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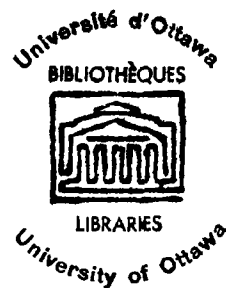
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CRIMINAL HOMICIDE AND CULTURE CONFLICT IN CANADA

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the requirements for the degree of Master of Arts.

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TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
INTRODUCTION	1
I. CULTURE CONFLICT AS AN EXPRESSION OF CRIME	3
I. 1 Explanations of Crime	3
I. 2 The Concept of Culture Conflict	5
I. 3 Review of Empirical Studies	7
I. 4 Culture, Subculture and Culture Conflict	10
I. 5 References	13
II. HOMICIDE	17
II. 1 Homicide in Canada	17
II. a Definition	17
II. b Homicide Statistics	18
II. c Criticism of Criminal Statistics	20
II. d Choice of a Proper Base	21
II. 2 Explanations of Homicide	22
II. a Patterns in Homicide	22
II. b Geneses of Homicide	25
II. 3 Applicability of the Culture Conflict Theory in Canada	29
II. 4 References	
III. THE MEASUREMENT OF CULTURE CONFLICT	36
III. 1 Estimates of Culture Conflict	36
III. 2 Applicability of Jayewardene's Conflict Index to Canadian Data	37
III. 3 Cultural Integration	49
III. 4 Measurement of Cultural Integration	51
III. 5 References	58
IV. PRESENTATION AND DISCUSSION OF RESULTS	61
IV. 1 Study A - Recapitulation of Rationale and Design	61
IV. 2 Findings and Discussion	62
IV. 3 Study B - Recapitulation of Rationale and Design	72
IV. 4 Findings and Discussion	74
IV. 5 Suggestions for Further Research	80
IV. 6 References	81

	IV.
	Page
V. SUMMARY AND CONCLUSIONS	83
VI. BIBLIOGRAPHY	85
VII. APPENDIX	95
VIII. ABSTRACT	97

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Criminal Homicide Rates in Canada computed with the Total Population and the 10-60 Year Old Age Group as Base, 1951-1970.	23
2. Infant Mortality and Homicide Rates in Canada, 1951-1967.	39
3. Infant Mortality and Homicide Rates in the United States of America, 1955-1967.	41
4. Infant Mortality and Homicide Rates in England and Wales, 1955-1967.	43
5. Infant Mortality and Homicide Rates in Australia, 1955-1967.	45
6. Governmental Per Capita Expenditure on Health and Social Welfare and Institutionalized Homicide Rates in Canada, 1951-1969.	50
7. Per Capita Gross National Produce in Constant Dollars in Canada, 1951-1969.	69
8. Number of Murders and Murder Rates According to Types of Murder in Canada, 1961-1970.	71
9. Measures of Cultural Heterogeneity and Cultural Integration in the Canadian Provinces, 1951-1961.	75
10. Criminal Homicide Rates in the Canadian Provinces, 1951-1961.	76
11. Trend Line Equations for Criminal Homicide Rates in the Canadian Provinces, 1951-1961.	77

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Scatter Diagram. Criminal Homicide Rates in Canada Computed with the Total Population and the 10-60 Year Old Age Group, 1951-1968 (data drawn from Table 1)	24
2. Scatter Diagram. Infant Mortality and Homicide Rates in Canada, 1951-1967 (data drawn from Table 2)	40
3. Scatter Diagram. Infant Mortality and Homicide Rates in the United States of America, 1955-1967 (data drawn from Table 3)	42
4. Scatter Diagram. Infant Mortality and Homicide Rates in England and Wales, 1955-1957 (data drawn from Table 4)	44
5. Scatter Diagram. Infant Mortality and Homicide Rates in Australia, 1955-1967 (data drawn from Table 5)	46
6. Scatter Diagram. Governmental Per Capita Expenditures on Health and Social Welfare and Criminal Homicide Rates in Canada, 1951-1969 (data drawn from Tables 1 and 6)	64
7. Scatter Diagram. Per Capita Gross National Product in Constant Dollars and Criminal Homicide Rates in Canada, 1951-1969 (data drawn from Tables 1 and 7)	70

INTRODUCTION

Although it occurs relatively infrequently compared to most other types of illegal activities, criminal homicide has always been a serious problem confronting most societies. In recent years, it has received public attention in North America because of the rise in homicide rates as indicated by official statistics.

Several explanations for homicidal behaviour have been put forward and tested with varying degrees of success. One of these is the culture conflict - criminal homicide hypothesis tested successfully in Ceylon (Sri Lanka) and Finland by Dr. C.H.S. Jayewardene. The present study partially replicates Dr. Jayewardene's research in a Canadian setting.

The general theory of culture conflict and crime is reviewed in Chapter One. Chapter Two focuses on understanding the phenomenon of homicide, first by examining what is known about the incidence of homicide in Canada, and second by examining various explanations purporting to account for homicide in general. This chapter concludes that owing to the cultural heterogeneity of the Canadian society the culture conflict framework seems especially appropriate to account for variations in Canadian homicide rates.

Difficulties encountered in finding appropriate measures of culture conflict, and the rationale for using selected indices of cultural integration as measures of culture conflict are presented in Chapter Three .

In Chapter Four, two such measures are related to criminal homicide. In Study A, the covariation over time of governmental per capita expenditure on health and welfare and criminal homicide rates is examined for the whole of the country. Study B focuses on the association between combined changes in the size of the linguistic majority and population density and changes in criminal homicide rates across the provinces. The results of the two studies are discussed separately, followed by suggestions for further research. Summary, conclusions and appendix complete the thesis.

CHAPTER I

CULTURE CONFLICT AS AN EXPLANATION OF CRIME

1. Explanations of Crime

Criminal behaviour is, essentially, behaviour in violation of the criminal law. This law, whether described as the crystallization of customs and mores, the reflection of the norms of society, or an arbitrary command imposed upon one group by another, is generally regarded as being composed of rules of conduct designed for the protection of society (33, pp. 3-16).

The purpose of this short section on various approaches to the explanation of criminal behaviour is to put the culture conflict framework used by the present study into perspective. (Another survey confined to theories of homicide is presented in Chapter Two.) More extensive surveys are to be found in standard sources such as Barnes and Teeters (1), Mannheim (22), as well as the specific sources in this section.

Since the beginning of scientific criminology, an event usually equated with the appearance of Lombroso (26, 42), a wide variety of explanations for criminal behaviour have been proposed (38).

In attempts to categorize the theoretical explanations of a given phenomenon, it is understood that there are no well articulated boundaries but only differential foci and emphases.

It could be said that at present there are three prominent perspectives in the understanding of criminal behaviour: the psychoanalytic-psychiatric; the constitutional; and the socio-cultural.

The psychoanalytic approach to an explanation of criminal behaviour emphasizes the unconscious aspects of the human mind and the importance of the early years of childhood. According to this view, all men are born with anti-social impulses and as a result of parental training most develop effective checks against these impulses. The potential criminal does not; his criminal behaviour may be either a direct manifestation of these anti-social impulses, or an attempt to resolve, on an unconscious symbolic level, problems that had their origin in early childhood, and of which the individual is not consciously aware (37, pp. 205-207).

The constitutional-environmental approach, as exemplified by Eysenck (11), focuses on the mechanism involved in the both pro and anti-social behaviour. It postulates the existence of two basic types of offenders. Due to constitutional factors, the first type acquires conditioned emotional responses with great difficulty and consequently does not fully develop the appropriate inhibitory mechanism to control his anti-social impulses. The second type conditions readily but due to the criminogenic social environment he learns anti-social behaviour patterns. This approach to the development of criminal behaviour directs attention to both the biogenetic and socio-cultural factors in crime causation.

The socio-cultural approach focuses on the social relationships of man. Man is born into a culture where he carries out a lifelong process of learning. He attaches meanings to customs, beliefs and artifacts and develops personal relationships with social institutions, his fellow

men and himself (30). Authors such as Bonger (3, p. 4), Taft and England (35), Thomas and Znaniecki (36) and Merton (23) concentrate on particular aspects of society such as the economic system, general cultural emphasis, social disorganization and anomie. To this list could be added some other important theoretical statements such as those made by Bell (2) who points out that for certain segments of American society crime has become a normal way of life. Sutherland presents a differential association theory; Shaw and McKay (31) describe criminal areas as a generating milieu of crime, Sykes and Matza (34) describe techniques of neutralization; and Reckless (27) presents a containment theory. Others are mentioned later in this chapter.

2. The Concept of Culture Conflict

The concept of culture conflict is based on the fact that man as a biological entity is born into a culture where he is reared in accordance with the values and norms of that culture and through the process of socialization - a process that continues throughout life - acquires and assimilates, among other things, the knowledge of the art of living which tells him what a person in that culture must or must not do and should or should not do (41, p. 26). Through interaction with people at first in the family, then in his neighbourhood and school, and later in other membership groups, he develops a set of social norms and values. These norms and values are thought to reflect those of other people in the society into which he was born, in which he was reared, and in which he

must live. They tell him what society considers right and wrong, what society expects him to do, and what society will be willing to accept.

In essence, the theory of culture conflict states that crime is an expression of conflict arising from the individual's being taught to behave in one way and society expecting him to behave in another way (30). The conflict would appear most likely to affect immigrants, especially those who come into a country that is very different culturally from the country they left. Growing up in one country and being taught to behave in one way, after migration these people find themselves in a host country that demands that in some areas of their lives they behave quite differently. The same situation may exist when a country is conquered and the victors extend their laws to cover the territory of the vanquished. Here, too, it is obvious that the individual has learned to behave in a certain way but the politically dominant group expects him to behave in another way. In these cases the conflict stems from a difference in codes which gives the individual a false perception of society's expectations.

These very obvious illustrations actually distract attention from the wide applicability of culture conflict hypotheses. Parsons (25, p. 469, 495) drew our attention to the concept of social role being one of the core concept of the behavioural sciences, because of its linking of the culture, social, and personality systems. Shared beliefs and values, i.e., cultural elements, are part of the basis of all social expectations. Thus, the concepts of culture and role conflicts substantially resemble

each other, and culture conflict is a useful analytical tool in any situation where the actor is confronted with competing and conflicting choice situations. (For analysis of different forms of role conflict-role strain, see 29, pp. 449-520.)

Review of Empirical Studies

Studies relevant to the testing of culture conflict theory can be found in the areas of migration, contact among groups, rural-urban criminality and social change. Some of the studies were specifically designed to test the culture conflict hypothesis¹, others were not.

Shoham (32) who studies criminality of immigrants in Israel found the crime rate among immigrants to be higher than that of native-born people. He also found variations in the crime rate among different groups of immigrants, lending support to the identification of a culture conflict as the criminogenic factor. Crime rates were highest in those groups whose cultural differences from the host country were the greatest. Both these findings supported the culture conflict hypothesis.

Support for the culture conflict hypothesis also comes from studies focusing on contact among different groups. It has been found that crime rate of migrants begins to increase as their contacts with the surrounding culture increase. This was the finding in the study of

1 The terms culture conflict theory and culture conflict hypothesis have been used interchangeably.

criminality among Italian immigrants in Montreal (28); of Japanese immigrants in the United States (13; 16, p. 145; 21), and of North American Indians in the United States (14).

The study of rural criminality provides another source of evidence for the criminogenic nature of culture conflict. Clinard (5) found that rural criminality was predominantly the behavioral manifestation of individuals living in rural areas but displaying urban characteristics, such as mobility and impersonality in social relations, which were incongruous with their surroundings. These findings have been substantiated by Eastman (10, p. 101), who repeated Clinard's study in the same village at a different time, and by Clinard himself, who repeated the study in a Swedish village (6).

Apparent non-support for the crime generating nature of rapid social change was obtained by Clifford (4) in Zambia. In a comparative study of delinquents and non-delinquents, he had expected to find more parent child conflict for delinquents because of the rapid social change in the country. No such difference was found. Jayewardene (19) suggests that the attitude towards social change itself may be the important crime generating factor. He found in Ceylon that variance in the incidents of crime among rural communities was related to the community leaders' reaction to social change. Crime rates increased when change was resisted or "exuberantly" supported but remained unchanged where it was accepted as a normal part of life.

However, not all the investigations relating to the testing of the

culture conflict hypothesis are positive. Thus Young (45) in the United States found, contrary to her expectations, that children who had emigrated after living several years in their home country had lower crime rates than immigrants' children who were born and reared in the host country. Studies in Australia (9), Canada (39) and Europe (12) also report the crime rate of immigrants to be lower than that of the native-born. Even when correction was made for the differences in age and sex distribution, the crime rate of the two groups becomes more similar but the lower rate for the immigrants remains (12; 40).

Ferracuti (12) claims these negative findings do not provide adequate evidence to invalidate the theory of culture conflict. He suggests that culturally determined behaviour implicit in culture conflict might be hidden by the broad categorization of behaviour into the dichotomous groups of criminal and non-criminal. If particular offences are considered, he says, there might be higher rates for immigrants although the overall crime rate may be lower. Thus, in Germany, Irish and Finnish immigrants have a higher rate of commitment for drunkenness and Italian and Turkish immigrants have high rates for homicides and assaults, reflecting cultural "traditions" of their homeland.

Also, criticism such as that of Kaiser (20), who says that the culture conflict hypothesis is "too vague", arises due to the misinterpretation of the concept of culture conflict.¹ Generally, the term conflict is

1. C.H.S. Jayewardene, Personal Communication.

interpreted in terms of immutable commitment on the part of the migrant to behave in a specific manner. What is frequently forgotten is that conflict does not exist in the immutable commitment but in the variance of this commitment with the requirements of the society in which the migrant lives. Thus, as Ferracuti, Jayewardene suggests a narrower range of phenomena for the application of the culture conflict concept.

Culture, Subculture, and Culture Conflict

The sharing of similar values, ideas and beliefs by a collectivity of individuals is what gives meaning to the concept of culture. Within this collectivity, there are some groups with characteristics peculiar to themselves. This fact has led some theorists to speculate on the existence of subcultures which constitute a part of the parent culture while remaining apart from it (43).

When the behaviour of persons contributing to a subculture conflicts with that expected by those contributing to the parent culture, the subculture may be considered anti-social or criminal. Various authors differ, however, about the factors that lead to the establishment and maintenance of subcultures. In the case of delinquency, for example, Miller (24) sees delinquent behaviour as a manifestation of lower class culture. The delinquent places more emphasis than other lower class youth on things such as smartness, excitement, trouble, toughness, fate and autonomy. It is the high degree of emphasis on these concerns which deviate from societal expectations that is defined by legal norms as delinquency. Cohen (8) considers the awareness of lower class youth of

their inability to measure up to middle class expectations as the root source of illegal behaviour. The inability to live up to standards results in anger and anxiety which are resolved when the middle class values and norms are replaced by "collective" subcultural solutions or gang delinquency (15, p. 83).

A slightly different view has been put forward by Cloward and Ohlin (7), who see delinquent subculture emerging as a response to a clash between the values which promote unlimited aspirations and the social structure which restricts accomplishment of these aspirations. The delinquent subcultures, according to this view, emerge in segments of the populations where the possibility of legitimately achieving success goals is limited. They may take the form of "criminal", "conflict", or "retreatist" subcultures.

Subcultural theories and studies are based on the concept of culture conflict. The 'conflict' stems from a contrast between two or more normative systems, at least one of which implies strong adherence to codified values. The normative systems are part of the larger culture or cultural whole and can be looked upon as discrete cultural units, to which the various groups of individuals in a society contribute. It is these units which are termed as subcultures when sociologists attempt to study the value system of inmates, delinquents, ethnic groups, social classes and other groups in a heterogenous society (43, pp. 99-101).

The concept of criminal cultures and subcultures has been criticized by Jayewardene (18). His empirical findings indicate that

though differential stress on values is placed by different groups in society, the differences are not absolute but relative. This, he says, could either be regarded as revelations of the existence of subcultures or the "manifestations of the variations in the normative powers of the values concerned". In the former case, crime is the expression of an external culture conflict between two different distinct cultures - the predominant culture on the one hand and the subculture on the other. In the latter case, crime is the expression of "internal culture conflicts having its roots in a situational complex."

The culture conflict theory differs from previous theories in that it does not assume that the individual's behaviour is the result of his loyalty to one group but to the totality of his social interaction (17, p. 8). Jayewardene (17) suggests that one can think of culture as the "least common factor" of values of a whole society. He groups these values into personal, societal, and legal value systems and defines culture conflict as the discrepancy between the latter two. Criminality is explained by the discrepancy between the normative power within these two systems of values. (For further elaboration see pp. 27-28 and 37-48 of this thesis.)

The major hypothesis tested by Jayewardene, using Ceylonese and Finnish published statistics, was that the degree of culture conflict is proportional to the incidence of criminal homicide. The present study is an attempt to apply Jayewardene's framework to Canadian data.

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CHAPTER II

HOMICIDE

1. Homicide in Canada

a) Definition

Homicide is the killing of one human being by another. Canadian law, as does the law of many other countries, recognizes its existence in two forms - culpable and non-culpable. In culpable homicide, blame is attached to the individual who commits the act; in non-culpable homicide no such blame is attached. Canadian law recognizes three forms of culpable homicide: murder, manslaughter and infanticide (47, Section 194). Murder is the wilful killing of another human being with malice aforethought. Prior to September 1961, all murder carried the death penalty. In 1961 an amendment in the Canadian Criminal Code divided murder into two categories: capital or non-capital. The former was defined as premeditated murder, the murder of police officer, police constable, prison guard or warden acting in the course of their duties, or murder committed during the commission of another criminal act. This type was punishable by death. All other types of murder were defined as non-capital, and were punished by mandatory life imprisonment. In 1967 the criminal code section dealing with murder was again amended with the amendment effective for a five-year trial period. The effect was to restrict the definition of capital murder to the killing of a law enforcement officer or a member of the staff of a correctional institution acting in the course of their duties. This type of murder, defined

as capital murder, was left punishable by death. All other murder, called non-capital murder, was made punishable by life imprisonment.

Infanticide is the wilful killing, through omission or commission of an act, of her newly-born child by a female who, not having fully recovered from the effects of childbirth or of lactation consequent on the birth of the child, was in a disturbed state of mind (47, Section 204). Culpable homicide exclusive of infanticide is often referred to as criminal homicide. Culpable homicide that is neither murder nor infanticide is manslaughter (47, Section 204). Here, too, the law recognizes two forms - negligent manslaughter and non-negligent manslaughter. Negligent (or involuntary) manslaughter is unintentional killing, usually during the commission of some criminal act other than a felony or through negligence during an act that is otherwise non-criminal. Non-negligent (or voluntary) manslaughter, on the other hand, is a killing that occurs with the presence of intent to do bodily harm.

b) Homicide Statistics

Statistics relating to homicide have been collected in Canada since Confederation. They are included, as in many other countries, in court statistics, vital statistics, and police statistics. Homicides reported in the court statistics have been collected since 1870 (25, p. 27-28). They were collected first by the Department of Agriculture. In 1912, the Department of Trade and Commerce was entrusted with the job. The Dominion Bureau of Statistics (hereafter referred to as D.B.S.) took

over the responsibility in 1918. Information is plentiful, not only about the number of charges, acquittals, committals for trial and convictions, but also personal data covering such items as residence, occupation, conjugal status, education, age, use of alcohol, place of birth and religion. Court statistics, however, refer only to persons convicted of this offence. They are inadequate for providing a reasonably accurate record of the incidence of homicide, since they do not include unsolved murders, or cases where the suspected murderer never comes to trial due to lack of sufficient evidence, suicide or mental incapacity (45, p. 9).

Homicidal deaths have been reported in the Vital Statistics of Canada since 1921. D.B.S. has reported these statistics since then for all the provinces except Quebec which joined the programme in 1926. From 1921 to 1944 death statistics were based on the place-of-occurrence, but this practice was changed to a place-of-residence basis in 1944. In addition, arrangements were made with the United States to ascertain the number of Canadians killed in that country. The data, therefore, excludes Americans killed in Canada and includes Canadians killed in the United States. Homicide in these statistics also includes murder, infanticide, homicide due to the intervention of police, and legal execution (25, p. 27-28) but excludes cases where death resulted from negligence and more particularly from motor accidents (45, p. 9). Vital statistics is the most inclusive existing record of homicides and is based on provincial death registrations where the cause of death is reported in the coroner's

report. It has been noted that the recorded cause of death frequently occurs before the real cause of death is determined (45).

Crime statistics reported by police are considered to be more reliable than any other source as far as the incidence of an offense is concerned (45, p. 9; 54, p. 74). Unfortunately, homicide statistics reported by the police are not available prior to 1951 (45, p. 9-10) and even after 1951, when the D.B.S. undertook the task of publishing homicides known to the police, the statistics over the next ten-year period are marked by wide variations in the reporting practices followed by various police departments across the country (25, p. 28). Since 1961, however, all police forces in Canada have adopted an uniform crime reporting system, prepared by the D.B.S. whereby special homicide forms are filled by the police (25, p. 28).

c) Criticism of Crime Statistics

"The statistics about crime and delinquency are considered to be most unreliable and most difficult of all social statistics....It is impossible to determine with accuracy the amount of crime in any particular jurisdiction at any particular time" (55, p. 25). This is because a large proportion of all law violations go undetected, other crimes are detected but not reported, and still others are reported but not officially recorded. Furthermore, the changes in law leads to changes in the definition of crime and/or in reporting practices which makes it difficult to compare crime rates from time to time not only with other jurisdictions but also within the same jurisdiction (55, p. 25).

Conceding the existence of difficulties in the compilation of statistics and other factors which may influence such compilation, Avison (2) contends that one can use criminal statistics in support of propositions or arguments "which throw much needed light on the fundamental structure of society." Quinney (51, p. 121-122) regards criminal statistics as indicators of the socially recognized volume of crime. As pointed out earlier, crime statistics that are reported by the police are considered more reliable than other criminal statistics, and hence these statistics will be used in this study as a measure of the incidence of criminal homicide in Canada.

d) Choice of a Proper Base

Criminological studies involving either temporal or spatial comparisons must necessarily use rates to minimize the effect of population differences and changes. The rate used in these studies is usually computed with the total population as base and expressed in terms of per 100,000 population. As a rate carries a probability connotation, it has been contended that the proper base for computation of homicide rates is not the total population but the population capable of committing homicide (43, p. 108-113). Jayewardene has shown that the population committing homicide most often is between the ages of 10 and 60 years i.e., those who are neither legally incapable of committing the act nor physically unlikely to do so. He has also shown that though this be the case, no significant error is introduced by the use of the one or the other in temporal studies as the total population bears a close relationship to the population capable of committing homicide over a long period of time.

In the present study, a comparison between the homicide rates using both the total population and the 10 to 60 years age group as a base was made for the period of 1951-1968 in Canada. Table 1 presents the criminal homicide rates for the two groups and Figure 1 graphically depicts the relationship between the two rates. A product moment correlation of .94 was significant at the 1% level. (Hereafter, unless otherwise specified, all correlation coefficients are Pearson's product moment coefficients.) The variance shared by the two rates was 88%, indicating a high association between the two. This confirmed Jayewardene's finding that it matters little whether one uses the total population or the population capable of committing homicide as the base in the computation of homicide rates.

2. Explanation of Homicide

a) Patterns in Homicide

Homicide is thought to be largely an unplanned act based on emotion and committed on the spur of the moment (48, p. 22; 52, p. 266). Yet, studies indicate that certain uniformities and common patterns in homicidal behaviour do exist. The major patterns are (3, 30, 56, 60, 62):

a) It is predominantly a male phenomenon, involving as offenders, young persons between 20 and 30 years of age, and as victims, persons usually slightly older than their assailants.

b) It is concentrated in certain areas of a city or state inhabited by that segment of the total population sharing the lower socio-

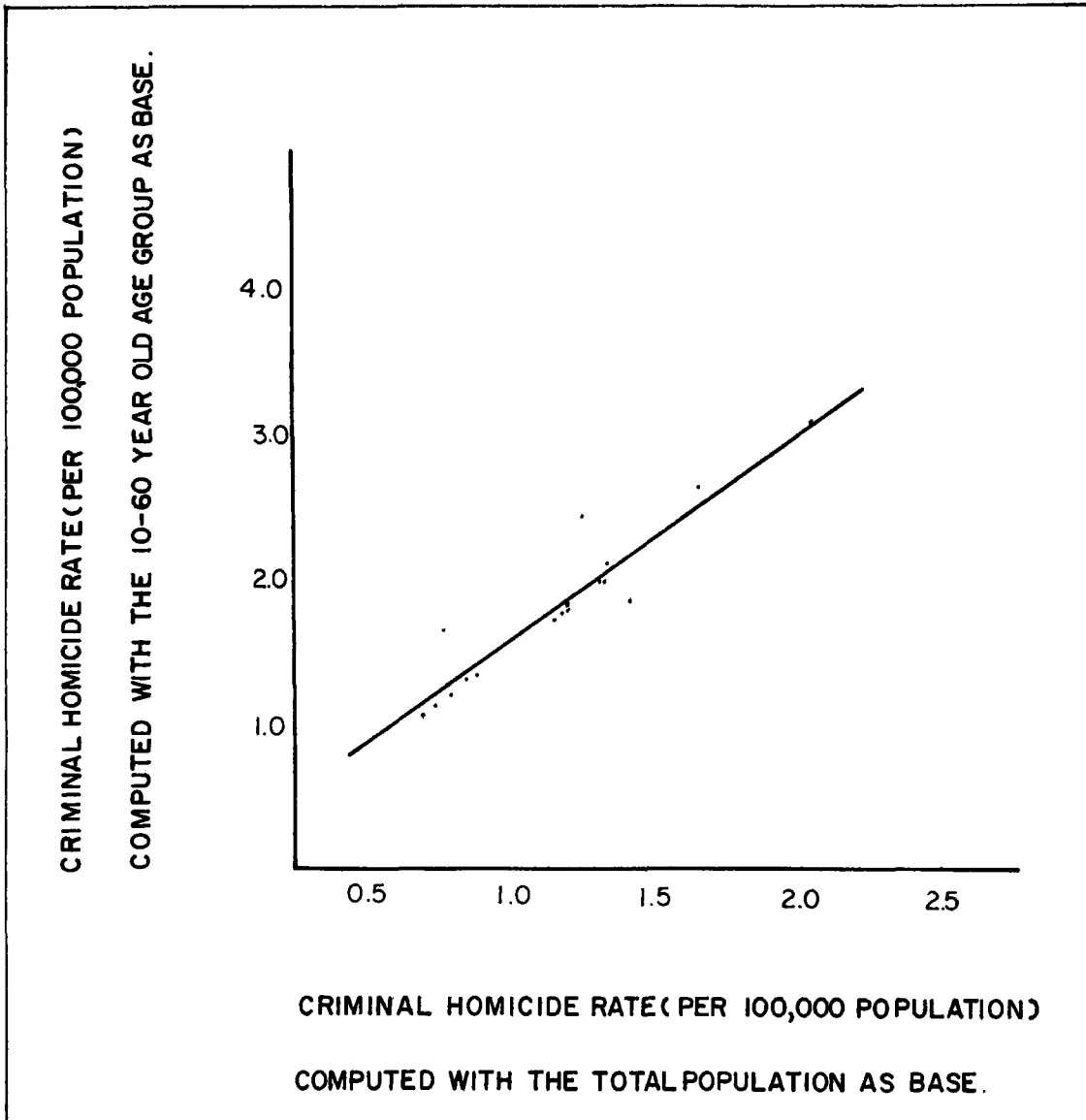
Table 1 - Criminal Homicide Rates¹ in Canada Computed with the Total Population and the 10-60 Year Old Age Group as Base, 1951-1970.

Year	Rate ²	Rate ³
1951	2.04	3.07
1952	1.18	1.78
1953	1.19	1.80
1954	1.14	1.73
1955	0.76	1.66
1956	0.79	1.21
1957	0.85	1.31
1958	0.74	1.13
1959	0.70	1.07
1960	0.88	1.34
1961	1.19	1.82
1962	1.62	2.46
1963	1.31	2.00
1964	1.32	1.99
1965	1.32	2.13
1966	1.42	1.86
1967	1.24	2.46
1968	1.65	2.66
1969	1.80	N.A. } ⁴
1970	2.18	N.A. }

1. Figures are rates per 100,000 population.
2. Rates computed with the total population as the base.
3. Rates computed with the 10-60 year old age group as the base.
4. Not Available in 1972.

Source (6-22,24,26-27).

Figure 1 - Scatter Diagram. Criminal Homicide Rates in Canada computed with the Total Population and the 10-60 Year Old Age Group as Base, 1951-1968 (data drawn from Table 1)



Regression Equation $Y = 0.17 \pm 1.4X$.
 Coefficient of Correlation = .94.
 Significant at the 1% level.

economic background.

c) It is mostly an intra-group phenomenon whether the grouping is according to race, ethnic origin, class, caste, or religion.

d) It occurs more frequently on weekends, and during the hotter periods of the year.

In Canada, no studies pertaining to patterns in homicide have been found. Inspection of the available data, however, suggests that patterns "a" and "d" hold true in Canada (25).

b) Genesis of Homicide

Explanations of homicide vary from unconscious motives within to the inordinate weather conditions from without. The organization of the short review below follows that of Jayewardene (43).

Murderers have been thought to possess peculiar anatomical and physical characteristics. They are born like this and constitute a special species (34, p. 130; 42, p. 130; 46, p. 130). They have been thought to lack the sentiments of benevolence, altruism, pity and empathy (38, p.131) and are said to be hostile and rebellious against authority (31, p. 215; 32, p. 215). When they are considered a special species, they have been regarded as constituting a group with peculiar psychogenic makeup (1, 40, p. 131; 61). When their psychogenic makeup was not considered peculiar, they have been thought to belong to a group with special traditions and cultural patterns that promote the commission of homicide. Thus, the cultural habit of carrying a knife in France was associated with high incidence of homicide in that country in the nineteenth century (57,

p. 132). Even when these tribal (local) characteristics were no longer thought to be reflected in the statistics of crime against life, their effect on these criminality figures was considered obvious (58, p. 113). More recently, Gastil (39) has contended that differences in the cultural traditions could account for variations in the homicide rates between the southern and northern states of the U.S.A.

The mechanism involved in endowing cultural elements with homicide generating character has been variously identified. Henry and Short (41), and to some extent Palmer (48) have used the elements of Dollard et al.'s (29) frustration-aggression theory and explained homicide as an expression of aggression arising out of frustration. Henry and Short note that homicide is predominantly a lower class phenomenon and hypothesize that homicide rates rise during periods of economic prosperity. They reason that status deprivation relative to higher status groups is at its peak during periods of prosperity and that it is this relative deprivation which generates the frustration, which is often reduced by other oriented aggression. Empirical data in the form of published statistics generally support this hypothesis. Wood (64) conducted a similar test of the frustration-aggression hypothesis in Ceylon and obtained some support for it. Closely associated with the frustration-aggression theory is Erich Fromm's (37) hypothesis that aggression may extend to the point of violence and destructiveness, as a response to or a means of coping with boredom.

Basing their contention on the finding that homicide occurs mostly in certain social and age groups, Wolfgang and Ferracuti (63, pp. 150-163), believe homicide and violence are essentially a subcultural phenomenon, the natural outcome of behaviour dictated by a system of norms and values where physical aggression is not only socially approved but is also the expected response to certain stimuli. Such a subculture, they say, exists mainly in the lower socio-economic strata of society from which murderers come. These are, therefore, people who have internalized the values of the subculture of violence. This view, as Wolfgang and Ferracuti point out, does not explain all homicides and violence but only a certain type which they call subcultural violence.

Jayewardene's criticism of the subcultural explanation of crime has been noted in Chapter 1. Jayewardene (43), Jayewardene and Ranasinghe (44) have used culture conflict framework to explain criminal homicide. Proceeding from the interpretation of culture conflict as the difference in the way an individual has learned to behave and the way in which society expects him to behave, Jayewardene attempted to construct a conflict index which would measure the overall conflict in a society at a given time. He conceptualized culture in terms of value systems and postulated the existence of three such systems: personal, social and legal. With the aid of these three systems, he contended, explanations could be provided, first for the extent of homicide in any society, and second, for the behaviour of the particular offender. Jayewardene also introduced the

concept of normative power of the value which defines the norms dictated by the value and the frequency with which behaviour dictated by these norms is displayed.

The legal value system was conceived as the value system of the politically dominant group, and the societal value system as that of the society as a whole. The difference in the normative power of the value of human life between these two systems may lead to different perceptions, interpretations and expectations in a given situation. Thus, culture conflict may lead to action which the politically dominant group has defined as criminal homicide.

Frank (35, p. 16) claims that if one disregards the question of the highly complex issue of "simplicity", agreement with observation, and the fitness of the theory to be generalized to allow prediction of more observable facts, are the two most important reasons for the acceptance of any given scientific theory. To various degree, each of the theories mentioned above suffer from the difficulty of operationalizing its concepts, and finding appropriate design that would allow the testing of the hypothesis or hypotheses derived from it. With these methodological problems in mind, one can safely say that the available empirical support for each theory is equivocal.

Because of the ubiquitous nature of the concept of culture (see, for example, pp. 5-6), one can argue that suggested explanations which make use of the notion of culture are more comprehensive, more general, more widely applicable than the other theories in terms of

potential relevance to a larger number of individuals and situations. Of the two culture focussed theories considered, the subcultural theory only purported to account for violence among members of the lower socio-economic class, while the culture conflict theory was applicable to all crimes and all of the population. The latter appears to be potentially superior with respect to generality.

3. Applicability of Culture-Conflict Theory in Canada

Canada's population is almost entirely of European origin and is the product of three and one-half centuries of sporadic immigration and persistently high rates of natural increase (36). One of the important characteristics of the Canadian social structure is its ethnic heterogeneity. The two oldest ethnic groups, the French and the British, are still the largest, but the continued flow of immigrants has decreased the British representation. By family origins (i.e., by original habitat on the father's side) 43.8 percent of the population of Canada were of British origin and 30.4 percent of French origin in 1961 (the latest census for which data were available). For the statistical data on the ethnic, religious and linguistic composition of the Canadian population the reader is referred to Porter's book (50).

In their study of Canadian society, sociologists have varyingly described it as a "Canadian Mosaic" or "Vertical Mosaic" (49). Canadian society is not only characterized by ethnic differentiation but also by the constant flow of immigrants from other countries. The process of

assimilation into the Canadian society, as in other such societies, is relatively slow and is dependent upon many factors such as language, education, communication, contacts outside one's immediate ethnic group, and the attitudes of the receiving community (4). Vallee and his associates (58) have found that in Canada ethnic groups tend to maintain their differences in certain spheres while becoming alike in others, such as political participation and language. The process of assimilation is affected by language; those who do not know one of the two official Canadian languages are handicapped in making contacts outside their ethnic group (5).

In view of the fact that Canadian society is heterogenous and characterized by continuous flow of immigrants, the culture conflict theory appears appropriate in explaining the incidence of criminal homicide in Canada.

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CHAPTER III

THE MEASUREMENT OF CULTURE CONFLICT

1. Estimates of Culture Conflict

The review of empirical studies in Chapter 1 describes how the culture conflict theory can be used to explain the differential crime rate of specific groups in relation to each other or to society as a whole and also by observing the variability of criminality over time by relating it to the variability of the culture conflict generating factors. Considering the means rather than the subjects, whereby the required information was obtained, these studies can be grouped into two broad categories, with some like Ribordy's (32) falling into both at the same time:

i) Techniques developed especially for the study. Clinard (25) for example, in his study of the relationship of urbanism to criminality designed a questionnaire to measure urbanity. This contained items such as the offender's self-concept, the nature of his community contacts, physical mobility, participation in public affairs and his social relations in the community.

ii) Techniques not specifically developed for the study. Here two subcategories can be differentiated:

a) tests and structured interviews; Shoham and his associates (36), for instance, in Israel administered a number of objectively scorable questionnaires used in earlier researches in a variety of contexts to a group of delinquents and non-delinquents, controlling for such criminogenic factors as length of residence in the country,

country of immigration, year of immigration, and socio-economic status. Content analysis, by the authors of the approximately 50 items which differentiated between the two groups indicated that these items could readily be interpreted within the cultural framework of reference.

b) Published statistics: Jayewardene (30) is a major representative of this approach. It will be recalled from Chapters one and two that he conceived culture conflict as the discrepancy between the societal and legal value systems. Focusing on the value of human life he measured its normative power by infant mortality in the societal value system and governmental per capita expenditure on health in the legal value system. The magnitude of the discrepancy between these two related measures at a given time was taken as an estimate of prevailing culture conflict at that time. The choice of his measures, used in the conflict index, was justified by rational and empirical arguments. These are discussed in detail in the following section.

2. Applicability of Jayewardene's Conflict Index to Canadian Data

The infant mortality rate, Jayewardene contends, is a measure of the value of human life in the societal value system. This is because the preservation of the life of the infant, especially during the first year of life, depends mainly upon the attitudes of adults in society. The infant during this period is more susceptible to disease and its fatal consequences; he is also incapable of verbalizing. It is up to the adults to care for the child and pay the necessary attention, for the child's very survival

depends upon it. Though improvements in medical knowledge have helped to reduce infant mortality, they are not in themselves sufficient to account for the reduction of the frequency of death. The individual should not only be aware of the availability of health services but must also be willing to use them. It is for this reason that Musson (31), referring to fact that Eskimos have the highest rate of infant mortality in Canada, concurs with Jayewardene's view that infant mortality reflects the societal concern for the value of human life.

To replicate Jayewardene's work, it was necessary to establish the existence of the predicted relationship between indices of the value of human life before one could use the difference between the two indices, infant mortality rate and governmental per capita expenditure as estimates of culture conflict. Following Jayewardene's example, the infant mortality rate was correlated with homicide rates. These rates, from 1951-1967, are presented in Table 2 and Figure 2. The resulting coefficient of $-.74$ was significant at the 1% level, but its sign was contrary to what was expected. Consequently, infant mortality rate could not be used as a measure of the normative power of the value of human life in Canada.

The failure to produce results similar to those which Jayewardene obtained in Ceylon and Finland, does not appear to be a peculiarity of the Canadian data. The infant mortality rate and homicide rate for the United States, England and Wales, and Australia for the period of 1955-1967 were also correlated. Tables 3, 4 and 5 present the infant mortality rate and homicide rate for each of these countries and Figures 3, 4 and 5 depict

Table 2 - Infant Mortality and Homicide Rates in Canada, 1951-1967.

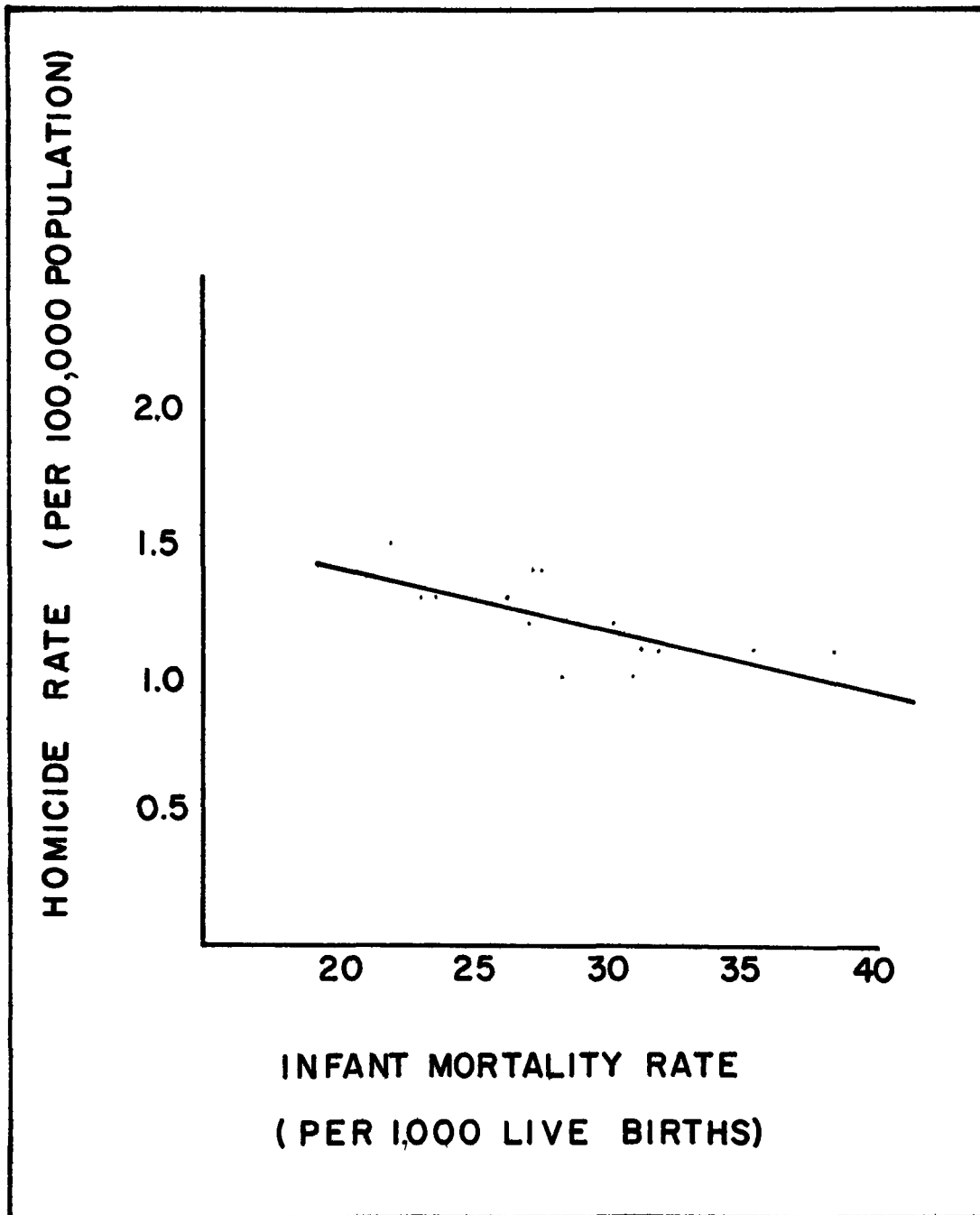
Year	Infant Mortality Rate ¹	Homicide Rate ²
1951	38.5	1.1
1952	38.2	1.0
1953	35.6	1.1
1954	31.9	1.1
1955	31.3	1.1
1956	31.9	1.1
1957	30.9	1.0
1958	30.2	1.2
1959	28.4	1.0
1960	27.3	1.4
1961	27.2	1.2
1962	27.6	1.4
1963	26.3	1.3
1964	24.7	1.3
1965	23.6	1.3
1966	23.1	1.3
1967	22.0	1.5

1. Per 1,000 live births.

2. Per 100,000 population.

Source: (5-13, 15-22).

Figure 2. Scatter Diagram. Infant Mortality and Homicide Rates in Canada, 1951-1967 (data drawn from Table 2)



Regression Equation $Y = 1.9 - 0.02 X$.
Coefficient of Correlation = $.74$.
Significant at the 1% level.

Table 3 - Infant Mortality and Homicide Rates in the United States of America, 1955-1967.

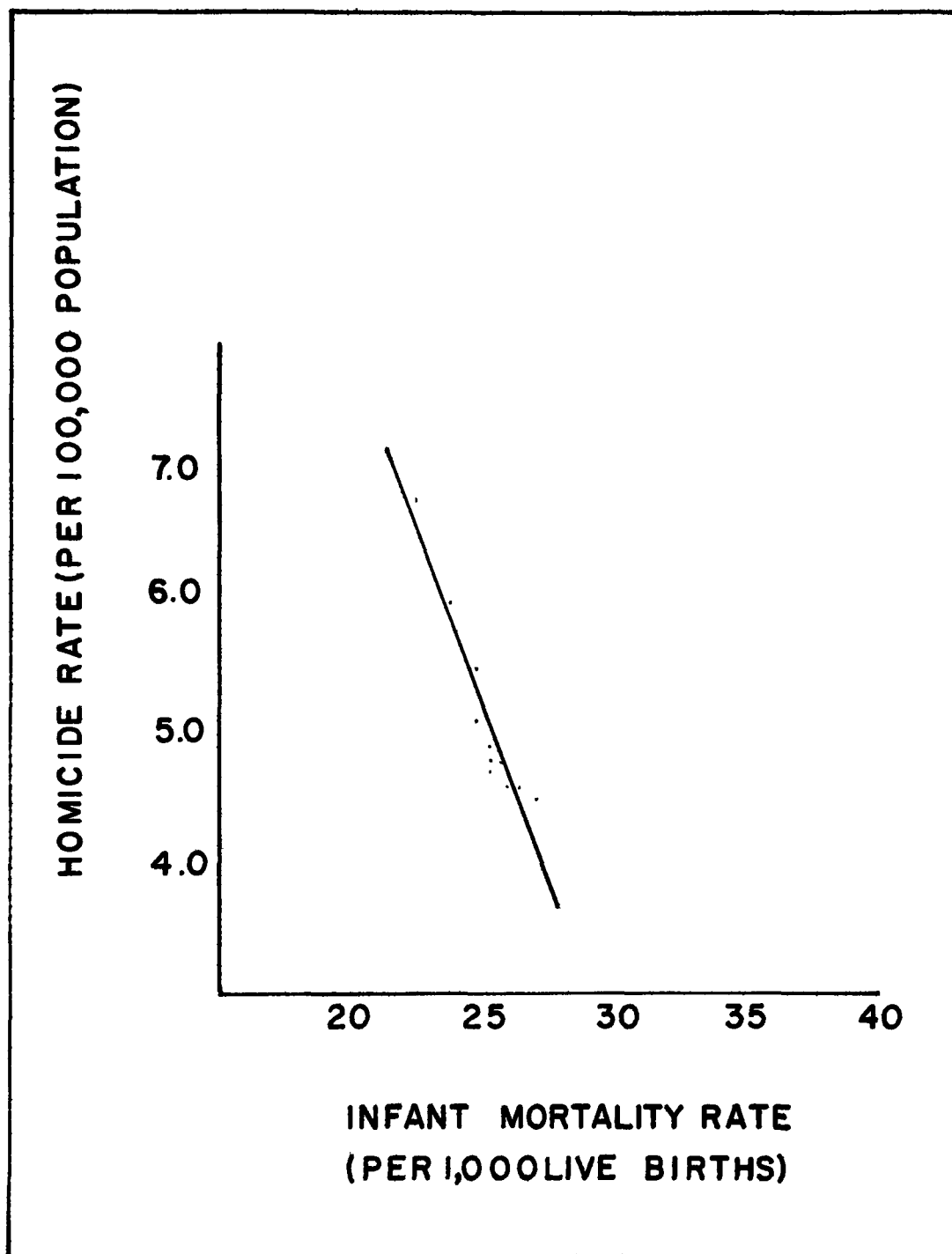
Year	Infant Mortality Rate ¹	Homicide Rate ²
1955	26.4	4.5
1956	26.0	4.6
1957	26.4	4.5
1958	27.1	4.5
1959	26.4	4.6
1960	26.0	4.7
1961	25.3	4.7
1962	25.3	4.8
1963	25.2	4.9
1964	24.8	5.1
1965	24.7	5.5
1966	23.7	6.0
1967	22.4	6.8

1. Per 1,000 live births.

2. Per 100,000 population.

Source: (37-41).

Figure 3. Scatter Diagram. Infant Mortality and Homicide Rates in United States of America, 1955-1967 (data drawn from Table 3)



Regression Equation $Y = 18.0 - 0.52 X$.
Coefficient of Correlation - $-.95$.
Significant at the 1% level.

Table 4 - Infant Mortality and Homicide Rates in England and Wales, 1955-1967.

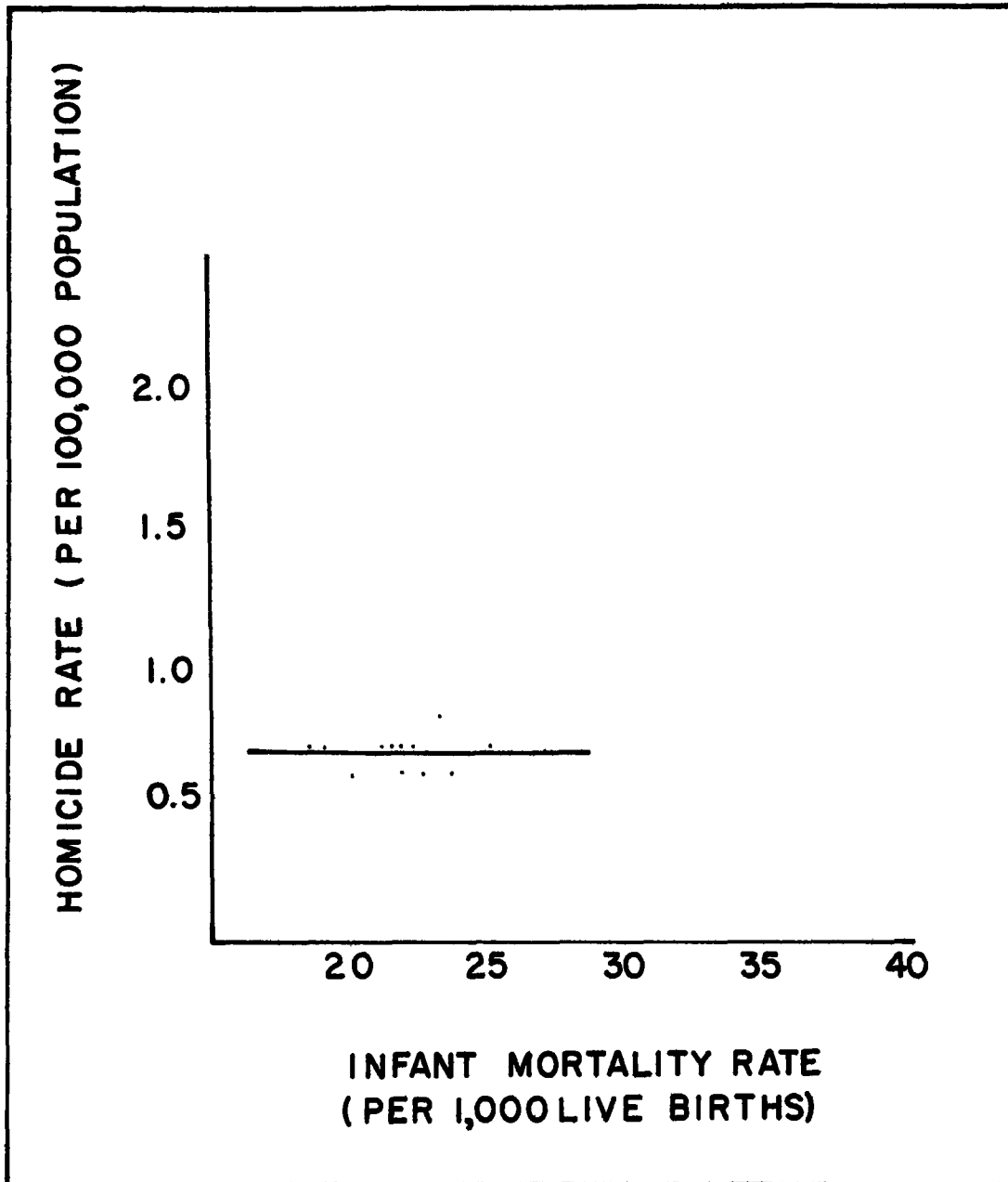
Year	Infant Mortality Rate ¹	Homicide Rate ²
1955	24.9	0.5
1956	23.6	0.6
1957	23.1	0.8
1958	22.5	0.6
1959	22.2	0.7
1960	21.8	0.6
1961	21.4	0.7
1962	21.7	0.7
1963	21.1	0.7
1964	19.9	0.7
1965	19.0	0.7
1966	19.0	0.7
1967	18.5	0.7

1. per 1,000 live births.

2. per 100,000 population.

Source: (37-4)].

Figure 4. Scatter Diagram. Infant Mortality and Homicide Rates in England and Wales, 1955-1965 (data drawn from Table 4)



Regression Equation $Y = 0.70 - 0.001X$.
Coefficient of Correlation - -.03.
Not Significant.

Table 5 - Infant Mortality and Homicide Rates in Australia, 1955-1967.

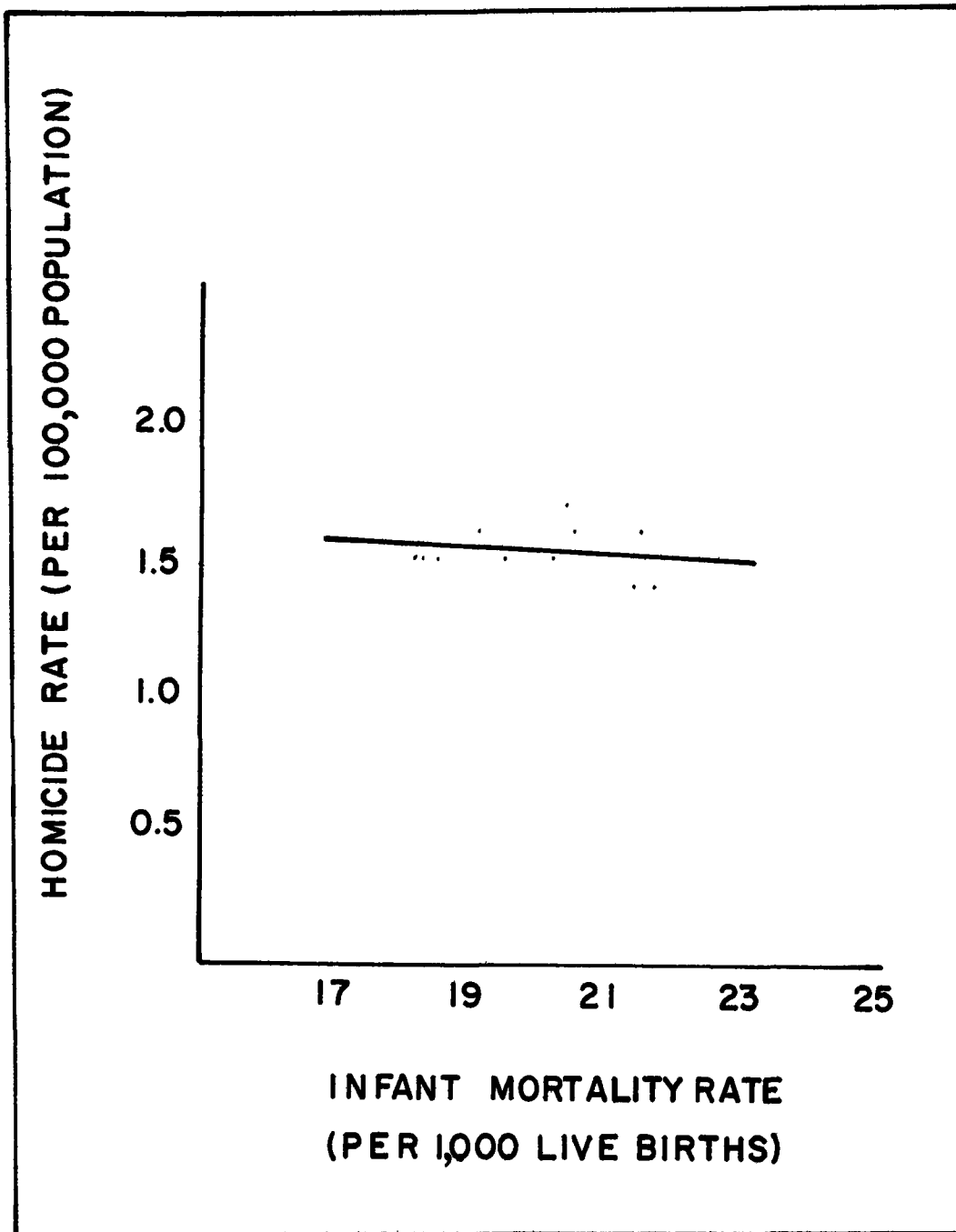
Year	Infant Mortality Rate ¹	Homicide Rate ²
1955	22.0	1.5
1956	21.7	1.4
1957	21.4	1.4
1958	20.5	1.6
1959	21.5	1.6
1960	20.2	1.5
1961	19.5	1.5
1962	20.4	1.7
1963	19.5	1.5
1964	19.1	1.6
1965	18.5	1.5
1966	18.2	1.5
1967	18.3	1.5

1. per 1,000 live births.

2. per 100,000 population.

Source: (37-41).

Figure 5. Scatter Diagram. Infant Mortality and Homicide Rates in Australia, 1955-1967 (data drawn from Table 5)



Regression Equation $Y = 1.7 - 0.01X$.
Coefficient of Correlation = $-.10$.
Not Significant.

them graphically. Negative correlations - United States (-0.95; $p < .01$), England and Wales (-0.03; N.S.), Australia (-0.10; N.S.) - were found in all these countries. These findings suggest that the value of human life is not reflected in the infant mortality rate in the same way that it is in the homicide rate in these countries, and that the infant mortality rate should not be used as a measure of that normative power.

One possible explanation for the difference between Canada, United States, England and Wales, and Australia, on the one hand, and Ceylon and Finland, on the other, is the time period studied. Jayewardene dealt with the time period 1931-1955, whereas the data for Canada is for 1951-1967, and for United States, England and Wales and Australia 1955-1967. Infant mortality can be divided into two components, one that can be controlled (exogenous) by human beings and the other which cannot, (endogenous) (3). One can argue that in countries where the infant mortality rate is high, the exogenous component is larger, and the infant mortality consequently reflects value oriented behaviour. In countries where the infant mortality rate is low, the exogenous component is low and the infant mortality may not sufficiently reflect value oriented behaviour. It is possible that during the time period studied by Jayewardene the exogenous component in infant mortality rate was higher. Increased exposure to the mass media, as well as improvements in transportation facilities might have resulted in a change of the "level" of awareness among the people regarding the possibility of doing something about decreasing infant mortality. Consequently, the infant mortality rate may

no longer be an appropriate indicator of the societal value of human life in countries where technological advancement has occurred.

Governmental per capita expenditure on health, Jayewardene contends, is a measure of the value of human life in the legal value system. It reflects the attitude and concern of the politically dominant group in a society for the value of human life. It is an effort on the part of this group to devote its resources to this particular value. The politically dominant group controls the machinery of the state and has the power to promulgate or delete laws such as capital punishment. It can also commute death sentences and forbid the police to use lethal weapons. This group's concern for the value of human life is also reflected in the number of justifiable homicides that occur in society. Justifiable homicides such as executions and the killing of escaping prisoners, are homicides that have the tacit approval of the politically dominant group.

Jayewardene postulated that if these indices - governmental per capita expenditure on health and justifiable homicide (which he terms as institutionalized homicide) - are an expression of the value of human life of the politically dominant group there should be a negative correlation between these two indices. This he did find, thus validating the governmental per capita expenditure on health as an index of the value of human life for the politically dominant group.

The amount the government of Canada spends on health services cannot be discerned from the available published data since this ex-

penditure is not separated from expenditure on welfare. Welfare expenditure, as Howard (29, p. 61) points out, is concerned with the value of human life for it is intended to promote the well-being of human beings in society. Since welfare expenditure also reflects concern for the value of human life, in the present study the combined sum of per capita expenditure on health and social welfare was used. Table 6 presents the institutionalized homicide rate and governmental per capita expenditure on health and welfare in Canada from 1951-1969. There is a significant negative correlation between these two indices ($r = -0.79$; $p. < .01$) indicating that expenditure on health and welfare is an appropriate measure of the normative power of the values of human life in the legal value system.

3. Cultural Integration

As discussed in Chapter 1, the concept of culture conflict refers to the lack of congruence among different values, and norms in society. It also implies that the greater the difference in cultural values and norms (or heterogeneity) the higher the incidence of crime in a society. An alternate method for measuring culture conflict is to measure cultural integration, i.e. the sharing of common values, beliefs and interests (42, p. 582). The measurement of one phenomenon implies the measurement of the other in an inverse manner.

(Societies where there is a complete cultural integration or consensus in values, beliefs and interests do not exist in reality. Society

Table 6 - Governmental Per Capita Expenditure on Health and Social Welfare and Institutionalized Homicide Rates in Canada, 1951-1969.

Year	Expenditure ¹	Institutionalized Homicide Rate ²
1951	81.13	0.0785
1952	87.97	0.0691
1953	106.98	0.0673
1954	112.74	0.0719
1955	122.31	0.0382
1956	121.50	0.0311
1957	124.59	0.0180
1958	146.89	0.0175
1959	165.22	0.0171
1960	173.35	0.0111
1961	187.90	0.0054
1962	200.90	0.0107
1963	208.39	0.0000
1964	213.48	0.0000
1965	229.35	0.0000
1966	239.04	0.0000
1967	267.08	0.0000
1968	313.90	0.0000
1969	350.46	0.0000

} 3

1. Governmental Per Capita Expenditure on Health and Social Welfare.
2. Number of executions per 100,000 population.
3. Personal communication, K.A. Holt, Assistant Director, Judicial Section, Statistics Canada.

Source: (14, 23, 24, 27).

by definition implies heterogeneity as it consists of number of individuals, each having a distinct set of values, beliefs and norms. A certain degree of integration among these elements is required, however, for the functioning of the social system. The greater the integration the more homogenous is a society, and vice versa.)

4. Measurement of Cultural Integration

The measurement of cultural integration, like that of culture conflict, has been attempted in different ways. Most of the studies, however, have concentrated on specific groups, such as immigrants, deviants, and so on. Very few empirical studies on the integration of an entire society or community exist (2). Studies on the integration of specific groups are illustrated briefly with examples from recent Canadian studies, followed by a review of the two studies which used larger samples and published statistics as their source of data, and from which the two indices of cultural integration eventually employed in the present research were derived.

Grygier and Spencer (28, p. 19) using interviews, studied the integration of four immigrant groups - British, Germans, Hungarians and Italians - in Toronto. Two major hypotheses were tested. First, that the "integration of each ethnic group would differ in degree and emphasis, and that these differences would be related to differences in their economic, social and cultural backgrounds"; and second, that "integration would be higher when the differences between the home and the Canadian

environments were smaller". Both these hypotheses were supported. The British whose background was the most similar to the Canadian background were most integrated, followed by Germans. The least integrated were the Italians who were most dissimilar in terms of language, rural background, education, family structure, and other characteristics.

Byles (4) and Deschamps-Eric (26) studied the integration of deviants into Canadian society. By means of individual interviews, Byles investigated alienation-integration with respect to social institutions in a stratified sample of Toronto adolescents. His major conclusion was to caution against thinking of "alienated youth" as a distinct and homogenous entity since, a) each adolescent was alienated from at least one social institution; b) the pattern of alienation was different for boys and girls. Incarcerated delinquents were one of the eight subgroups studied and were found to be the most alienated group after the "hippies". Also, by means of interviews, Deschamps-Eric compared the integration of a group of Ottawa hippies into the "hippie" and "orthodox" societies. Contrary to her expectations, the majority of subjects were integrated into both. She suggested that the hypothesized differential integration was more likely to be found with "rural" than "urban" hippies.

Angell (1) examined the moral integration of American cities by which he meant the existence of a set of common ends (values) toward which all the citizens in a given community are positively oriented. One testable hypothesis implied by the construct of moral integration was the inverse

relationship between activities in support of and contrary to societal agreement on the importance of the welfare of its citizens. He saw any kind of welfare expenditures confirming, and any type of crime negating this agreement.

The hypothesis was tested on a sample of 43 American cities. A welfare effort index along which cities could be ranked in terms of their expenditures was constructed on the basis of published statistics which took into account both public and private funds spent on welfare. This measure supplied an index of "pro value" activity for each city. The "contra value" activity for each city was estimated by a crime index, a weighted composite measure made up of the murder, non-negligent manslaughter, robbery and burglary rates.

The statistically significant negative correlation obtained between the measures of welfare effort and crime confirmed Angell's hypothesis that the more the people of a city sacrifice their private interest for the sake of public interest, the less the crime there is in that city (1, italics added).

Similarly, he also tested a second hypothesis by a design similar to the above except that moral integration was the dependent variable. He operationalized it as an index made up of a combination of the crime and welfare indices referred to above, and correlated it with indices of population mobility, and heterogeneity. The latter measures were obtained from the demographic data. He obtained statistically significant negative

correlations between moral integration and heterogeneity and moral integration and mobility thus further validating the construct of moral integration.

Angell's welfare effort index, as pointed out above, represents values that promoted integration in a community. It has been said that in a democracy what a government usually does is what the people desire (33, p. 146). Samuelson and Scott (34, p. 170) point out that expenditures on welfare, which are enacted into law by people's representatives reflect the "collective conscience of the Canadian people." Therefore, it is herein contended that Angell's welfare effort index could be employed independently as an index of cultural integration in Canadian society. Since per capita expenditure on welfare was not available in Canada, governmental per capita expenditure on health and social welfare will be utilized.

The present study aimed to use Jayewardene's longitudinal approach to investigate the Canadian situation with respect to the culture conflict criminal homicide hypothesis. It has been suggested that since the notion of culture conflict is the inverse of the notion of cultural integration, an appropriate measure of cultural integration could be substituted for the measure of culture conflict. Angell's welfare effort index seem to be such a measure. The reader is reminded that, however, this measure thus differs from Angell's welfare index in the following ways:

a) the governmental per capita expenditure on health and social welfare is used in place of per capita expenditure on welfare;

b) Angell's index included both private and governmental expenditure, while this modified index only represents governmental expenditure;

c) Angell measured the integration of a number of American cities at one given period of time (late forties), whereas the present study makes repeated measurements for a country as whole over an extended period of time (1951-1969).

(Governmental per capita expenditure on health and social welfare involves a unit that does not remain constant over time since annually varying inflation rates affect it. The real expenditures were computed following Shao's (35, p. 505) method where variability in the Consumer Price Index is used to calculate inflationary effects. The correlations between the "real" and the actual expenditure indicated the interchangeability of the two indices ($r = 0.99$). Consequently the actual expenditures were used in all the calculations.)

Jayewardene (30, pp. 271-290) has studied the relationship of cultural integration to criminal homicide, in addition to culture conflict. He hypothesized that variations in the degree of cultural integration correlated negatively with changes in the incidence of criminal homicide. He devised an index estimating the cultural integration of a given territorial unit during a given period, and used changes in the size of the linguistic majority and the density of the population of the territory as the two components of the index. These two were seen as indices of

cultural heterogeneity at any given time. (Following Jayewardene's example, no attempt was made to empirically validate the components of the cultural integration index.) The positive correlation between the indices of cultural integration and decreasing criminal homicide trend lines both in the provinces of Ceylon and Finland supported his hypothesis.

The rationale underlying the construction of the cultural integration index was as follows: a) the sharing of meanings and values, that is, cultural integration, is promoted by interaction; b) interaction is furthered by communication; c) communication is facilitated by both the similarity of language and the spatial proximity of communicators; and d) both the linguistic similarity and spatial proximity contribute equally towards cultural integration.

The experimental hypothesis was tested in the following manner:

1) For each province, the indices of cultural integration were obtained by using the formula $\frac{a+b}{\sqrt{2}}$ where "a" refers to change in the size of the majority group according to language and "b" to change in the density of population. (The term "change" refers to the differences between the years 1931 and 1953 in Ceylon, and 1930 and 1950 in Finland.) The numerical values of these two indices were combined to obtain a single numeral - an index of cultural integration.

1. Cultural Integration = $a \cos 45^\circ + b \sin 45^\circ = \frac{a+b}{\sqrt{2}}$. See Appendix for more detailed description.

2) For each province, the term change in the incidence of criminal homicide referred to the slope of the linear regression of criminal homicide rates on time. The slope of this trend line indicates the changes during the same time periods in the criminal homicide rates.

3) The indices of cultural integration and changes in criminal homicide were correlated across the provinces in Ceylon and Finland respectively by the Spearman's rank order correlation technique.

The replication of this part of Jayewardene's study can, at present, be done for Canada with the following modification. Since in Canada appropriate demographic information appears only in the census data every decade, and criminal homicide statistics are only available since 1951, this measure could only be applied to the 1951-1961 period since data from the 1971 census are not yet available.

In the next chapter, Angell's and Jayewardene's modified indexes of cultural integration will be related to the incidence of criminal homicide in Canada and the results will be discussed.

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CHAPTER IV

PRESENTATION AND DISCUSSION OF RESULTS

Before presenting the findings, a short recapitulation is in order. This study initially purported to examine the culture conflict - criminal homicide relationship using Canadian data to replicate a part of Jayewardene's (21) study. In doing so, it was found that one component of his conflict index could not be empirically validated. A search for other indices of culture conflict was not successful.

It was indicated in Chapter 3 that the term culture conflict could be applied to the negative end of a cultural integration continuum. Focusing on integration, rather than its corollary conflict, two indices of cultural integration were found which, with some modifications, could be applied to the Canadian data. This allowed the testing of the cultural integration - criminal homicide hypothesis, thus establishing continuity with relevant earlier studies of cultural integration, culture conflict, and crime.

The testing of the general hypothesis was done through two sub-studies, Study A and Study B. These will be discussed separately. Recommendations for further research are followed by summary and conclusions.

1. Study A

The rationale for this project is that the greater the societal concern for the well-being of human beings, especially for the value of human life, the lower the incidence of behaviour deviating from these

values. The governmental per capita expenditure on health and social welfare reflects societal concern for the values of human life since in a democracy the government usually does what the people desire, and the criminal homicide rate represents the behaviour deviating from such values. The former promotes the integration of society, and the latter the opposite.

In this study, governmental per capita expenditure on health and social welfare, is used as an index of cultural integration. It is correlated with the criminal homicide rate to test the hypothesis, which stated in the null form, reads: There is no significant negative (linear) relationship between the governmental per capita expenditure on health and social welfare, and the incidence of criminal homicide. Governmental per capita expenditure refers to annual expenditure from 1951-1969, and the incidence of criminal homicide to the ~~annual~~ criminal homicide rate for the same period. The hypothesis was tested by correlating the two indices.

Governmental annual per capita expenditure on health and social welfare is presented in Table 6. These data were obtained from the Department of National Health and Welfare and the Canada Year Books. The indices of criminal homicide obtained from the crime statistics reported by the police and published by the D.B.S. are presented in Table 1 (p. 23).

2. Findings and Discussion

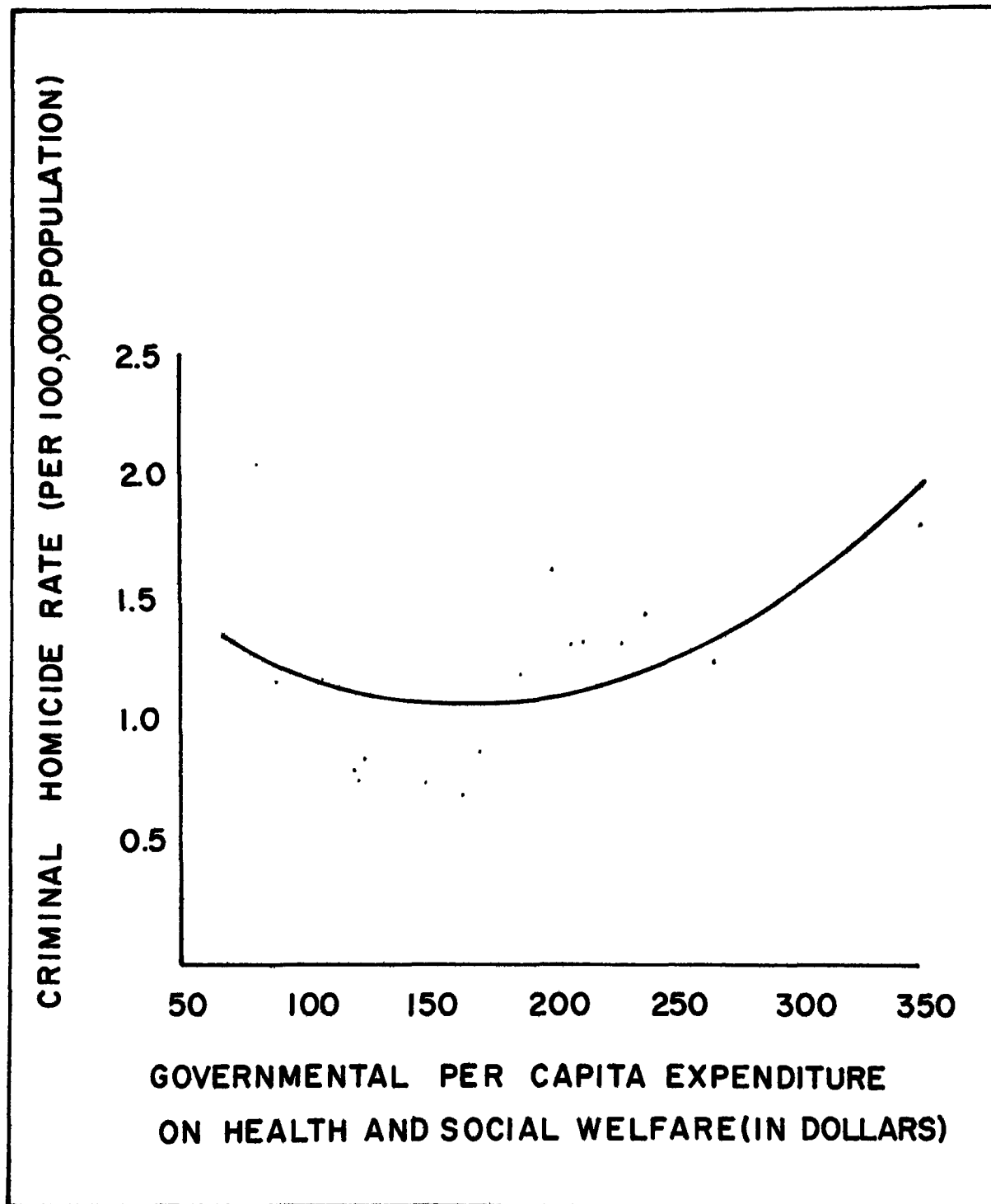
A positive correlation of 0.42 ($p < .05$, one tailed test) was found between governmental per capita expenditure on health and social

welfare and the criminal homicide rate but the null hypothesis could not be rejected, as the relationship was not in the expected direction. The scatter diagram (Figure 6) indicates the existence of a curvilinear relationship. The index of correlation was 0.60, suggesting that the curvilinear relationship represents the said relationship better than the linear relationship postulated (28, p. 584-585). The curvilinear regression equation between the two indices was $Y = 1.8 - 0.85 \left(\frac{X}{100}\right) + 0.26 \left(\frac{X}{100}\right)^2$

The non-linearity of the data indicated that for a while there was a positive relationship, and for the rest of the period a negative relationship. A negative relationship between the two indices existed for the nine-year period of 1951-1959 (when the Spearman's rank correlation coefficient was $\rho = -0.93$, $p. < .01$, one tailed test) and a positive relationship existed for the remaining ten years between 1960-1969 (where $\rho = 0.69$, $p. < .05$, one tailed test). (Note that the total 19 year period was divided into 9 and 10 year segments to maximize the value of these coefficients); Thus, while for the period of 1951-1959 the experimental hypothesis is upheld, it is not supported when the whole 1951-1969 period is considered.

Not being able to reject the null hypothesis, it is the duty of the researcher, say MacCorquodale and Meehl (24), to speculate about the reasons for this failure, and make helpful suggestions to other researchers interested in the topic. The following seven comments have been written with this idea in mind.

Figure 6. Scatter Diagram. Governmental Per Capita Expenditure on Health and Social Welfare and Criminal Homicide Rates in Canada, 1951-1969 (data drawn from Tables 1 and 6)



$$\text{Regression Equation } Y = 1.8 - 0.85 \frac{(X)}{100} + 0.26 \left(\frac{X}{100} \right)^2$$

Index of correlation = .60.

Not Significant.

1) Wolfgang and Ferracuti (35, p. 273) forewarn the investigator about the difficulties he is likely to encounter in the study of murder because of the variety of situations, motives and manner of execution that serve as the parameters of homicidal behaviour, its reporting and its recording. Jayewardene (21, p. 280-283) and Mannheim (25, p. 118-122) discuss the problems faced when making intra and intergroup comparisons of homicide rates. Smith (31) points out that in spite of its appearance of straightforwardness, the design of replication studies in the behavioural sciences is usually difficult and the interpretation of the results is quite complex. The results of Study A give force to these warnings.

2) It is clear that non-linear relationship between governmental expenditure and criminal homicide rates for the 19-year period was due to the cyclical variation in homicide rates since the increase has been virtually continuous in the governmental expenditure on health and social welfare. Criminal homicide rates have shown variations from year to year (Table 1, p. 23). In 1951, the criminal homicide rate was relatively high (2.04) but since that year it has fallen, reaching its lowest level in 1959 when the rate was (0.70). Homicide rates then began to increase with a temporary arrest of the trend in 1962 and 1967 - indicative of downward and upward limbs of the cyclical phenomenon. In view of the fact that cyclical variations in homicide rates have been observed in other countries (20, 21, p. 196; 32, pp. 140-142) and the constant rise in general expenditure on health and social welfare in Canada has been

explained by reference to the "conscience of a democratic society" (p.54, Chapter Three), thus the negative findings of Study A could not be said to have come as a surprise.

3) The results call into question the manner by which the independent variable was estimated, specifically the application of Angell's modified index of moral integration. Of the three modifications, governmental instead of private and public expenditure, health and welfare instead of welfare expenditure, and a time sequence design in place of a spatial one, the last seems to be most questionable since the "conscience of democratic society" explanation supports the first two modifications. Given the cyclical nature of homicide, and the persistently increasing expenditure on health and welfare, the relationship between the two would depend on the time and duration of the period examined, and no general linear relationship could be postulated.

4) It must be noted that while the design used here was suggested by Jayewardene's 1960 study, the results are not directly comparable to his results. Apart from the general difficulties encountered in comparative studies of this kind, two discrepancies stand out.

First, the present study only used one component (modified) of Jayewardene's conflict index the governmental per capita expenditure on health - which was his estimate of the value of human life in the legal value system. Justified by reference to a democratically elected government in Canada representing the will of the people, governmental expenditure on health and welfare was, at the same time, an estimate of

the normative power of the value of human life for both the legal and the societal value systems. To question the high concurrence of the legal and the societal values one neither has to evaluate the democratic qualities of the Ceylonese colonial government during the period examined by Jayewardene, nor debate the nature of the leader-follower relationship between a democratic government and the population. (For an example of the government bringing in an unpopular legislation, see Jayewardene (23).) However, the fact remains that the correlation of infant mortality rates and government per capita expenditure on health in Ceylon, and Finland were $-.83$ and $-.90$ respectively, leaving 31% and 19% of the variance unaccounted for. Thus while the measure of the legal and societal value systems were closely related, they were not fully interchangeable, and interchangeability one could say is implied by the emphasis on the representativeness of the government in Study A.

The second discrepancy between Jayewardene's and the present study is between the observed fluctuations of the independent variables. There are two reasons for this: a) Jayewardene's index has two sources of variations (the governmental expenditure and the infant mortality rates), while the present study has only one (governmental expenditure); b) in the twenty-five years studied by Jayewardene, there were five years both in Ceylon and Finland when there was a decrease in governmental expenditure from one year to another. There was only one such decrease during the 19 years studied in Canada. One could, consequently, argue that as used by Jayewardene governmental expenditure was a more sensitive

index of the different forces affecting the value of human life than the one in the present study.

5) When one inspects the Gross National Product (hereafter referred to as GNP) in constant dollars for the period of 1951-1969 one finds a constant annual increase (Table 7). If one equates the expanding economy with increasing prosperity, and considers criminal homicide as a generally lower class phenomenon (p. 22, Chapter Two), the present data allows one of Henry and Short's (20) U.S. findings to be tested in the present context. It will be recalled that they observed homicide rates to rise during economic prosperity and explained this in term of relative deprivation between lower and upper status groups. Though their sources of information for both prosperity and homicide differed from the present study, the correlation of .39 between per capita GNP and criminal homicide rates calculated here for the period of 1951-1969 was significant at the 5% level, one-tailed test. The scatter diagram (Figure 7) indicates that, just as in the case of governmental per capita expenditure on health and social welfare, a non-linear relationship exists between GNP and criminal homicide for this period.

6) Since criminal homicide is not a homogenous phenomenon and the relative proportion of various categories to each other changes from time to time (22), it seemed appropriate to examine the covariance of governmental expenditure and separate categories of homicide. Murder statistics for 1961-1970 (Table 8), were the only data available in which three categories of homicide were reported separately. The

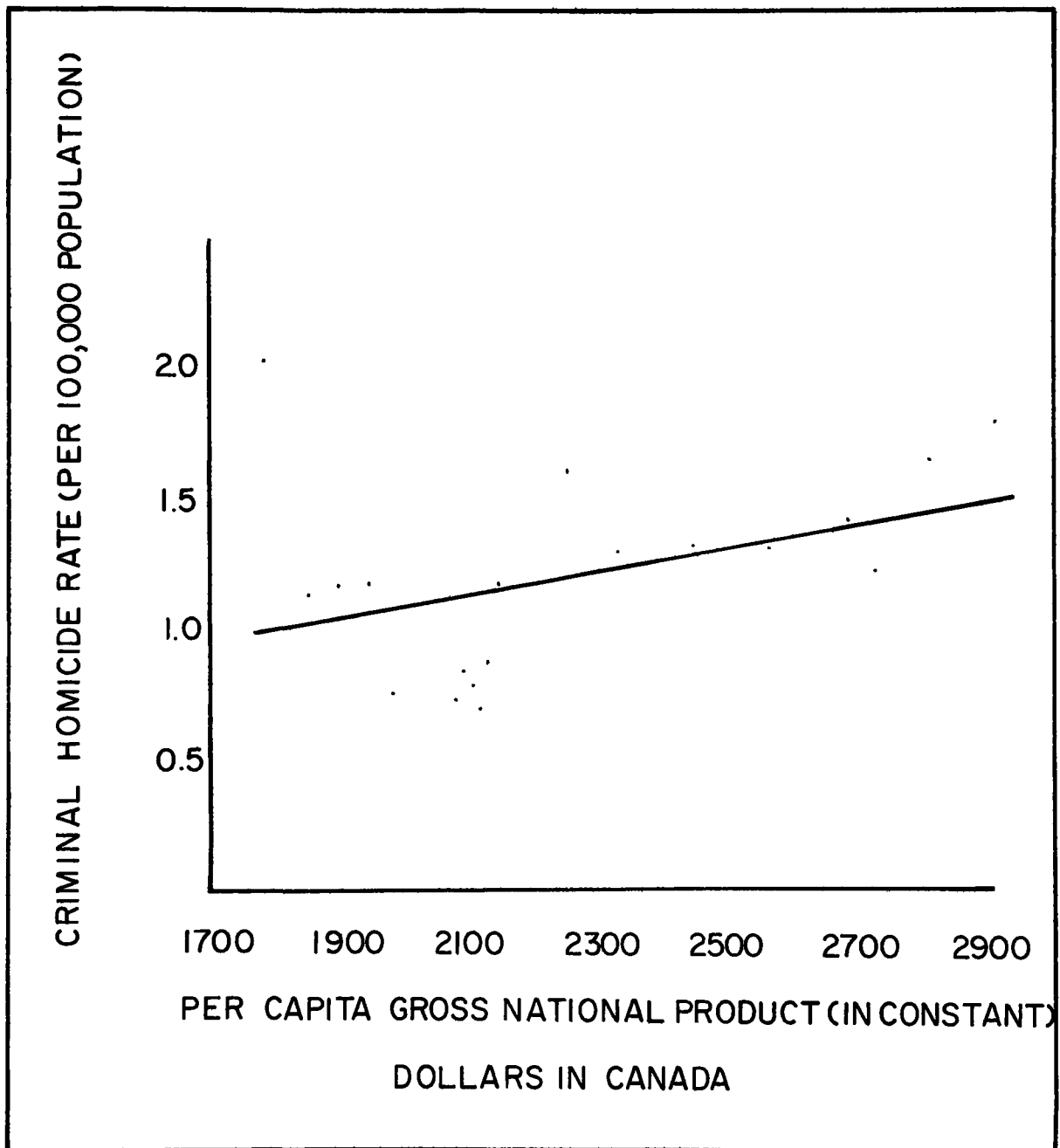
Table 7 - Per Capita Gross National Product in Constant¹ Dollars in
Canada, 1961-1969.

Year	Per Capita GNP in Constant (1961) Dollars.
1951	1784.85
1952	1894.87
1953	1944.22
1954	1850.13
1955	1979.81
1956	2100.61
1957	2089.70
1958	2076.23
1959	2112.28
1960	2126.15
1961	2142.78
1962	2249.76
1963	2328.32
1964	2446.06
1965	2562.41
1966	2680.49
1967	2720.75
1968	2807.80
1969	2903.37

1. 1961 = 100

Source: (19)

Figure 7. Scatter Diagram. Per Capita Gross National Product in Constant Dollars and Criminal Homicide Rates in Canada, 1951-1969 (data drawn from Tables 1 and 7)



$$\text{Regression Equation } Y = 0.25 + .43 \left(\frac{X}{1000} \right).$$

Significant at the 5% level.

Table 8 - Number of Murders, and Murder Rates¹ According to Types of Murder in Canada, 1961-1970.

Year	Domestic ²		Commission during Criminal Act ³		Other ⁴	
	Numbers	Rate	Numbers	Rate	Numbers	Rate
1961	87	0.48	28	0.15	58	0.32
1962	82	0.46	45	0.24	65	0.35
1963	82	0.43	37	0.20	74	0.39
1964	76	0.39	40	0.21	83	0.43
1965	83	0.42	32	0.16	100	0.51
1966	91	0.45	33	0.16	80	0.40
1967	94	0.46	23	0.11	121	0.59
1968	117	0.57	37	0.18	135	0.65
1969	120	0.57	40	0.19	155	0.74
1970	115	0.54	67	0.31	169	0.79

1. Per 100,000 population. The rates in various categories are based on the number of incidents in each category for a given year.
2. Murders in which the victim is a member of the immediate or extended family of the offender.
3. Murders committed during the commission of another crime.
4. All other murders.

Source: (13-18).

Spearman rank correlation for the nine-year period of 1961-1969 inclusive between Governmental per capita expenditure on health and social welfare and homicides "domestic", "during another criminal act", and "other" were 0.39; -0.20; and 0.95 respectively. Since a coefficient of 0.60 is required for significance at the 5% level (one-tailed), examining such a single and short period one is not justified to speak even of trends supporting the experimental hypothesis in the case of murder committed during the commission of another criminal act.

7) A currently popular reason for the rise of homicide rates is the increasing availability of guns, mostly unlicensed (29, 33). Commonsense argument that the sheer availability of guns is a stimulus for murder or, as Princess Sita observed in Ramayana, the ancient Indian epic of non violence: "The very bearing of weapons changeth the mind of those that carry them" (33, p. 68), is hard to refute because evidence for or against it is difficult to obtain. It would seem that, for the moment, we have to say that the forces generating and limiting the amplitude of homicide cycles remain unknown.

3. Study B

In Chapter Three it was stated that this study views cultural integration over time as a joint function of contact-communication between members of the community within a given area. Concern for the maintenance of human life is one of the central values of western society, and the greater the desire of agreement on these values i.e., the greater

the cultural integration, the less chance is there of criminal homicide, i.e., behaviour negating the value of human life. It is hypothesized that indices of cultural integration over a given period of time will be associated with negative changes in the incidence of homicide over the same period.

The size of the linguistic majority group according to either of the two official Canadian languages and the density of population per square mile for all the Canadian provinces for 1951 and 1961 were obtained from Canada Year Books (and are presented in Table 9). Both the size of the linguistic majority group in a province and the density of population - indicators of communication and contact respectively - were equally weighed in the construction of the index of cultural integration. The cultural integration from 1951-1961, was calculated for each province by procedures described in Chapter Three, Page 56. The change indices and the data required for their calculations are presented in Table 9.

For each province the slope of the lines indicating the linear trend for an eleven-year period was used as the index of the changing incidence of criminal homicide (Table 11). Criminal homicide rates for the provinces of Canada from 1951 to 1961 are presented in Table 10. Finally, the obtained indices of integration for the various provinces were arranged in rank order according to their magnitude and the hypothesis of no significant negative relationship was tested by the calculation of Spearman's rho between these two sets of indices.

Because the Canadian data were not entirely comparable with Ceylonese and Finnish data, Jayewardene's method for computing the slope of criminal homicide trend lines using log transformation for all the provinces could not be duplicated. This was due to the fact that in some provinces no homicide was reported for a number of years, and consequently no log transformation could be done for those years as log of zero is infinity. In order to overcome this problem a constant of two was added to all values of homicide rates and this permitted the calculation of trend lines.

4. Findings and Discussion

The correlation between changes in cultural integration and changes in the incidence of criminal homicide was not statistically significant. The obtained rho was $-.31$, when the minimum value required for significance at the 5% level was $-.56$ (one tailed test). Thus the null hypothesis could not be rejected, even though the relationship between the change indices was in the predicted direction.

Jayewardene and others were quoted earlier in this chapter about the difficulties in inter and intra country comparisons in Criminology. The fact that Study B undertook to replicate Jayewardene's work in a different country at a different period in time suggests, however, that firstly, the cultural integration - criminal homicide hypothesis is widely applicable, and secondly that information regarding the association between cultural integration and criminal homicide is

Table 9 - Measures of Cultural Heterogeneity and Cultural Integration
in the Canadian Provinces, 1951-1961.

Province	Cultural Heterogeneity ¹		Change	Index ² of Cultural Integration
	1951	1961		
1. Nfld.	(98.6)(2.53)	(98.5)(3.20)	(-0.1)(0.67)	0.40
2. P.E.I.	(90.2)(45.07)	(90.1)(47.91)	(-0.1)(2.84)	1.94
3. N.S.	(92.6)(31.50)	(92.9)(36.12)	(0.3)(4.62)	3.48
4. N.B.	(61.8)(18.53)	(62.0)(21.48)	(0.2)(2.95)	2.23
5. Que.	(62.5)(7.74)	(61.9)(10.04)	(-0.6)(2.30)	1.20
6. Ont.	(89.5)(13.36)	(89.0)(18.12)	(-0.5)(4.76)	3.01
7. Man.	(88.3)(3.53)	(89.6)(4.35)	(1.3)(0.82)	1.50
8. Sask.	(92.2)(3.78)	(93.6)(4.20)	(1.4)(0.42)	1.29
9. Alta.	(92.5)(3.78)	(94.1)(5.35)	(1.6)(1.57)	2.24
10. B.C.	(95.5)(3.24)	(95.3)(4.53)	(-0.2)(1.29)	0.77

1. The first component of the ordered pair that measures cultural heterogeneity is the size of the majority of the population according to language expressed as a percentage of the total population; the second component refers to the density of the population per square mile.

The language of the majority group in all provinces is English except in Quebec where it is French.

The measure of the cultural heterogeneity has been so constructed that the bigger each figure the smaller is the cultural heterogeneity.

2. For the computation of the Index, see p. 56.

Source: (4,12).

Table 10 - Criminal Homicide Rates in the Canadian Provinces, 1951-1961.

Year.	NFLD.	P.E.I.	N.S.	N.B.	QUE.	ONT.	MAN.	SASK.	ALTA.	B.C.
1951	2.77	2.04	4.04	2.32	0.86	1.84	3.22	0.60	4.25	3.94
1952	0.00	0.00	0.91	0.00	0.83	1.56	1.00	0.00	1.74	1.65
1953	0.26	0.00	1.05	0.37	0.98	1.15	0.74	0.23	1.52	3.44
1954	0.25	0.00	0.89	0.55	1.27	0.91	0.72	0.34	1.32	3.01
1955	0.00	1.00	0.58	0.18	0.79	0.70	0.59	0.45	0.73	1.78
1956	0.24	0.00	0.43	0.18	0.71	0.74	0.70	0.22	0.26	2.71
1957	0.00	0.00	0.85	0.00	0.56	0.85	0.58	0.22	0.51	3.23
1958	0.23	0.00	0.28	0.00	0.83	0.77	0.22	0.11	0.82	1.56
1959	0.00	0.00	0.41	0.34	0.95	0.61	0.89	0.22	0.64	0.95
1960	0.22	0.00	0.41	0.16	0.85	0.91	0.99	0.54	0.92	1.62
1961	0.21	0.95	0.67	0.50	0.58	1.45	1.84	1.72	1.35	2.02

1. Per 100,000 population.

Source: (2,3, 5-11).

NFLD.	Newfoundland	ONT.	Ontario
P.E.I.	Prince Edward Island	MAN.	Manitoba
N.S.	Nova Scotia	SASK.	Saskatchewan
N.B.	New Brunswick	ALTA.	Alberta
QUE.	Quebec	B.C.	British Columbia

(Hereafter only the abbreviations will be used in the tables).

Table 11 - Trend Line Equations for Criminal Homicide Rates¹ in the Canadian Provinces, 1951-1961².

Province	Trend Line Equations
1. NFLD.	$\text{Log } Y = 0.3598 - 0.0151 X.$
2. P.E.I.	$\text{Log } Y = 0.3601 - 0.0078 X.$
3. N.S.	$\text{Log } Y = 0.4537 - 0.0234 X.$
4. N.B.	$\text{Log } Y = 0.3726 - 0.0120 X.$
5. QUE.	$\text{Log } Y = 0.4519 - 0.0035 X.$
6. ONT.	$\text{Log } Y = 0.4802 - 0.0077 X.$
7. MAN.	$\text{Log } Y = 0.4719 - 0.0071 X.$
8. SASK.	$\text{Log } Y = 0.3783 + 0.0096 X.$
9. ALTA.	$\text{Log } Y = 0.4989 - 0.0212 X.$
10. B.C.	$\text{Log } Y = 0.6295 - 0.0165 X.$

1. Per 100,000 population.

2. A constant 2, has been added to all values prior to the calculation of the equations.

strong enough to be noticed in spite of the confounding "noise" inherent in inter-intra country comparisons. If this viewpoint is adopted, and both Henry and Short (20) and Jayewardene (21) as well as Bakan (1) and Smith (31) seem to do, then specific countries represent samples on which the cultural integration - criminal homicide hypothesis can be tested. If this is true, results acquire a different meaning because the direction of the obtained relationship comes into narrower focus, that is, one might say that the reaching of magnitude of the coefficient required for the conventional 1% or 5% level of statistical significance is somewhat de-emphasized as long as the sign of the coefficient was in the predicted direction. The cultural integration-criminal homicide hypothesis supported by Ceylonese data, and partially confirmed in Finland, and has now also been partially confirmed in Canada thereby increasing the generality of Jayewardene's finding.

As in Study A, the null hypothesis could not be rejected. Possible reasons for the non-rejection of null hypothesis as well as suggestions for further research are considered in the remainder of this chapter.

1) An obvious weakness of the present study was the short time period analyzed. Compared to the 25-year period in Ceylon and Finland, the Canadian homicide trends based on eleven years must be considered less reliable, other factors being equal. A similar argument can be made for the measurement of change in cultural integration.

2) With regard to the Ceylonese and the Canadian studies covering different periods in time, comments already made in Chapter Three, about the ubiquitous effects of increased contacts and exposure to new ideas through developments in transportation and communication may also be applied to Study B. It can be argued that exposure to the same mass media of communication may have increased similarity among the people and thus reduced the variability in cultural integration among the provinces. This would suggest the repetition of Jayewardene's study for the 1951-1971 period (since appropriate data on criminal homicide was not available in Canada before 1951, and with the forthcoming census report, Study B could be extended to 1971). While the problems inherent in cross-cultural comparison would still have to be faced, with the comparison of Ceylon, Finland and Canada over this time period some confounding could be eliminated and more meaningful comparisons made. Of course, it is understood that similar studies in other countries should be made to extend the generality of the association between increasing cultural integration and decreasing criminal homicide.

3) The inspection of criminal homicide data for 1951-1970 (Table 1) especially for the overall Canadian homicide rates for 1962-1970 indicates that if the period were extended to 1970 in Study B, curvilinear trend lines should be considered in estimating comparable changes in criminal homicide rates over a twenty year period.

5. Suggestions for Further Research

Some suggestions for further research have been made both explicitly and implicitly in the text. The following could be carried out using either a vertical or horizontal design. In summary they are:

a) Extend the time period of the study in Canada.

b) Compare Ceylon, Finland, Canada and other countries for which appropriate data are available for the same time series, both in the sense of the length of the period, and in terms of the chronological time.

c) Use additional methods to estimate the value of human life both in the societal and the legal value system. Pittell and Mendelsohn's (30) article about the measurement of moral values may be useful source of appropriate instruments to do this by interviews and/or psychological tests. McClelland's (26) paper on the motivational trends in society seems a useful source of ideas about measuring the value of human life by "indirect" methods, such as the content analysis of school texts. For relevant and recent Canadian study, see McDiarmid and Pratt (27).

d) Repeat Study A with a horizontal design comparing:

i) Canadian cities;

ii) Areas within a given Canadian city.

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SUMMARY AND CONCLUSIONS

This project attempted to replicate Jayewardene's (1960) study explaining by means of the culture conflict hypothesis the fluctuating incidence of criminal homicide in Ceylon and Finland. The hypothesis of an inverse covariation between culture conflict and criminal homicide in Canada was tested by means of two studies, with the value of human life being the focal construct in both studies.

In Study A, cultural integration was conceptualized as the inverse of culture conflict, and was defined by the annual governmental per capita expenditure on health and social welfare. Data regarding criminal homicide was obtained from police statistics which, as well as the governmental health and welfare expenditure, are published annually by Statistics Canada. The hypothesized negative linear relationship between cultural integration and criminal homicide was tested by correlating these two variables over the 1951-69 period. The null hypothesis could not be rejected because the coefficient obtained was positive. It was also found that an inverted-U-shaped function described the relationship better than a linear one. The constant rise in government health and welfare expenditure was seen as an important explanation for the negative findings.

In Study B, cultural integration between 1951-1961 was related to changes in criminal homicide rate over the same period in the Canadian provinces. While the null hypothesis could not be rejected either, the coefficient had the predicted sign, and was interpreted

as possible evidence of the generality of the culture conflict-criminal homicide relationship.

When considering both Study A and Study B it would appear that, provided the relationship between these two did exist, it was weak, at least when both concepts were operationalized in terms of information available from published statistics. Other sources and techniques were suggested as possible means of obtaining a more valid estimate of existing culture conflict, and its relationship to criminal homicide.

In the course of the project, one issue pertaining to the use of homicide statistics in research was examined. It was found that for the computation of homicide rates it mattered little whether one used as a base either the total population or only the part of the population capable of committing criminal homicide.

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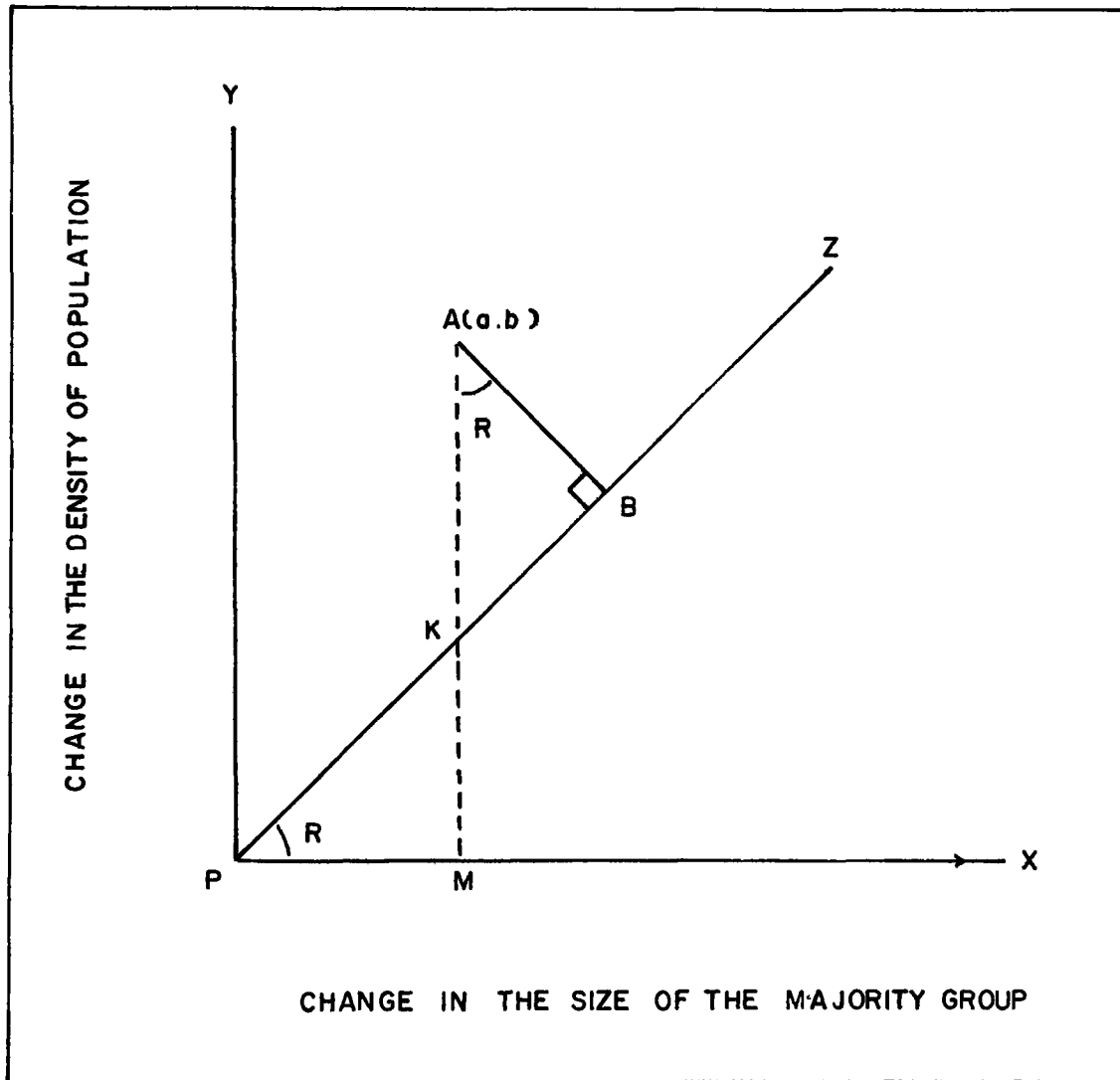
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APPENDIX

Appendix I - The Measurement of Cultural Integration



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Legend: PX and PY are the axes of the plane. PX measures change in the size of the majority group and PY measures the change in the density of population. A is a point denoting noted change (a, b). PZ is the measure of cultural integration inclined to PX at an angle R which represents the differential roles played by the two factors. If weight 'x' is given the change in the size of the majority group and 'y' the change in the density of population R is the angle whose tangent is y/x .

AB is the projection of A on PZ. PB measures the Cultural Integration produced by the change represented in A. It can be calculated from the formula $PB = a \cos R + b \sin R$.

Source: C.H.S. Jayewardene (1960) Criminal Homicide. Ann Arbor, Mich.: University Microfilms Publisher, 60-3661, p. 274.

ABSTRACT OF

Criminal Homicide and Culture Conflict in Canada.¹

The culture conflict-criminal homicide hypothesis was tested by the use of published statistics in partially replicating Jayewardene's (1960) research in Ceylon and Finland. In Study A the hypothesis of negative linear relationship between governmental per capita expenditure on health and welfare (a modified index of culture conflict) and criminal homicide over the 1951-1969 period was not supported. In Study B, the relationship between the indices of cultural integration (linguistic majority and population density) and criminal homicide among the provinces for the 1951-1961 period was not significant. The relationship, however, was in the expected direction, and the result was interpreted as giving some support to the experimental hypothesis. Suggestions for further research were made.

In the course of the project one methodological assumption was tested on the Canadian homicide data.

1. Avtar Singh, M.A. Thesis submitted to the Department of Criminology, University of Ottawa, Ottawa, 1973.