness of the two study groups.

SEQUENT OCCUPANCY OF SOUTH POPLAR:

As previously noted, prior to 1924, the Soth Poplar area was designated as Crown land. After 1924, logging operations moved into the area for a period of 5 years, and all that remained of the giant fir trees was a "criss-cross of waste timber and snags."[6] The land was then re-

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[6]Krahn.

claimed for agricultural purposes: consequently it was sub-divided into 20 acre plots and surveyed. The going price was to be $ 5.00 per acre, making a total of $100.00 for an average farm.

Because of drought and other disastrous problems of the Mennonites in Alberta, Saskatawan, and Manitoba, many had begun looking for future settlement in British Columbia. But because of these problems no real attmept to establish traditional Mennonite settlement was embarked on in many areas, including the South Poplar area. Neither was a delegation of buyers sent out, nor was the land bought as a single block. In addition, the ususal Mennonite demands for control of their own schools, language rights, control over their own settlement, and conscientious objector status were absent.

An auction sale for the land in the South Poplar area was arranged and bidding was opened at $ 10.00 per acre instead of the expected $ 5.00. This resulted in two distinct situations, which later were to have profound effects on the land. In certain cases two families went togeather to buy 20 acre plots, this resulting in a large number of 10 acre farms still seen in the area. In the second significant situation, land sales were slow and speculators took over the remaining land. These then produced or prevneted the developement of the area into a Mennonite colony, but at the same time, it ensured the future of a Mennonite community, as will be shown. It was depression time in Canada, and not only was money hard to come by for buying land, but land speculators soon found their money tied up in land. Slowly the Mennonite migrants were able to wrest new parcels of land from the specularors who were willing to subdivide into 10 acre plots, and more important were willing to carry a loan. This resulted then in a Mennonite area, since the Mennonites were willing to buy land in smaller parcels, and because of the differing times of purchase and nature of the Mennonite migration into the area, the colony idea was never to become a reality.

During the first years, the settlers were entirely dependent upon causal employment for a livelihood. With the existing economic depression, many resorted to relief work with the municipality. Roads were cut through the rough country and graded. The wage was 25¢ per hour, allowing the settlers to begin to pay back the land and transportation loans. At this time conditions in the Prairies were not imporving, and relatives and friends of the first settlers were migrating in increasing numbers some to the South Poplar area.

Soon the community started to resemble the linear pattern of earlier Mennonite settlements in Holland and Prussia. Houses were situated along the roads, with the plots leading back into the pasture and farm area, and with the few trees remaining, and newly planted trees, at the rear of the plot. This pattern is clearly visible today.

In the spare time, stumps were rooted to make the land fit for cultivation. Unitl 1940, small tools like axes and crowbars were the only equipment available. But a pattern of working off the land for a living, and working on the land to supplement that living had become fairly entrenched, Although this had now become a clear break in Mennonite history, the land-use, techniques in agriculture, farm organization, and social life did remain Mennonite with slight adaptations to local conditions.

In the very beginning a chrrch was organized, the basic component of all Mennonite settlements. The Sunday school work was immediately organized, and books for choir needs and language instruction were ordered from the beginning. In Vancouver, a city mission was organized for the girls who went from the country to find work there, mainly as domestics. In 1936, a bible school was organized, and the continuation of a Mennonite community was thus assured.

With large families to support, money owing on the land, and the passenger fee with the Canadian Pacific Railroad still unpaid, the settlers during this time were in

were in great economic distress. There was now no employment in the immediate vicinity, and many were forced to travel to Sumas for farm work, or logging operations in the valley, or road work with the municipality.

Already before the beginning of the War, two private high schools had been established, as well as Saturday language schools and religious instruction. The children readily attended the local elementary schools in the area. The legacy of legislation to this extent in the Prairies had produced a favorable enough compromise, with the children attending municipal schools during the week and church schools on the weekend.

Throughout the forties, conditions continued to improve economically for the Mennonites, but by now farm subsistence as a way of life was a thing fo the past. The farms tended to remain at their 10 acre size, and reliance on agriculture only to supplement outside income was the norm. The linear pattern of house and barns prevailed and the division of the lots into pasture and agricuture land and woodlands continued. The church as the central force in the community, as in the past, was evident, but by now the family's responsibilites for continuation of the culture had grown.

Perhaps the most significant feature of community spirit was the aid given to neighbors. If a barn or house was to be erected, the whole community was expected and did, cooperate.

In the late forties, the migration from Europe to Canada was at its peak. Many new Mennonite families moved into the South Poplar region. Church membership jumped at this time. The newer families were greatly aided by the existing community. Not only in food and clothing needs, but through loans and gifts of money for farms was recieved. Because of the unstable Mennonite situation in the Russian Ukraine prior to migrations, many of these Mennonites had lost the 'old colony' ideals, and they seemed to fit well into the new community.

The community grew and prospered throughout the fifties. Changes in Mennonite life were very slight. Basically the same ideals, organization, and relationships continued throughout the South Poplar region, and these are represented in the landscape, as discussed in Chapter three.

HISTORY OF THE SUMAS-BORDER NON-MENNONITES:

There are four major stages in the development of the Sumas-Border area. These will be examined in detail later in this section, but they generally are represented by two types of farmers, the farmer of the woodlands fringe of the corn belt, and the corn belt farmer.

Near the end of the 18th century, American pioneers began settling the forested river courses west of the Applachian Mountains. The forested environment was well suited to the economy of these settlers since they derived the greater part of their sustenance from hunting, fishing, and gathering. The early pioneers often engaged in a small amount of agriculture, copying Indian methods and cultivating Indian crops.[8]

Characteristicaly, a more farming minded group of settlers followed. This group was primarly native stock American whites. At first the newcomer's economics differed little from those of the earlier pioneers, but subsistence agriculture came to play an increased role. The settlers clung to the wooded land, which required many years of toil to clear. Beginning in the western part of Ohio, the treeless prairie was often available, but such areas were either avoided or only their margins were cultivated.

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[8]Unless otherwise noted, the background history of the Sumas-Border area is from the following sources: J.E. Spence and R.J. Horvath, "How Does and Agricultural Region Origniate?" *Annals of the Association of American Geographers*, Vol. 53, 1963, pp. 74-92; Robert Brown, "The Upsala Minnesota Community; A Case Study on Rural Dynamics, *Annals*, Vol. 57, 1967, pp. 267-300; Leslie Howes, "Some Features

The evolution of a commercial economy proceeded very slowly at first. A small surplus of corn or wheat might be produced which could be sold to settlers passing through or to new settlers in the area. Corn very early assumed a dominant position among the commercial crops grown in the forested landscape. One reason for the popularity of corn was that many of the settlers came from an area which had a well established corn cropping tradition. The extension of the railroads to the Midwest during the 1850's had a significant influence on the extension of the corn belt economy. Many of the earlier settlers remained in the wooded area and made a good living from hogs and corn. Many others migrated into the open grasslands which were being opened up by the railroads. Still others felt the intrusion of the new migrants distasteful, and moved into new territories, away from the railroads and from the crowded conditions of the then rural Midwest. The latter group was the one which eventually came to Western Washington, Oregon, and California, as well as other new territories.

By the 1870's logging and subsistence farming were quite common throughout Whatcom County Washington. Most of the settlers in the area came from the closing frontiers of the wooded fringes of the corn-belt. Farming practices reverted back to subsistence, with a few cash crops produced for the logging camps. This, then marks the opening of the Sumas-Border area migrations.

The second wave of migrants to reach the Sumas-Border region were not to come until the 1930's depression. These were basically corn-belt farmers from the grasslands, and the history of the corn belt therefore requires discussion.

As a result of the development of successful prairie cultivation techniques, including the steel plow, the late 1860's and 1870's saw rapid population growth in the Mid-

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of Early Woodland and Prairie Settlement in a Central Iowa Community, *Annals*, Vol. 40, 1950, pp. 40-57; Louis Schnidt, "The Agricultural Revolution in the Prairies and the Great Plains of the United States," *Agricultural History*, Vol. 8, pp. 169-195.

west corn-belt. The corn crop was limited by the acreage the farmer could cultivate; consequently, introduction of the horse-drawn cultivator contributed to rapid expansion of the area in corn production. Well-drilling equipment and the windmill provided a means of securing water and removing the necessity of living near a stream; barbed wire solved the fencing problem. A subsistence farming economy did not fare well on the prairie, but commercial farming did, and the settlement of the prairie was made possible only by the technological advances that came in this area.

The major force pulling the immigrants into the area was the cheapness of land and the railroads. The United States Government opened up some 274,000,000 acres of land for homesteading in the prairies from 1862 to 1930.

Grains rather than livestock were affected by the railroad, and an increasing percentage of corn was sold as a cash crop. The railroad companies who sold their lands to the settlers were concerned about farm production. As a result, the railroad companies engaged in crop experimentation, promoted agricultural fairs, and made other efforts to promote prosperity.

Corn was the leading crop of the prairie almost from the beginning. Early trial and error found that other crops were not well suited to prairie conditions and that corn was the best first crop to plant on the rich prairie soils. Livestock production in the area began to shift. The early corn-belt farmers from the woodlands brought the hog culture with them to the prairies, and the experiment developed into a full commerical operation. Beef cattle, needing open ranges, were forced to find new homes. The expansion of the railroads helped to promote more agriculturally marginal areas into areas of booming beef cattle industries. And lastly, the dairy cattle, especially in areas which had a little extra land in permanent pasture, began to take hold in the area.

The corn-belt suffered through the last decade of the 19th and first decade of the 20th centuryes. But with the comming of the First World War, large industries in the east attracted many settlers. This affected the corn-belt in two ways. The first was a rapid depopulation of the region, the second was an upsurge of commerical activity spurred by the need for agricultural supplies in the industrial regions. This gave a great impetus to growth in the corn-belt area. But all was not well and after the war prices began to drop again. By 1929, the corn-belt was suffering a small economic depression, and with the crash of the stock market in the year, disaster affected the area.

Many farmers were unable to meet debts that had mounted up during the preceeding years. Foreclosures were often swift and harsh, leaving many without homes or means of livelihood. During the depression years drought settled in the area, and even the few who remained were unable to provide for their families. Government grants and loans were not enough to same many from bankruptcy. The depression and drought caused mass migration out to the rural corn-belt into many urban centers, and into many other rural areas less affected by the prairie conditions. One trend of this migrantion was into Northwest Washington, including the Sumas-Border area.

In the late years of the depression, war again spurred the economy, and the corn-belt once again became a viable economic region. By the close fo the war agri-business was encroaching into the corn-belt and many small farmers found it more profitable to sell and move elsewhere, including the Sumas-Border area.

These are the two major settlement groups in the Sumas-Border area. The closing of the frontier caused a migration throughout the entire northwest, amny of whom settled in the Sumas-Border area. The depression and the post war boom, for two entirely different reasons caused many more settlers from the corn-belt to find new homes, and many of them came to the Sumas-Border area. But the particular history and sequent occupancy of the area needs to be examined in more

detail in order to compare it with the South Poplar region and thus to establish the distinctiveness of the two study groups.

SEQUENT OCCUPANCY OF THE SUMAS-BORDER AREA:

The Sumas-Border area underwent four stages of development. From the original occupation of logging until 1910 represents the first. The second by the period of time from 1910 to the depression. The latter war years and post-war boom represents the third stage, and recent migrations, not previously discussed, is stage 4. These four stages represent the three sub-groups withing the area. Group one is the original settlers and their families. Group two, the depression settlers. And the third Group is represented by the prosperous post-war and the recent migrants.

In contrast to the South Poplar area, the Sumas-Border area has been opened for settlement from the early 1870's. At this time, some logging operations were scattered throughout the Whatcom County area, including the Sumas-Border region. In the 1890's, the Great Northern and Northern Pacific Railroads were extended through the county from Seattle to Vancouver. Increased marketing potentials brought about by the railroad increased the intensity of logging in the entire area, including the American portion of the study area. Although the area's primary attraction was its forest products, many people came with the sole purpose of acquiring farmlands. "Most of the people combined forest industry work with part-time farming."[8]

By 1910, the first period of white occupancy in the area came to a close. Logging operations, working in a self-liquidating system, had cleared all available timber from the Sumas-Border area. Great tracts of cleared open land were left behind at cheap prices for farming. The farmers already in the area had a choice between following the logging operations, and thus moving, or switching to full-

time farming. Already by 1910, 35% or the present-day farms in the area had been established. Approximately 8% of the farming families then remain present today, albeit now represented by younger members of the family. Thus two periods of sequent occupancy actually had overlapped, logging operations and mixed farming, and full time farming, with the latter finally dominating.

The basic road patterns seen today had been established by 1910, and the town of Sumas had been developed and served as a major commercial center for the area.

Settlement in the area from 1910 to the depression was virtually at a standstill. By 1930, only 5% more of the total farms present today had been established. Most of these were taken up by relatives of those already in the area. Although large-scale immigration of German, Dutch, and Scandanavian settlers was underway in nearby areas, the Sumas-Border area remained unsettled by foreign immigrants. Perhaps the single reason for this pattern was the desirablitiy of the Sumas-Border land. This was because nearness to the town of Sumas had created higher land prices. The ethnic and religious make-up then of the earliest settlers to this area by 1930 was white, Protestant, and American, mostly form the closed frontier of the Midwest and Great Plains. They brought with them many of the attitudes and practices of the area, and the Sumas-Border areas "looked like southern Missouri, only in a different environment."[9] Perhaps the most noticable feature of this transplant was the dispersed settlement pattern.

The second wave of migration into the area was during the depression. Drought and other 'tough' times caused a wholesale migration out of the Plains and into the entire Northwest. By this time, Sumas had declined rapidly as an important commercial and trade center, and Lynden, ironically enough the area where the 'foreign' migrants had bought cheaper land, had grown to be the major center in Northwest

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[8]Lottie Roth, *History of Whatcom County*, Chicago: 1926.

Whatcom County. This meant that land was comparitively cheaper in the Sumas- Border area, and many immigrants flocked to the area. Almost 40% of the present farms in the area were established during the depression, many of them still owned by the same settlers.

The second migration barely affected the cultural landscape. The dispersed settlement pattern was in tune with the new migrants' ideals and they only served to strengthen that pattern. As with the first group, these settlers were white, protestants, and Americans.

During the later periods of the war, and during the postwar boom, another migration into the region took place. This again was predominently people from the Great Plains, but these were people who were bought out by the large corporate farms. Unlike the depression migration, these migrants came with an abundant supply of money, and bought approximately 15% of the existing farms in the area, establishing another 15% of their own. Again, the rural dispersed pattern was favored and continued. The whole area by now was divided into 160 acre farmsteads.[10] This pattern developed with the logging companies selling land only in quarter section sizes. Land later sold by the state or county was divided into quarter sections as well, and this pattern is evident today.

The last period of migration started approximately 10 years ago in 1960. This migration took on some peculiar tendencies. All the migrants into the area were people who had been or were at that time farmers within the greater Northwest Washington area. Many came from a short stay with the airplane industry in the area. A few of the migrants

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[9]From field interview.

[10]Most farms in the area are a few acres less than 160 because of expropriations of land for roads by either the county or state.

had previously lived in the Sumas-Border area, and had then moved, and were now moving back. These people were all white, Protestant, and local, as well as being Americans and from farming families.

CONCLUSIONS:

The two major conditions for the first hypothesis are thus verified. Two areas of similar physical environments, or in this case a uniform physical environment is described. The groups of people occupying the areas have been shown to be of distinctive backgrounds, and are two distinct groups. What remains is whether or not the cultural landscape forms are different, and if differing social characteristics have caused these landscape forms to be unlike. Both are examined in the nest chapter.

CHAPTER 3

INTRODUCTION

In the study of psychology, it is postulated that an understanding of an individual's behaviour pattern requires an awareness of his experiences. This includes a knowledge of early social and physical environment in which the developing person evolved fears and satisfactions. If this process is successful, the individual acquires a feeling of belonging and an affirmation to life which constitutes maturity. Is there not an analogy to this in the study of culture and society? Biology reminds us that 'ontogeny recapitulates phylogeny." Is it then incorrect to expect a social revolution to be as traumatic to a group as a broken home is to an individual?

The Mennonites have encountered several wars, lived through a complete revolution and lived in isolation for over one hundred years prior to coming to Canada. Need it surprise us when we discover that these past experiences have left indelible impressions?

The non-Mennonite groups in the Sumas-Border area have gone through several 'revolutions' of their own. From the closing of the frontier to the depression to the post-war boom, certain sociological imprints have left their mark on the cultural landscape.

The preceeding chapters have established that the two groups are involved in agriculture in similar physical environments and that they have differing backgrounds. This chapter will test the two hypotheses; that there are differences in the cultural landscape forms, and that these are a result of differing social values and beliefs held by the two groups.

It is, unfortunately, impossible to take into consider-

ation all elements of the two cultural-complexes. This is a task which would not only involve years of study but which would also tax the patience of the subjects. The selection of sereral representative values from the two groups would allow for a more detailed and complete survey of the question. Therefore, representative values for the two groups had to be obtained, but these values also had to be of a nature that they could be comparable between the groups.

From the interviews and the literature of the two groups, three broad categories of values for organizational purposes have been found to be representative and comparable between the two groups. These are individualism, egalitarianism, and particularism. Bennett argues that these three types of value systems are associated with a particular type of social system, the agrarian society."[1] He suggests that they are instrumental in lnndscape formation in North American agrarian society[2] and represent values present in the Sumas-Border area. From a historical survey of the Mennonites, these same three categories of values assume paramount positions in their social values, and are reflected in the cultural landscape forms. Smith[3] and Francis[4] suggest this to be true in studies on Mennonite culture in Prussia, Russia, and Canada.

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[1]John W. Bennett, Microcosm-Macrocosm Relationships in North American Agarian Society," *American Anthropologist*, Vol. 69, 1967, pp.441-445.

[2]*Ibid.*, p. 445.

[3]Smith, *Op. Cit.*

[4]Francis, *Op. Cit.*

The previously discussed questionaire on these socio-cultural characteristics was significant in substantiating the difference between the two groups. The null hypothesis (H_o) that the answer would be random with no significant differences between the two groups was rejected. In each of the 20 questions the probabiltiy of similarity between the two groups was at most .001. Therefore the probability of difference was extremely high and the null hypothesis was rejected. These differences will be fully explored in a discussion of the characteristics of the two groups.

CHARACTERISTICS OF THE MENNONITES:

The major characteristics of the Mennonites are their preoccupation with agriculture, pacifism, use of the German language, conservativism, cooperation, frugality, simplicity of life, non-conformity to the world, egalitarian principles but a superiority of themselves to non-Mennonites, seperation of church and state, and continuation of the old cultural values and ways. Walter Kollmorgen has described the Mennonites as having ". . . fine, wholesome traditions of good farming, and being without peers among this country's- and the world's- operators of family size farms."[5]

Pacificism, the Mennonite's chief article of faith, makes it impossible for a sect member to bear arms for any purpose, and has often been the cause of Mennonite migrations. They are equally as careful to keep the German language, for it is the language of their religion, and had been preserved through the centuries of their residence in Europe. In order to live up to their religious principles, the

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[5]Walter M. Kollmorgen, "The Role of Mennonites in Agriculture," *Mennonite Community,* Vol. 1, 1947, pp. 18-20.

Mennonites have developed a high degree of conservatism and a suspicion of ideas different from their own. This is not surprising in view of their bitter experiences in Europe. They ". . . maintain a puritan discipline in matters of conduct, with strict injuction to keep the Sabbath," and " are forbidden to dance, play cards, smoke, or drink."[6] This, by the way, prevents the Mennonite farmer from growing such crops as tobacco and malting barley.

The Mennonite's belief in cooperation has resulted from a mumber of principles and experiences. Their 'brotherly love,' the guarding of their religious beliefs, their desire to produce and purchase goods inexpensively and efficiently,[7] are reflections of the cooperative value. The Mennonite farmers of the Lower Fraser Valley are marked by their frugality, which results in economy in the household and the avoidance of certain luxuries, like television. Their ". . . homes are small, simply furnished, but clean,"[8] and their occupants are "hard-working, thrifty people and live simple lives."[9] In Inus's words, the farms of the Mennonites " . . . are nearly always well cared for, and usually boast neat houses and clean yards, examples of thrift, planning, and hard work for which the Mennonites of the area are noted."[10]

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[6] Evelyn Maguire, "The Mennonite in British Columbia: Matsqui-Sumas-Abbotsford Area," *Bulletin of the British Columbia Board of Health,* Vol. 8, 1938, pp. 171-173.

[7] David P. Reimer, "The Mennonites of British Columbia," unpublished Bachelor's Thesis, University of British Columbia, 1964, p. 2.

[8] Maguire, p. 173.'

[9] William C. Smith, Victoria Fugua, and Paul Louie, "The Mennonites of Yamhill County, Oregon," *Research Studies of the State College of Washington,* Vol. 8, 1940, p. 33.

[10] Harold Ray Inus, "Land Utilization in the Sumas Lake District, British Columbia," unpublished Master's Thesis, University of Washington, 1948, p. 54.

Reflecting their bible-centerdness, they live by a simple three-word formula, obedience, simplicity, and love. Their settlement at South Poplar retains their identity primarily because they do not separate religious and secular activities.[11]

INDIVIDUALISM: refers to the tendency in society to regard the individual as responsible for his acts and achievments. It also emphasizes the acquisition of property by the individual and his right to control that property.

There is a conflict in Mennonite as it pertains to the category individualism. The right to control and own one's property, and the responsibility of the individual for all his acts has always been of supreme importance to the Mennonites. But conformity, conservatism, cooperation, and continuation of the old values are also important to the community and the indidual. This conflict was resolved by the Mennonites in Prussia and Russia, and is reflected in the South Poplar region.

Historically the Mennonites have lived in close community units. These served in Prussia to preserve religious principles and their way of life, and in Russia were further compounded when Czarina Katherine gave the land to the community at large and not the individual. In these closed units, the power of internal conformity and the strength through unity against the outside world, created a situation where a lack of individualism was the norm. The individual was still responsible for his narrow personal acts, but conservativism, perpetuation of the old ways and values, close unity and internal conformity lead to a loss of indivuduality in actions other than the narrowest of personal behaviour. The community was more important than the individual. Therefore the Mennonites could be described as communalistic and not individualistic.

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[11]Reimer, p. 21.

EGALITARIAN: refers to the tendency to conceive of the ultimate outcome of social and economic evolution as a society of equals. This is reflected in the lack of individuality among the Mennonites. The religious and cultural values have beeen explicite in this category. All men are equal in the 'eyes of God.' Personal possessions or success are not criteria for the good and right life, but are often detriments to it. Historically, the communal life in Russia and the close community cooperation in Prussia have lead to a sharing of natural resources and opportunities and thus to a greater equality. Their values of cooperation and aid to one another are reflections of this belief.

A paradox has developed with respect to this catagory of beliefs. The Mennonites feel a superiority of their own group to others. Francis suggests that this may be a result of conflicts and religious persecution felt by all Protestant groups during the Reformation.[12] In addition, the conservative nature of the Mennonites, and their resistance to Russification in the Ukraine has furthered this feeling of superiority. But despite the reasons, Mennonite egalitarianism does not extend to non-Mennonites so that Mennonite society fosters and attemepts to be egalitarian, but in the relationship of Mennonite to outsider this is lacking.

Their values of frugality and simplicity of life, and the tight religious and community controls further the egalitiarian society.

PARTICULARISM: refers to the tendency for individuals to conduct private arrangements with each other. In Mennonite beliefs, particularism is a non-acceptable doctrine. Private dealings, trading, cooperation, and aid between Mennonites is frowned upon unless the entire community is at least informally informed and approves. Private

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[12]Francis, p. 148.

dealings are often first suggested to the minister for his approval. Private actions outside the group are almost unheard of, both because of the values of non-conformity withthe world, and the superior feelings of Mennonites to others. From Mennonite beliefs, particularism would initially seem to conflict with individualism, but as previously discussed, the individualism of the Mennonites is only in reference to the most personal of acts, thus particularism is lacking as a trait in Mennonite society.

A conflict in Mennonite beliefs between particularism and the functional needs of the Mennonites has developed. Although they frown upon outside dealings, the Mennonites of South Poplar are required to obtain 80% of their income from outside sources. This creates the situation where private dealings and associations are a necessity. The South Poplar community has resolved this conflict. Informally, every member of the community knows what the other members are doing in business, pleasure, and in making a living, and in addition, the church lectures, the members in the right attitude and methods of doing business outside the community. The conflict has, therefore, been resolved by compromise of the practice with the preachings of beliefs that are anti-particularistic. Thusly the Mennonite beliefs can be catagorized as non-individualistic, egalitarian, and non-particularistic.

CHARACTERISTICS OF THE NON-MENNONITES:

Although the non-mennonites are agriculturalists like the Mennonites their beliefs correspond to the commercial nature of their activities rather than to any religious doctrine. Beliefs in 'getting ahead,' optimization of economic return, and supression of functionally non-benificial values distinguish them from the Mennonites. Bennett suggests that the non-Mennonites social values are: to help oneself is the best thing; a man should get all he can- that is his right; competition is good; independence

is good; and everyone is equal, but some 'get ahead' faster.[13] In comparison to the Mennonites, this group is 'liberal' with regard to new ideas and practices. Any legal forms of entertainment are considered acceptable. They are elaborate and fashionable in their homes, farms, and personal appearance when compared to the Mennonites. Religious persuasion and belief is almost entirely lacking, and the seperation of religious belief from life styles is peculiarly evident.

Beliefs that represent individualism are extremely impotant to this group. Having a much broader interpretation of it than the Mennonites, they consider all acts of a man to be his individual choice and right, although laws are recognized as a necessity. Values do not include cooperation; 'to help oneself is the best thing,' and ' man should get all he can' reflects this lack. The community social pressures for cooperation are virtually non-existant, but pressures and controls suggestive of individualism do exist.

According to Bennett, at one time, beliefs suggesting egalitarian principles formed an intregal part of North American agarian mentally but are less apparent today, in general and specifically in the Sumas-Border area. But these principles do reappear when times of trouble besiege the farmer. At such times, the farmer can be counted upon to espouse cooperative-collective principles, values opposed to individualist behaviour but in tune with behaviour suggesting egalitarian principles. But he votes individualistic-conservative when he is out of trouble, and expresses these values in all but the most difficult times.[14] This action seems to correspond with the principle that 'a man should get all he can,' and despite the view that 'everyone is equal, some getahead faster than others.' But more striking is the paradox in religious belief. He

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[13] Bennett.

[14] *Ibid.*

is non-religious but has a puritan ethic that since God is benevolent and forgiving, all are equal in the eyes of God, and God gives to those who deserve it. Surprisingly for a non-religious group of people, there is a universal belief that actions on earth do not reflect one's position in heaven if he admits he has sinned. These conflicts in values allow him to justify competiveness and thus individualistic behaviour with little concern for neighbors or the less fortunate, and with freedom from 'everlasting' responsibility for his actions.

The category of values representing particularism is compatible with those representing individualism and the non-eqalitarian with the non-Mennonites. Private control and thus private dealings and enterprises are the mainstay of the group's values. This is expressed in one way by the resistance of the group to community-owned cooperatives in the area. It has also lead the non-Mennonite to a faster consideration of new ideas, tools, and marketing potentials in agriculture, a feature noticably lacking in the Mennonite community.

In contrast to the Mennontes, the non-Mennonites values can be characterised as being individualistic, non-egalitarian, and particularistic. These conflicting value categories of the two groups may be expressed in the forms the cultural landscape has taken. Particularly important are the overall settlement patterns in the two areas, agricultural techniques, and farming intensity. There are a number of elements in the landscape which are directly attributable to these social values, and another set of elements which are indirectly attributable to the social values, i.e. they are directly caused by another element that is caused by social values. In attempting to relate the landscape forms to social values, these two forms will be used as organizational themes.

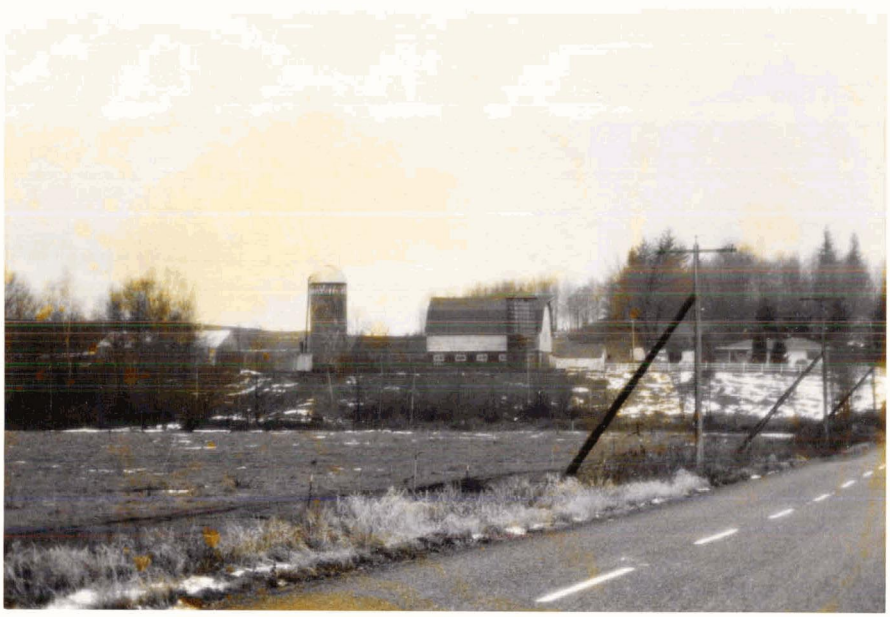

Figure 4. Typical non-Mennonite barn. Note the silo and house.

Figure 5. L-shaped non-Mennonite home.

Figures 6 and 7 Two non-Mennonite barns. Note the use of two silos.

Figures 8 and 9. Migrant labor shacks on non-Mennonite farm.

Figures 10 and 11. Modern non-Mennonite house and barn.

Figures 12 and 13. Non-Mennonite house and farm. Note the machinery unused in the field.

Figures 14 and 15. Mennonite barns.

Figures 16 and 17. Mennonite barns.

Figure 18. Mennonite bungalow house.

Figure 19. South Poplar Mennonite church.

RELATIONSHIPS BETWEEN VALUES AND CULTURAL LANDSCAPE;

When observing the two areas, the diversity of patterns that the settlements exhibit is striking. A heavily dispersed pattern is observable in the South Poplar, Mennonite area. The specific form is a linear-oriented pattern that strongly resembles a long-lot pattern. The Mennonite farm in the South Poplar area averages only 10 acres. The most noticable feature is the considerable and consistently elongated farm yards. These patterns are further reflected in the landscape in several ways.

It is typical in the Mennonite area for the houses to border the road. The Mennonite farmer's house is quite small, averaging but four bedrooms, is simply furnished, well kept, and in good repair. A bungalow style is universal in the area, and is always white in color. This small house is remarkable in view of the size of the family, which averages seven persons.

Behind the house, but relatively close to it is the barn, which is oriented parallel to the road, and is about 1,500 square feet in area. There is but one major barn style in the South Poplar area, the small gambrel-roof barn.

In 35% of the farms observed a small chicken house to the side of the farm was found, ranging from 500 square feet to 2,000 square feet in area. In only 5% of those cases where chicken houses were observed was a commerical operation underway, and in no case did this account for more than 20% of the income. Where chickens were raised for commerical enterprises, a centrally-located feed room was present.

Behind the barn are several acres of pasture land which in the past were periodically rotated with a few acres of oats and hay located beyond the pasture. Although this practice is no longer followed, the acres of oats and hay can still be found beyond the pasture.

Behind this acreage, and in some cases to the side, a berry patch is located. It is of interest to note that those who raised chickens for a commercial venture had no berry crop. This is highly suggestive of a more labor-intensive nature of farming rather than an extensive form, a topic explored later.

In 40% of the farms, the last several acres are devoted to woodland, and in the other 60% more pasture. The woodland is used today for firewood and other various uses around the farm, but at one time it was a highly important feature of the Mennonite farm, especially for use in fences and buildings.

To the side of the barn, fruit trees, for home consumption, and the family vegetable plot are located. The latter is quite large, averaging 9,000 square feet, but is never used for commercial purposes.

A small non-farm nucleation in the area provides basic services; a general store, an automobile service station, the church, and homes for the retired members of the community. Nucleations of this type are closely related to the church site, and the commerical establishments are owned and operated by Mennonites.

The pattern described above is not new, nor is it a random pattern in Mennonite history. It strongly resembles the type of line or row village which is derived from the medieval *Marshhufendorf* (marsh village) and *Waldhufendorf* (forest village).[15] The latter type of settlement morphology is seen elsewhere in North America. It was introduced from northern France by French settlers and is still found in parts of French Canada. In both forms, the farm buildings are more or less loosely located along a road or a river and the farm extends perpendicularly in one single direction as a rectangular piece, parallel to the neighboring farms, back into the raw forest or marsh land. In

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[15]Francis, p. 145.

[16]*Ibid.*

Prussia and Holland, Mennonite settlements were organized after the pattern of the marsh village. Buildings were arranged in a long drawn-out row, usually following the courses of river bends, but often a road as well.

Customary laws or mores, copied from their ancestral home, provided a strong regulative force in the Hollander communities of Prussia. Generally the village community regulated practically all phases of life. Although each individual farm was theoretically an independent unit, the operation of which was left to private initiative, the erection and maintance of the social system required close cooperation and strict discipline.[17]

Because of the Mennonite values representing communalism and not individualism, and specifically because of the value of continuation of the old culture, the Prussian types of settlement and community controls have reappeared in the South Poplar settlement. The basic farm pattern is reflected throughout the Mennonite communities in the Lower Fraser Valley. The Prussian settlement's small nucleated village for retired persons, stores, and the church appears, as we have seen, in South Poplar. The simplicity of house-styles and furnishings and the neatness of farmyards are results of the Mennonite values of simplicity of life and group conformity. The family garden and the fruit trees reflect the Mennonite traditional frugality.[18] In addition, these patterns reflect the Mennonite non-conformity to the rest of the world, in that they attempt to gain what they possibly can from the farm in order to prevent excessive dependence and interaction with non-Mennonites.

The Sumas-Border farmer, in contrast, holds at least 15 times as much farm land as his Mennonite counterpart, an average farm size being 156 acres. In this area, where settlement is sparser, the fields are oblong, square, and irregular in shape.

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[17] *Ibid.*

[18] Gibson.

The entire area exhibits a lightly dispersed settlement pattern. The houses rarely border the road and are of two major styles. The bungalow style similar to that in South Poplar area, but it is greatly modified, being usually much larger and often with an attached wing. The other major style is the two story L--shaped type. These houses are larger than those of the Mennonites and are usually elaborately furnished but not always well-kept. Despite the affluence in the area, the houses are usually in poor repair. They may be any color and usually contain five bedrooms, although the family is smaller than that of the Mennonites, being usually only of 4 children. This is a partiuclarly noticable feature of values representing individualistic characteristics of the Sumas-Border farmer, in that every child is given his own bedroom, while the Mennonite children share bedrooms.

The Sumas-Border farmyards are noticably untidy in comparison to those in South Poplar and the barns are a further distance from the house. There are two major barn styles; the multi-gabbled, hipped roof type, and the broken-gable pitched roof barn. Neither is oriented in any special direction probably because the lack of any prevailing wind. While the South Poplar barn is only 1,500 square feet in area, the Sumas-Border farmer has a much larger barn, averaging 4,000 square feet.

Most houses and barns are located on higher ground, resembling almost a dry-point farm pattern. Although drainage is good in the area, the continual winter precipitation brings some low-point flooding. This type of pattern is not noticable in the Mennonite area.

It is normal to find three major buildings on the non-Mennonite farm. In addition to the barn and the house, a machine shed, usually located near the barn is found. This added building is noticably lacking from the Mennonite farm, as is a silo, which is universal in the Sumas-Border area. Nor are there chicken houses in the Sumas-Border area. There are no family garderns in 65% of the farms

in the area, and where they do exist, they rarely cover more than 2,000 square feet, as compared to 9,000 square feet in South Poplar. The non-Mennonite settlement pattern results from its historical roots and the social characteristics of its creators. The rural dispersed settlements evident in the area directly replicate those of the corn-belt transplanted to a wetter and more heavily forested environment. The scattering of houses and barns on the farms is not only a consequence of the historical transplant, but is a reflection of the individualism of the settlers. The elaborate and new houses and house styles, furnishings, and variety of colors reflects this individuality. It also reflects the commercial, 'liberal' nature of the farmers. The barns are commercially built in 70% of the cases, as building companies offer a cheaper and more functional barn. In the Mennonite area, barns and houses are the products of cooperation between members of the group and the family. Of the remaining 30% of the non-Mennonite barns, 5/6 were built with hired labor from purchased architectural plans and the other 1/6 are built from traditional styles.

Spencer and Horvath refer to these types of settlements as "neighbor-shunning."[19] The practice clearly reflects the values represented by the individualistic, particularistic and non-egalitarian categories. The smallness of the garden, the extra machine shed and silo, the large and elaborate house and modern barn reflects the commercial nature of the Sumas-Border farmers, results of their individualistic behavioural patterns.

The dry-point farming in the area, where it is not functionally needed, seems particularly out of place with these apparently economically optimizing farmers, but further analysis shows that this pattern is not dysfunctional. Therefore, we must assume that the pattern is neutral.

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[19]Spencer and Horvath, p. 77.

This probably reflects the perception of the 'damp' environment that these corn-belt farmers have.

The rate of change in the two areas can not be gauged accurately, nor can the precise processes by which change has taken place be properly judged. But it is possible to state that between 60% and 70% of all farms in the Sumas-Border area underwent some readily visible change in the period 1955-1969, while the South Poplar area underwent only 20% change in the same period. Included in these changes were mechanization of the work load on an ascending scale, clearing of forest, instaliation of plumbing and water systems, construction of new buildings, purchase of additional land or land alienation, commercial fertilization to supplement annual manure, steel fence posts replacing wooden fence posts, and barbed and electric fencing replacing wooden fencing. It seems likely that there is an acceptance of new farming ideas, procedures and marketing in the Sumas-Border community, while very little acceptance in South Poplar. We could then classify the Sumas-Border region as a definite "innovator-adapter" situation, producing a "leader-follower" relationship.[20] The social values that caused these trends will be discussed throughout the rest of this chapter.

Fence types vary amoung the two sets of farmers. This is not surprising for fences generally reflect the type of land-use.[21] Accordingly the Sumas-Border area fences are predominately barbed wire, with some movable electric fencing to facilitate strip-grazing. This is an indication of the reliance on livestock for the farmer, discussed later, and an indication of the rapid acceptance of new techniques, especially the electric fences. The South-Poplar fences are barbed, chicken wire, but mostly rail fencing, suggestive of a more diversified farm, but with concentration on field crops. The universal lack of electric fencing and the use of the old wooden rail fence is highly suggestive of the Mennonite conservative characteristic.

The preceding differences in cultural landscape patterns in the areas is reflected in the relative density of farms in these areas. In the two areas of equal size, there are 140 farms in the South Poplar Mennonite area, while there are only 61 in the non-Mennonite area. Although more of the Mennonite land is used for agriculture, full scale commercial farming is undertaken only by the non-Mennonites. It is interesting to note the differences in attitudes towards land alienation in the two areas. In this respect, none of the Mennonites interviewed have alienated any land, nor have they increased their farm size. On the other hand, in the Sumas-Border region, large scale land alienation and land procurement has continually taken place since the time of the first settlement.

These striking differences can again be explained by the individualistic and community value catagories found in the groups. As established, values calling for individualistic nature has lead them into farming as a commercial enterprise. The farm represents production. The farmer sees the buying and selling of land in large or small acreage as an intregal part of his attempt to increase production and thus profits. On the other hand, the Mennonite farm is the home. The farmer may well have to work off the farm in order to gain a living, but the farm is the value-giver. Land alianation is in opposition to this concept and others. His conservative nature, his belief in the simplicity of life, and his conformity to the group, which does not sanction land alianation, are in opossition to it. At first it could be assumed that the reason he does not obtain more land is related to economic return, i.e. he would need some 30 more acres of land be-

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[20] *Ibid.*

[21] John Fraser Hart and Eugene Cotton Mather, "The American Fence," *Landscape*, Vol. 6, 1957, pp. 4-9.

fore he could make a commercial operation feasible,[21] but historical records show a strong Mennonite opposition to increasing the size of the farm.[22]

The Sumas-Border farms are safely above the 40 acre economic limit required for dairying in the greater area and thus the farmer is free to concentrate on this type of farming, but the Mennonite farmer with his 10 acres must choose a less extensive form of agriculture.

SECONDARY RELATIONSHIPS BETWEEN VALUES AND LANDSCAPE:

Many landscape differences arise from differences in farm sizes. As we have seen, the Mennonites regard the farm as the end in itself, the value-giver, a *Gemeinshaft*-like relationship. The farm is not thought of as a producer of necessary goods for like, but rather as a producer of the necessary values for life, i.e. the farm is the embodiment of the proper values. On the other hand, to the farmer in the Sumas-Border area the farm is the provider of goods, the producer of a commodity exchangable for material wealth, thus a *Gesellshaft*-like relationship has developed, i.e. the farm is a means to an end. These conflicting ideals of the role of the farm result in a differing perception of what is an acceptable size of a farm. The non-Mennonite in the area considers 100 acres to be minimal size farm, while the Mennonite feel any size, "as long as a few acres of pasture, a family garden, and a couple head of cattle" can be obtained.[23] The causes of the differing perceptions of the role of the farm appears to be those values suggesting the individualistic characteristics of the non-Mennonites, to help oneself is the best thing, and a man should get all he can, and those values suggesting community characteristics of the Men-

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[21]Gibson.

[22]Smith and Francis.

[23]From field interview.

nonites, conservatism and cooperation. Since certain landscape forms are a result of differing farm sizes, and since these are a result of differing values we can deduce that any landscape forms that are attributable to farm size are a result of differing social values of the two groups.

Accordingly, the Sumas-Border farmer keeps 70 head of cattle and has 40 acres of pasture, 40 acres of hay, and 16 acres of oats. In addition, he normally has a few acres in berries and/or nuts. The Mennonite farmer concentrates on raspberries, and less important, chickens, supplemented by a few cows. On the average the Mennonites who raise berries have 3 acres in raspberries, and those who keep chickens have 500 laying birds. He keeps only 2 dairy cows and has but 4 acres for pasture, an acre for hay, and one for oats. He has no ensilage, unlike his non-Mennonite neighbor. The income from these endevors allows the non-Mennonite to subsist from his farm, while the Mennonite only makes 20% of his income from his farm, making-up the remaining 80% from outside work.

The Mennonite farmer, being much less concerned with dairying than the Non-Mennonite, has only one head per 2 acres of pasture, while the Sumas-Border farmer has nearly 2 head per acre.

The main reason for this diversity in head of cattle per acre between the two areas results from reseeding and fertilization techniques. The non-Mennonite reseeds his pasture every four years, and puts 7 tons of manure on each acre, and 200 pounds of commercial fertilizer each year. In contrast to this, the Mennonite farmer reseeds over 5 years or so, puts less than one ton of manure on each acre and uses no fertilizer. This results in greater hay yields for the non-Mennonite farmers, who obtain between 4 and 5 tons of hay to an acre, while the Mennonite barely yields 3 tons per acre. With his much greater amount of hay, both acreage and yield, the Sumas-Border

farmer can store it in labor-saving bale form, The Mennonite farmer, however, with but a very small amount of hay, commonly stores it loose.

The Sumas-Border farmer's use of ensilage both suggests and is a result of this reliance on dairying. The Mennonite farmer apparently does not consider it worthwhile to make silage for his cattle, so that, as previously noted, the silo is not a landscape feature. The Sumas-Border farmer's heavier yields of hay, together with his use of silage, results in his deriving a greater proportion of his livestock feed, as much as 3/4, from his farm, while the Mennonite farmer can obtain only about 1/4. These features do have a direct result upon the landscape in the area. The added buildings, machine shed and silo, and the more elaborate operation of the non-Mennonites are reflections of this. As noted, these causes can be directly related to the functional consideration of differeing farm sizes, but their farm sizes are a result of differing value characteristics of the two groups.

The Sumas-Border farmer's dependency upon farming is further indicated by the fact that his herd consists of one dairy breed, usually either Jersey, Guernsey or Holstein, for he feels that one particular breed is better than others for dairy purposes. On the other hand, the Mennonite farmer, being much less dependent upon the milk check, is, as a result, less concerned about which breed makes the best dairy animal.

The two sets of farmers also differ in the amount of human labor expended on their farms. The Sumas-Border farmer, with his greater acreage and commercial farming, leads in this respect. He has three hired hands, one permanent and two temporary for just over a week each year, altogether around 20 man hours per day are put in on his farm. In comparison, the less extensive, supplementary income farmers of the South Poplar area have no permanent

or temporary hired help, and need only 3 man hours per day, most of which is done by the wife and children.

This difference in land-use intensity does not fall into perspective until the amount of human labor expended on each acre per day is explored. The Mennonite farmer puts in roughly 35 man-minutes on each acre per day. This reflects the *Gemeinshaft*-like relationship of the Mennonite farm, where intensive work is a virtue, and the *Gesellshaft*-like relationship of the non-Mennonite farmer, where income is the virtue.

The larger scale operations of the Sumas Border farmer also requires more machine labor. In total, he has 12 pieces of machinery, including 10 different kinds. In contrast to this, the implement-poor Mennonite farms have 5 pieces of machinery, of 4 different kinds. The non-Mennonite rents 3 peices of machinery for an extra 5 days during the year for such operations as silo filling, and hay baling, while the Mennonite rents none. With his fewer implements the Mennonite finds it unnecessary to have a machine shed, while the Sumas-Border farmer must. Apparently even this is not spacious enough, for the non-Mennonite farmer leaves many of his implements outside. The Mennonite farmer, on the other hand, normally leaves no machinery outside, even though he lacks a machine shed. As a result of his larger machinery complement, the Sumas-Border farmer puts in 5 machine hours per day on his farm, while only one and a half machine hours are expended on the Mennonite farm.

The Mennonite farmer is more inclined towards a type of self-sufficiency than the non-Mennonite farmer, even though he only derives 20% of his income from his farm. His greater degree of self-sufficency is evidenced in several ways, and appears to be a result of his conservative characteristics, and his desire for non-conformity

with the world.

Half of the Mennonite's food comes from his farm, whereas the Sumas-Border farmer averages only 13% of his food from his own farm. Because of the difficulty in gaining a comfortable livelihood from their small farms, the Mennonites tend towards self-sufficiency in other ways. For one thing, whereas the Sumas-Border farmers hire someone to butcher any of his animals, the South Poplar farmer does all of his own slaughtering himself. Al least one major landscape difference is a result of this self-sufficency, that is the garden size, considerable larger with the Mennonites then with the non-Mennonites.

CONCLUSIONS:

A set of cultural values has been found to differentiate the Mennonites and the non-Mennonites in the study area. For the Mennonites, these characteristics stem from religious and social beliefs in cooperation, conservativism, simplicity of life, continuation of the old culture, nonconformity with the world, frugality, and separation of church and state. It has been found that these values can be catagorized as non-individualistic, egalitarian and nonparticularistic. These have lead to the transference of the *Marschufendorf* type settlement pattern to South Poplar. The small farm sizes, field patterns, and agriculture techniques reflect this transference.

On the other hand, the values of the non-Mennonites has resulted in a transference of the corn-belt pattern of the United States to the Sumas-Border area. Their values can be categorized as individualistic, non-egalitarian, and particularistic, and stem from the beliefs that: to help oneself is the best thing; a man should get all he can; competition is good; independence is good; and everyone is equal, but some 'get ahead' faster. These have

lead to the checkerboard, rural dispersed settlement pattern of the Sumas-Border area, and have lead to differences in farm size, field patterns, and agricultural techniques that so markedly differentiate the two groups.

Specifically, the Mennonites have transfered a small elongated farm yard pattern. Houses are small and of one bungalow style. Field patterns are neat and organized and intensively utalized. Contary to this, the non-Mennonites checkerboard field pattern exemplyfies individuality in house styles and field organizations. Their's is an extensive farming pattern. But the greatest difference of the two patterns is the commercial *Gesellshaft*-like relationship of the non-Mennonite farm and the supplementary income *Gemeinshaft*-like relationship of the Mennonites.

CHAPTER 4

CONCLUSIONS

Two agricultural groups, one Mennonites, and the other of non-ethnical American characteristics, located in the Lower Fraser Valley of British Columbia and Whatcom County Washington were the subject of this comparative study. An investigation into the different cultural landscape forms and the causative social value characteristics comprised the body of this thesis.

An analysis was made of the physical environment to establish similar physical environments, and of the distinctive backgrounds of the settlers in the two areas. The research was accomplished primarly through interviews and field schedule and the results of the findings were compiled by groups and aligned one against another.

In the Sumas-Border area, all the migrations had several factors in common. All migrants were white, protestant, and American and all were from the corn-belt. As a result of these migrations, a distinctive cultural landscape was developed.

The Mennonites of the South Poplar region of British Columbia, descendents of Mennonites who moved from Holland to Prussia to Russia and finally to Canada, created an equally distinctive cultural landscape.

The preceeding chapters have tested and tentatively proven the two hypothesis of this study: Different cultural landscapes occur in areas of similar physical environments where two distict groups have settled; and these (different cultural landscapes are a result of variations in social characteristics of the groups of people occupying that environment.) Chapter two has shown

the distinctiveness of the two groups occupying the areas, and established that the two areas are of similar physical environments. Part of the findings recorded in Chapter three have established that the cultural landscape forms are different in the two areas. This then leads to the conclusion that the first hypothesis is verified.

Chapter three has shown that the differing cultural landscape forms are a result of value characteristics distinct in each group. The beliefs of the two groups were organized under the categories of individualism, egalitarianism, and particularism. These categories were compared one against another and it was concluded that the second hypothesis was verified.

Certain external influences might be interpreted as affecting the outcome of the testing of the hypotheses of this study. The first of these appears to be one of economic consideration. The differeing groups could be shown to be in differing 'rings' or zones from their respective market centers. The Sumas-Border area is clearly in a dairy zone of the Seattle marketing area, while the South Poplar area is in a zone of transition, from dairy farming to truck farming, for its market area, Vancouver. This appears to have had little influence in this sutyy, since the Mennonites were never involved in any economic considerations of commercial agriculture in site selection.

Another external influence could be the relationship of farm sizes in the two areas. As was noted, the Mennonites and the non-Mennonites perceive differently what is the desired farm size. Despite the fact that farm size considerations are a result of value characteristics differing the two groups, this becomes a second-hand cause and should weaken the argument. It would seem prudent in any furtherstudy along the lines of this one that areas be chosen where economic activity is similar and farm sizes the same.

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APPENDIX A

QUESTIONAIRE

Name:
Address:

1. Do you own or rent your farm?
2. What is the present size of your farm? Original size?
3. Do you own or rent any farmland elsewhere? How much?
4. Have you ever sold or subdivided any acreage? How much and why?
5. What is your country of origin?
6. What part of that country?
7. Why did you move?
8. What were your reasons for choosing this district in which to live?
9. What were your reasons for choosing this farm on which to live?
10. How long have you been on this farm?
11. How long has this place been farmed?
12. Were you raised on a farm?
13. Have you always been a farmer? If not, then what other occupations have you had?
14. Were your parents farmers? Grandparents? If not, then what other occupations were they?
15. How many and what kind of buildings do you have?
16. How old is your house and barn?
17. Have you added any buildings? If so, how many and what kind?
18. How many pieces of each of the following implements do you own?

car	truck	tractor
trailer	plow	harrow
cultivator	mower	tedder
hay loader	baler	binder
hay tongs	packer	blower
seed drill	hammer mill	bulk tank
manure loader	manure spreader	wagon
water cooler	milking machine	disc
silage cutter	litter carrier	hay rake
fertilizer spreader	barn cleaner	hay sweep
hay conditioner		

19. Do you ever hire any machinery? If so, how much and what?
20. Do you share any machinery with your neighbors? If so, how much and what kind?
21. How many acres of each of the following crops do you have and what is the approximate average yield per acre of each?

pasture	fallow	Vita-Grass
corn	grass hay	nut trees
oats	alfalfa	root crops
clover	raspberries	fruit trees
timothy	strawberries	other
peas	beans	other

22. Do you practice any double cropping? If so, of what?
23. Do you practice any multiple cropping? If so, of what?
24. How often do you rotate your crops?
25. Do you practice any irrigation? If so, how much and what?
26. Do you keep a compost heap?
27. How much barn manure do you put on each acre each year?
28. How much commercial fertilizer do you put on each acre each year?
29. How much lime do you put on each acre each year?
30. How much of the following animals do you have and what is the dominant breed of each?

cattle	swine	sheep
horses	goats	chickens

turkeys bees others

31. Do you keep purebred or cross bred (graded) cattle?
32 Are your cattle bred by bull or artificial insemination?
33. Have you ever done this differently? If so, then why did you change?
34. Are your cattle immunized against disease? If so, against what?
35. Do you purposely raise and sell any youngstock for cash?
36. What is the approximate value of the livestock on your farm?
37. Do you do your own slaughtering?
38. Approximately what percentage or fraction of your livestock's feed requirements is supplied from your farm?
39. Do you use ensilage?
40. Do you milk by hand or by machine?
41. How many times a day do you milk?
42. Approximately what percentage or fraction of your food requirements is supplied from your farm?
43. Approximately what percentage or fraction of your clothing needs is made at home?
44. Do you use a frozen food locker or a deep freeze?
45. How large is your vegetable garden?
46. Approximately what percentage or fraction of your vegetable needs comes from your own garden?
47. Approximately what percentage or fraction of your annual net income comes from each of the following?

milk	poultry	animals
berries	vegetables	field crops
tree fruits	nuts	jobbing
eggs		

48. Where do you do most of your shopping?
49. Approximately how many times a month do you go to town?
50. How many farm magazines and buletins do you subscribe to?

51. How many government agricultural magazines do you subscribe to?
52. How many farm service programs do you listen to and watch on radio and television?
53. How many marketing organizations, like a cooperative, do you belong to? Which ones?
54. Do you and your neighbors ever help each other out in your farmwork? If so, how much?
55. What is the approximate average number of man hours expended on your farm each day?
56. Do you do other than necessary work on Sundays?
57. By what means is your farm produce transported to market?
58. Do you recieve any direct or indirect government subsidies?
59. Do you benefit or suffer from any Canadian or American tariffs or customs duties? If so, which ones and to what extent?
60. Have you ever attended any special agricultural classes at university or night school or elsewhere? If so, how long?
61. How much schooling have you had?
62. What church do you belong to?
63. In what ways, if any, does your church beliefs affect your farming practices and way of living?
64. How many children do you have?
65. To what extent do your children do work on the farm?
66. How many permanent and/or temporary hired hands do you have?

APPENDIX B

TEST OF SOCIO-CULTURAL VALUES AND DIFFERENCES

1. Society should be quicker to throw out old ideas and traditions and to adopt new thinking and customs.
2. If civilization is to survive, there must be a turning back to religion.
3. A first consideration in any society is the protection of property rights.
4. The well-being of a nation depends mainly on its industry and business.
5. Some sort of religious education should be given in our public schools.
6. There should be no government interference with business and trade.
7. Ultimately, private property in the instruments of production should be abolished and complete socialism introduced.
8. No economic system can function efficiently without appealing to the desire for private profits.
9. A classless society is possible.
10. A classless society is desirable.
11. Curent social practices are fundamentally sound because they lead to the survival of the fittest.
12. The social needs of the citizens are the responsibility. of themselves and their families and not of the community.
13. Everyone is out for himself at the expense of everyone else.
14. What is good for the community is good for me.
15. Each one should handle his own business as he pleases and let others handle things as they please.

16. A community would get along better if each one would mind his own business and let others take care of themselves.
17. One should never allow his own experiences and reason lead him in ways that he knows are contrary to the teachings of the Bible.
18. The government should provide to all classes of people opportunity for insurance at low cost against accident, sickness, premature death, and old age.
19. Only the doctors should have the responsibility for the health program in the community.
20. Long term progress is more important than immediate benefits.
21. This used to be a good community to live in.
22. Everyone is out for himself at the expense of everyone else.
23. The good citizen should help minority groups with their problems.
24. Each of us can make real progress only when the group as a whole makes progress.
25. Progress can best be accomplished by having only a few people involved.