

University of Windsor

Scholarship at UWindor

Electronic Theses and Dissertations

Theses, Dissertations, and Major Papers

1979

CANADIAN CHILDREN'S UNDERSTANDING OF THEIR POLITICAL SYSTEM.

PATRICIA M. CANNING

University of Windsor

Follow this and additional works at: <https://scholar.uwindsor.ca/etd>

Recommended Citation

CANNING, PATRICIA M., "CANADIAN CHILDREN'S UNDERSTANDING OF THEIR POLITICAL SYSTEM." (1979). *Electronic Theses and Dissertations*. 1357.

<https://scholar.uwindsor.ca/etd/1357>

This online database contains the full-text of PhD dissertations and Masters' theses of University of Windsor students from 1954 forward. These documents are made available for personal study and research purposes only, in accordance with the Canadian Copyright Act and the Creative Commons license—CC BY-NC-ND (Attribution, Non-Commercial, No Derivative Works). Under this license, works must always be attributed to the copyright holder (original author), cannot be used for any commercial purposes, and may not be altered. Any other use would require the permission of the copyright holder. Students may inquire about withdrawing their dissertation and/or thesis from this database. For additional inquiries, please contact the repository administrator via email (scholarship@uwindsor.ca) or by telephone at 519-253-3000ext. 3208.



National Library of Canada
Collections Development Branch

Canadian Theses on
Microfiche Service

Bibliothèque nationale du Canada
Direction du développement des collections

Service des thèses canadiennes
sur microfiche

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us a poor photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de mauvaise qualité.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE

CANADIAN CHILDREN'S UNDERSTANDING
OF THEIR POLITICAL SYSTEM

by

Patricia M. Canning
B.A., University of Prince Edward Island, 1971
M.A., University of Windsor, 1976

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the
Requirements for the Degree
Of Doctor of Philosophy At The
University of Windsor

Windsor, Ontario, Canada
1979

© Patricia M. Canning 1979

ABSTRACT

The present study was designed to examine Canadian children's development of an understanding of their political system, and its relationship to cognitive development. It was assumed that development of political understanding is closely related to cognitive development. Thus, it was hypothesized that better political understanding would be associated with higher levels of cognitive development. In addition, it was hypothesized that the more knowledge a student possesses about politics and the more a student engages in extra-curricular activities that are thought to enhance role-taking abilities, the greater would be the student's political understanding. Sex differences in political understanding were expected.

Forty-eight grades five, eight, and eleven male and female students were interviewed to assess their cognitive and political development. The student's cognitive development was determined by the student's performance on tasks of class inclusion, conservations of weight and volume, syllogistic reasoning and proportional reasoning. In a second interview, the child's understanding of political persons, political institutions and the relationships between various institutions and levels of government was assessed. Students completed a political knowledge questionnaire which mainly assessed their ability to identify various contemporary political persons. The children's engagement in extra-curricular activities was also determined by a questionnaire which required that they report all sports, clubs, and elected offices in which they were involved.

The results indicated that the youngest children examined displayed

very little awareness or understanding of a distinct political world. At the grade eight level, however, the children were able to identify the major political persons and had some idea of the roles these persons perform and the roles of various institutions of the political system. At the highest grade level examined students displayed an understanding of the interrelationships among various roles and institutions. A conception of the multi-dimensional aspects of the political system was evident in some but, by no means all of these students.

The basic assumption of this study that there is a relationship between political and cognitive development was supported although this relationship was not as strong as expected. It did not appear from these results that cognitive development determines political understanding. There were students whose political development was more advanced than their cognitive level. In addition, both grade and political knowledge were better predictors of political understanding than cognitive development. A slight relationship between political understanding and extra-curricular activities was found. Males, as expected, were more politically developed than females. The findings are discussed with reference to the theories of Piaget and Vygotsky.

ACKNOWLEDGEMENTS

There are many people who deserve special recognition for their efforts and assistance during the period of research and learning which this dissertation summarizes.

First, there are the members of my committee: Dr. Richard Merelman, my external reader from the University of Wisconsin, offered many thoughtful and constructive comments; Dr. Meyer Starr generously spent his time in answering my numerous questions concerning the statistical procedures and results of this research. Dr. Robert Orr has been very helpful throughout my graduate work. Dr. Byron Rourke gave helpful comments and suggestions.

Next, there is my committee chairperson, Dr. Ann McCabe. She provided constant guidance and support from the initiation to completion of this paper.

I also wish to offer a special thanks to Dr. Akira Kobasigawa, who guided me toward the area of political development and encouraged the initiation of this research.

Additionally, I would like to thank John McVeen for scoring the many protocols. Thanks also go to Irene Arsèneau and Mary Anne Martin for their time and energy in typing this manuscript.

Finally, I wish to thank my family and friends for their encouragement and support. A very special thanks is extended to a very dear friend for his consideration and encouragement during the long course of preparation of this research.

TABLE OF CONTENTS

	Page
ABSTRACT	ii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
Chapter	
I INTRODUCTION	1
Early Studies	2
Later Studies	3
Need for a Cognitive Model	4
Initial Attempts to Apply a Cognitive-Developmental	
Model to Political Socialization	7
Hypotheses	12
II METHOD	13
Subjects	13
Measures	13
Procedure	14
Scoring	15
III RESULTS	17
IV DISCUSSION	33
APPENDIX	
A Canadian Political Understanding Interview and Scoring	46
Procedures	
B Political Knowledge Questionnaire	60
C Extra-Curricular Activities Questionnaire	64
D Cognitive Development Interview and Scoring Procedures	67
E Additional Descriptive Statistics	73
F Additional Statistical Analysis	78
G Means for Political Knowledge by Cognitive Level and	
Political Knowledge	82
REFERENCES	83
VITA AUCTORIS	91

LIST OF TABLES

Table	Page
1 Means, Standard Deviations, and Ranges for Political Understanding, Political Knowledge, Cognitive Level, and Activities	18
2 Means (Standard Deviations) for Political Understanding, Political Knowledge, Cognitive Level and Activities by Grade and Sex	19
3 Best Regression Model and R^2 Value for Political Understanding with the Predictor Variables Significant Beyond .10 Level	22
4 Correlation Coefficients for Variables	23
5 Kruskal-Wallis Analysis of Variance by Ranks of Political Understanding Scores.	26
6 Frequency Data and Chi-Square Analysis of Cognitive Political Levels	27
7 Analysis of Variance of Political Understanding Scores by Sex and Grade.	29
8 Analysis of Variance of Political Knowledge, Cognitive Level, and Activities Scores	30
9 Analysis of Variance of Cognitive Level	32

LIST OF FIGURES

Figure	Page
1. Mean Scores for Grades 8 and 11 Males and Females on Cognitive Level	31

CHAPTER I

INTRODUCTION

Political socialization is the process by which society transmits to its young the values, beliefs, knowledge, and opinions of the political culture which provide the basis of later behaviour as adult citizens (Hess & Torney, 1967). The process of political socialization contributes to the creation of and maintenance of support for political systems. Without support it is doubtful that the political system could long persist. The implication for a democratic society of a voting generation who know little about politics is rather grave since the underlying assumption of democratic voting and political participation has been the claim that people get involved or vote in certain ways because they have some understanding of the political system (Campbell, Converse, Miller, & Stokes, 1960; Lazarsfeld, Berelson, & Gaudet, 1944). In spite of this assumption, few serious attempts have been made to examine this important determinant of political participation.

While it is assumed that during childhood and adolescence, there is a gradual construction of a more and more elaborate interpretation of politics, few studies have attempted to investigate this development. Little is known about children's development toward a more and more elaborate interpretation of politics. There has been to date no extensive investigation into the Canadian schoolchild's development of awareness and understanding of the political system. The purpose of the present investigation was to examine children's understanding of the Canadian political system in a developmental context.

Early Studies

The pioneering studies in political socialization centered on the grade school child and were concerned largely with determining the knowledge and attitudes children acquire about political leaders (Easton & Dennis, 1965; Easton & Hess, 1962; Greenstein, 1960, 1965; Hess & Torney, 1967). Few of the investigators attempted to apply psychological theories in interpreting data and those who did generally adopted a psychoanalytic framework. As a result of the psychoanalytic emphasis on the early years, investigations were generally confined to the elementary school age child while the study of the adolescent and older people were neglected.

The early researchers principally investigated young children's knowledge of and attitudes toward political leaders and children's political party preference. They generally reported that for American children the period of most rapid acquisition of political knowledge is during the elementary school years (Easton & Dennis, 1969). Greenstein (1960, 1965) reported that almost every fourth grader (96%) could name the president of the United States. Children were found to hold very favourable views of the political leaders, especially the President, describing him as helpful and taking care of them. He also found that by the fourth grade, six out of every 10 children surveyed stated a political party choice. Further, Easton and Hess (1962) reported no significant changes in partisan attitudes from grades nine to 12. So it was generally agreed that trust in government and the belief in the benevolence of political leaders characterized young children's views of their political system. This development was believed to be just

about complete by the end of the elementary school years (Hess & Torney, 1967).

Later Studies

Later studies (Green, 1972; Greenberg, 1970a, 1970b; Greenstein, 1975; Jaros, Hirsch, & Fleron, 1968; Liebscheitz & Aiemi, 1974; Orum & Cohen, 1973) were extended to include not only white, middle-class American children, but children from various other socio-economic classes, ethnicities and cultures. A somewhat different political picture of the young child emerged. High levels of awareness of the President and other political leaders were not found in all subgroups or countries (Pammett, 1971; Rebelsky, Conover, & Chafetz, 1969; Roig & Billon-Grand, 1968). The original psychoanalytic interpretation of the child's positive image of political leaders being a result of transfer from the parent to the political authority figure began to be questioned since it was found that not all children hold favourable attitudes toward political leaders.

Contrary to the earlier conclusion that party identification did not undergo substantial changes after the elementary school years, later studies revealed a somewhat different pattern of partisan identification. Merelman (1971) and Sears (1975) report much lower percentages of grade and highschoolers choosing a political party. Similar low levels of partisan identification were found in Canada (Pammett, 1971) and various European countries (Abramson & Inglehart, 1970; Dennis & McCrone, 1970).

While these and other studies (Artenton, 1974, 1975; Jaros & Kolson, 1974; Sigel, 1968; Tolley, 1973; Vaillancourt, 1973), gave a somewhat

more comprehensive view of children's political socialization, they were still limited to examining children's knowledge of and attitudes toward government and politics. This limitation existed even though later researchers adopted a learning theory approach rather than the psychoanalytic orientation so popular in the earlier investigations. But, learning theory approach was also limited to an emphasis on examining 'content.' Thus, even when attention was given to developmental considerations it was in terms of changes in content across age levels. The result was a substantial literature describing the amount of information children have and their attachment to the political community. There was no apparent interest in examining children's understanding of their political environment.

Need for a Cognitive Model

Most political socialization research has emphasized content. These efforts share a preoccupation with preferences and feelings. Investigators rarely consider modes of political perception and cognition. In addition, this research generally assumes an environmental learning rather than a cognitive-developmental model.

Political researchers were slow to recognize the need for a framework for examining the development of comprehension of political systems. The cognitive-developmental view might provide such a framework. Cognitive developmental theorists, rather than emphasizing content, emphasize a hierarchy of increasingly differentiated and integrated stages of cognitive development, from the concrete-operational to the formal-operational (Kohlberg & Gilligan, 1971) rather than attempting to

account for individual and group differences on the basis of environmental variables. Cognitive developmental theorists emphasize the relationship between cognitive structure and comprehension.

Advocates of the cognitive-developmental approach do not deny the importance of environmental variables. In fact, developmental theorists conceive of cognitive growth in terms of a process of interaction between genetic and maturational changes and environmental effect (Flavell, 1963; Kohlberg, 1969). Kohlberg (1969) observes that change in the structure of cognitive categories depends upon experience...

The effects of experience, however, are not conceived of as learning in the ordinary sense in which learning implies training by pairing of specific objects and specific responses, by instruction, by modelling, or by specific practice of responses. Indeed the effects of training are determined by the child's cognitive categories rather than the reverse. (Kohlberg, 1969, p. 351).

While there have been relatively few studies applying this framework to the area of political development, there have been more attempts to apply it to the analysis of other areas of social and personality development. The cognitive developmental model has been applied to the analysis of sex-role development (Kohlberg, 1966; Kohlberg & Zigler, 1967) and to the development of empathy. Perhaps most extensively application has been to the development of moral judgement (Kohlberg, 1963, 1964). Recent research by Kohlberg and associates has elaborated a cognitive approach to moral development (Blatt & Kohlberg, 1969; Kohlberg, 1963, 1964, 1969; Kohlberg & Kramer, 1969; Kohlberg & Turiel, 1971; Turiel, 1966). The focus is on the reasoning of an

individual confronted with a moral or ethical dilemma. The major thrust of the approach is that the development of moral thought follows a universal sequence of distinct stages. Kohlberg investigated how intellectual capacities are applied to moral thought (Kohlberg, 1958; 1969; 1971) and he, as well as others (Broughton, 1974; Haier & Keating, 1975; Selman, 1976) reported strong links between moral and logical development. In general, children at a given moral stage will pass all the stage-equivalent cognitive tasks. This correspondence is expected because the reasoning required at each moral stage is strongly linked to powers assumed to exist at the parallel cognitive stage.

The translation between the cognitive and moral realms is not, however, automatic. Although moral reasoning presupposes certain cognitive skills, individuals at a given cognitive stage will not necessarily be found at the matching moral stage (Hoffman, 1970). Kohlberg (1969) explains that experiences with physical objects are requisite for cognitive development while moral development requires involvement with social and interpersonal experiences. While most people have the opportunity for experiences which lead to cognitive development, there are many who have not equivalent opportunity for the development of moral thought.

Similar to Kohlberg's attempt to apply a cognitive developmental approach to moral development there have been some studies aimed at applying this model to the study of how children develop politically. The development of political understanding should reflect the general stage of cognitive development of the child.

Initial Attempts to Apply a Cognitive-Developmental Model to Political Socialization

Dawson and Prewitt (1969) applied a cognitive-developmental model in examining the development of ideas of power and authority. At the earliest stage, political learning stresses the given nature of authority. Political objects are positive and rules are to be obeyed. Later, stress is on the conventional nature of power and authority. Rules are seen, not as absolutes, but as conventions, somethings which are agreed upon. In adolescence there is further recognition that rules can be influenced and manipulated. As adolescence gives way to adulthood, the notion that authority is somewhat under the influence of the average citizen is even more prevalent. The developmental progression then, is from a belief in the given nature of authority, to acknowledgement of its conventional nature, and eventually to a recognition of the accountable and participatory nature of authority.

These investigations have also reported that political development is affected, to some extent, by extra-curricular activities and participation in classroom activities which involve decision making. They argued that a more complex political outlook results from active involvement due partly to the individual's needs to justify the activity and actions and partly because such activity increases his/her information. Presumably, possessing a lot of information leads to a recognition of the connections between different facts and actions which, in turn, results in more complex and abstract conceptualizations.

Rebelsky, Conover, and Chafetz (1969) investigated the cognitive components of children's political perceptions by examining their

knowledge of and attitudes toward the relevant issues in the 1968 presidential election. As expected, the investigators found that the amount of accurate information increases with age. More interestingly, from the point of view of cognitive-developmentalists, is the finding that there was substantially more difference between the youngest age group (2 to 5 years) and the next age group (6 to 11 years) than between this and the oldest group (9 to 13 years). This deceleration of political learning as indicated by the similarity of responses of the middle and oldest group points to the possible applicability of a cognitive developmental approach. Indeed, there seemed to be definite qualitative differences between the approaches of the youngest and oldest groups. In answer to the question "What does the President do?" younger children gave very concrete and idiosyncratic responses, while the older children stressed making laws, passing bills, and making wars. These responses seemed to reflect differences between the structures of thought of the pre-operational and concrete operational stages as outlined by Inhelder and Piaget (1958). Similar qualitative differences might have been expected if an older (15 years or older) group had also been compared, reflecting the differences in structure of concrete and formal operational levels of thought.

Connell (1971) reported that he distinguished four main stages in the development of interpretation of politics that correspond to Piaget's intuitive, preoperational, concrete, and formal operational stages of intellectual development. He assumed that children's age and level of political development were reflective of their level of cognitive development but made no attempt to assess their intellectual functioning.

These studies provide some support for a cognitive-developmental interpretation of political learning. Indeed, there appears to be a definite relationship between general level of cognitive structure and level of political comprehension. But, there is some indication of the importance of considering environmental variables. Gallatin and Adelson (1971) reported that the development of political orientations lags behind that of cognitive development as much as two to three years. Also, there are large numbers who never structure their political orientations as fully as might be expected from a cognitive-developmental perspective.

Jahoda (1964) concluded that direct application of Piagetian stages to political development is inappropriate. Results from research on the development of children's ideas about the physical world cannot be directly applied to aspects of the development of ideas of the social world. Connell (1971) elaborated on the differences between the ideas that make up the political world and those of the physical world. Contrary to the situation in his physical world, the child cannot exert any influence on his political world. A child learns about his physical world in large measure by operating on it and learns about his intimate social environment also in large measure through reaction of others to his advances and enterprises. But the child cannot do this in his political environment. The distance between the child and politics makes this learning substantially different from the child's basic learning about his physical environment.

Children learn about political events through other people. Their contact with politics is indirect. This learning is also different from

that of the physical world in that the object of the child's thoughts is itself a part of society. Political thought consists of ideas other people have conceived and expressed and relations that others have set up and changed.

Rationale for the Present Study

While there are some preliminary data on Canadian children's knowledge of political persons and offices (Belovari, Cook, Murphy, Nicholson, & Williams, 1976; Pammett, 1971) there is no detailed information on children's understanding of the political system. The proposed study will examine Canadian children's comprehension of their political system at different age levels.

Connell (1971) and others (Adelson, 1971; Merelman, 1969, 1971, 1972) have concluded that political development proceeds from pre-operational level to a concrete and finally to a formal operational level. These main stages in the interpretation of politics are said to correspond to Piaget's pre-operational, concrete operational and formal operational stages of intellectual development. However, no attempt was made in these investigations to determine children's level of cognitive functioning. It was simply assumed on the basis of age. Other studies have reported the difficulty in assuming the presence of cognitive structure from the child's age. The most critical question remains unanswered: To what extent is political development determined by the child's cognitive development? The proposed study will examine the relationship between cognitive development and political comprehension by examining not only the child's level of political development but also his/her level of cognitive functioning as outlined by Piaget (Inhelder &

Piaget, 1958). It is expected that the child's level of political understanding will reflect the level of cognitive development.

Political development is fundamentally a process of restructuring perceptions of roles vis a vis rule systems. Role taking opportunities should provide the necessary input for stimulating development. For example, peer group 'stars' who participate more actively than 'isolates' display both more rapid development and a more mature moral development (Kohlberg, 1968). Research results suggest that opportunities for role-taking operate by stimulating cognitive development rather than producing a particular value system. Similarly, role-taking opportunities should enhance political development in children. It is expected that children who engage in extracurricular activities which provide opportunity for role-taking (e.g., team sports, clubs) will be more advanced in political development than children who do not engage in such activities.

Perhaps extracurricular activities give the child more political information and with more information the child's political world becomes complicated. However the child acquires information, it appears to determine, in part, political development. In contrast to the child's developing cognitively by acting on his environment, the child cannot exert any influence on politics and therefore, he must learn about politics from others. The more the child knows about a subject the more complex will be the cognitive structure applied to that subject. Individuals may see part of their world as unidimensional and another as tri-dimensional. It depends on how familiar a person is with each particular area. It is expected that children who are more informed will

be more politically developed than children at the same cognitive level with less political information.

Sex is another variable reported to affect political development. Males and females differ as early as the elementary school in their quasi-political interests (Hyman, 1959). Others have also reported differences between boys and girls (Greenstein, 1965; Easton & Dennis, 1969; Hess & Torney, 1967) generally reporting that girls are more likely to possess a personalized and idealized conception of government and are less interested in news of politics or public figures than boys. Rich (1976) also reported that females have lower levels of political interest and knowledge than their male counterparts. Similar differences are expected in this study in the understanding of the political system.

Hypotheses

It is hypothesized that:

- (1) Better political understanding will be associated with higher levels of cognitive development.
- (2) Children who engage in extra-curricular activities which enhance role-taking skills (e.g., team sports) will be more advanced in political understanding than children of the same cognitive level who do not engage in such activities.
- (3) Children who possess more information regarding the political system will show more advanced political understanding compared with children of the same cognitive level with less political information.
- (4) It is expected that males will be somewhat more advanced in political understanding than females of the same cognitive level.

CHAPTER II

METHOD

Subjects

The subjects were 48 students, 16 each in grades five, eight and eleven who attend a public elementary or high school in fairly middle-class neighbourhoods in Halifax. An equal number of males and females were represented at each grade level. The mean ages for grades five, eight, and eleven, were 11.0, 14.1 and 16.9 years, respectively. Intelligence measures were not available but subjects were chosen from classes in the normal or bright-normal range.

Measures

Political Understanding. This was a measure of the students understanding of the Canadian political system. The students were interviewed in clinical format similar to that used by Piaget (1929). This involved posing questions concerning the political system, allowing the student to answer, and then asking subsequent questions based on the student's answer to the preceding question. Such a format allows the student's answers and not some preconceived plan to determine the course of questioning. The questions which 'guided' the interviews are provided in Appendix A. These interviews focused on the student's understanding of the following: Monarchy, Prime Minister, Premier, Mayor, Parliament, Cabinet, Senate, Electoral Process, Conflict, Mass versus Elite Power, and the Judiciary.

Political Knowledge. Forty-two completion items, similar to those developed by others (Greenstein, 1965; Hess & Torney, 1967; Maghami, 1974)

were selected to provide an index of the student's knowledge of contemporary political authorities and organization in local, regional, federal, and international systems. This questionnaire is provided in Appendix B.

Extra-Curricular Activities. A measure of the extent to which students engaged in extra-curricular activities was obtained by having the students complete a questionnaire asking what and how often they were active in sports, clubs, and elected offices. This questionnaire is contained in Appendix C.

Cognitive Level. The student's level of cognitive development was assessed using the revised clinical method and tasks developed by Piaget and Inhelder (Inhelder & Piaget, 1958; Piaget & Inhelder, 1964). Tasks used in the present study were those for the conservation of weight, class inclusion, conservation of volume, thinking about one's thinking, and proportionality reasoning. This interview is presented in detail in Appendix D.

Procedure

The political knowledge questionnaire and the extra-curricular questionnaires were group administered to 50 students in grades five, eight, and eleven. Eight males and eight females at each grade level were chosen randomly from these groups.

The subjects selected were then tested individually in two experimental sessions approximately five days apart.

Session I. The child's level of cognitive development was assessed using the tasks outlined above. All children were interviewed by the

same female experimenter. This session lasted approximately 45 minutes.

Session 2. The child's understanding of the Canadian political system was determined using the Piagetian revised clinical method and following the general line of questioning outlined above. A different female experimenter conducted all of these interviews. This session was approximately 45 minutes in length.

Scoring

Political Understanding. In order to obtain a single score for Political Understanding a student's scores on items that assessed his/her understanding of the political system were summed. There were 17 scores, some of which were scored on a scale of one to three and others on a scale of one to four. Some items (e.g., Queen) were scored from one to three since it was felt that understanding of such items did not require higher levels of political thinking. An item scored out of a maximum of four was Parliament. A student who had no idea of what Parliament was received a score of one. If a student knew that Parliament was made up of a group of people who rule or in some way recognized Parliament in a political sense, he/she received a score of two. A score of three indicated that the student knew that Parliament was made up of parties which differ. A score of four was assigned if the student had a conception of Parliament made up of parties which compete for the right to exercise power with only one of them doing so at any one time. Also, a student had to understand that Parliament passes laws which reflect the will of the people. The lowest possible score was 17. A student could receive a maximum score of 60.

Political Knowledge. In order to obtain a single score for political knowledge, a subject's responses on the individual items of the questionnaire were totalled. The lowest possible was zero. A student could receive a maximum score of 42.

Extra-Curricular Activities. A single score for extra-curricular activities was obtained by totalling the number of sports, clubs, and offices that a student reported. Since students were required to report their extra-curricular activities there was no designated maximum score. If a student had played no sports, belonged to no clubs, or had never held an office, he/she was assigned a score of zero.

Cognitive Level. A student was considered to be at the concrete level of intellectual development if responses to four of his/her five tasks were at the concrete level. If a student had at least two responses at the transitional level and others at the concrete level he/she was considered to be in the transitional stage between concrete and formal thought. A student was assigned the formal stage of reasoning if at least two out of the three tasks assessing formal thought were at the formal level. A complete description of the scoring of each task is given in Appendix D.

Interrater Reliability. A second rater independently scored 50 percent of the political understanding interview data and the cognitive tasks. Interrater reliabilities of .97 and .93, respectively, were obtained. The disagreements were discussed and a final score was arrived at by a consensus of both judges.

CHAPTER III

RESULTS

The means, standard deviations and ranges for political understanding, political knowledge, cognitive level and activities for all 48 students are presented in Table 1. The average political understanding score for the complete sample was 37.4 of a maximum possible score of 60. Scores ranged from 20 to 57.5 with a standard deviation of 9.0. By examining Table 2, which breaks down these scores by sex and grade level, we can see that there is a gradual increase in political understanding across grade levels. Males have higher scores than females at all grade levels examined. Furthermore, the difference between males' and females' political understanding increases with grade level.

Responses to the political knowledge questionnaire indicate a low level of political knowledge for this group of students. The average obtained score was 12.5 of a maximum possible score of 42. Scores ranged from 0 to 33 with a standard deviation of 9.3. Again, as with political understanding males' scores are higher at every grade level than those of females. As was the case with the political understanding measure, the gap between their scores increases with grade level.

All students were at the concrete, transitional, or formal levels of cognitive development. This range would be expected considering the age range of these students (Inhelder & Piaget, 1958; Piaget, 1950). Once again males outscore females with the difference increasing with grade level. Particularly noticeable is the difference between them at the eleventh grade level. While the males, on the average, as expected

Table 1
Means, Standard Deviations, and Ranges
for Political Understanding, Political Knowledge,
Cognitive Level, and Activities

Variable	\bar{X}	SD	Range
Political Understanding	37.4	9.03	20.0 - 57.5
Political Knowledge	12.5	9.30	0.0 - 33.0
Cognitive Level	2.7	.73	2.0 - 4.0
Activities	11.0	8.20	0.0 - 36.0

Table 2

Means (Standard Deviations) for Political Understanding

Political Knowledge, Cognitive Level and Activities

by Grade and Sex

Variable	Grade 5		Grade 8		Grade 11	
	Females	Males	Females	Males	Females	Males
Political Understanding	28.0 (1.54)	29.6 (4.57)	34.4 (3.43)	40.5 (3.37)	42.1 (5.93)	49.9 (8.45)
Political Knowledge	3.9 (2.80)	5.6 (4.75)	9.4 (4.81)	13.4 (5.29)	16.5 (7.96)	26.3 (7.09)
Cognitive Level	2.1 (.35)	2.3 (.46)	2.5 (.54)	2.8 (.71)	2.6 (.74)	3.6 (.52)
Activities	9.6 (8.37)	8.5 (4.38)	8.4 (6.99)	15.0 (10.37)	18.3 (6.61)	16.1 (9.14)

(Inhelder and Piaget, 1958) are functioning near the formal operational level the females are, on the average, at the concrete stage of intellectual development.

The average obtained score on the extra-curricular activities survey was 11.0. Since the students were asked to report their involvement in activities there was no predetermined maximum score. Scores ranged from 0.0 to 36.0 with a standard deviation of 8.2. With one exception males reported more involvement in extra-curricular activities than females. Although grade five females had higher involvement than grade five males, the females' involvement declined with grade while males became more involved with grade level. At both grades 8 and 11 the males can be seen to be approximately twice as involved as females.

Females, at the junior highschool and highschool grade levels, appear to understand their political system somewhat less than their male counterparts. They also possess less knowledge about politics, function at a somewhat lower level of cognitive development and engage in extra-curricular activities to a lesser extent than males of the same age.

It was predicted that knowledge of politics, cognitive level, participation in extra-curricular activities, sex and grade would each explain a portion of the variance in political understanding. A general test of the hypotheses is provided by regression analyses. The combination of political knowledge, grade, and sex provides the best predictor model with all predictors significant at .10. Thus some support is provided for Hypotheses 3 and 4.

The relationship between the variables measured and their relationship

to grade, age and sex were investigated. The resulting correlation coefficients are presented in Table 3. Political understanding, knowledge of politics, and cognitive level correlate highly with each other and with grade and age. There is an almost perfect correlation between political understanding and political knowledge. The more one knows about politics the more one understands the political system. The relationships of grade and age to the other variables are almost identical owing to the almost perfect correlation between these two variables. Thus, subsequent analyses utilized only grade.

Because of the high degree of multicollinearity, all possible linear regression models were generated in order to examine more fully the relationships of knowledge of politics, cognitive level, extra-curricular activities, grade and sex to political understanding. The results of these analyses are presented in Table 4. Each of the predictors singly and in combination account for a portion of the variance in political understanding.

Cognitive level as a single predictor accounted for approximately 30 percent of the variance in political understanding, lending support to Hypothesis 1. It failed, however, to enter into the best three variable model for predicting political understanding. This is apparently due to the large contribution of grade as a predictor. Since grade and cognitive level are highly intercorrelated, the variance explained by cognitive level is only part of that variance already accounted for by the variable grade. An examination of Table 4 reveals that when cognitive level is combined with grade as a predictor, it increases the R^2 only from .6163 (Model #4) to .6428 (Model #9).

Table 3
Correlation Coefficients for Variables

	Age	Political Knowledge	Activities	Level	Grade	Sex
Political Knowledge	.73**					
Activities	.17	.25				
Level	.53**	.49**	.24			
Grade	.99**	.74**	.16	.53**		
Sex	0.000	.28*	.28	.32*		
Political Understanding	.79**	.91**	.29*	.55**	.79**	.29*

** p .01

* p .05

Table 4
Regression Models for Political
Understanding

Model Number	Model	R ²
1	Activities	.0815
2	Sex	.0835
3	Cognitive Level	.3073
4	Grade	.6163
5	Political Knowledge	.8310
6	Activities, Sex	.1293
7	Level, Sex	.3215
8	Activities, Level	.3317
9	Level, Grade	.6428
10	Activities, Grade	.6431
11	Grade, Sex	.6998
12	Political Knowledge, Sex	.8322
13	Political Knowledge, Activities	.8346
14	Political Knowledge, Level	.8467
15	Political Knowledge, Grade	.8588
16	Activities, Level, and Sex	.3393
17	Activities, Level, and Grade	.6611
18	Level, Grade, and Sex	.7033
19	Activities, Grade, and Sex	.7073
20	Political Knowledge, Activities, and Sex	.8351
21	Political Knowledge, Level, and Sex	.8468
22	Political Knowledge, Activities, and Level	.8486
23	Political Knowledge, Activities, and Grade	.8633
24	Political Knowledge, Level, and Grade	.8653
25	Political Knowledge, Grade, and Sex	.8675

Continued

Table 4 Continued

Model Number	Model	R^2
26	Activities, Level, Grade, and Sex	.7099
27	Political Knowledge, Activity, Level and Sex	.8486
28	Political Knowledge, Activities, Level, and Grade	.8683
29	Political Knowledge, Activities, Grade, and Sex	.8697
30	Political Knowledge, Level, Grade, and Sex	.8702
31	Political Knowledge, Activities, Level, Grade, and Sex	.8720

Since grade 11 students were almost equally divided among concrete, transitional, and formal levels of cognitive development, it was possible to investigate the effect of cognitive level holding grade constant. Kruskal-Wallis analysis of variance (Table 5) revealed no significant differences in political understanding that could be attributed to differences in cognitive level.

Due to the large single predictive ability of cognitive level, its relationship to political understanding was investigated further. Each student was assigned a level of political understanding. A complete description of these levels is given in Appendix A. A level of two denotes that the child identifies a distinct political world and can identify various political persons and to a less extent political institutions. At the next level, three, the child's conception of politics is less personalized and he/she has a basic understanding of the institutionalized aspects of the political system. At the fourth level the child has differentiated and integrated various aspects of the system and thus has a multi-dimensional conception of the political system. Chi-square analysis and observed frequencies are presented in Table 6. The relationship between cognitive and political levels was significant $\chi^2(4) = 17.29 \cdot p < .01$. Although this relationship was significant, 25 percent of the students had higher political level than cognitive development. Thus, while there is a relationship between intellectual and political development, the nature of this relationship is not as expected.

Engagement in extra-curricular activities accounted for approximately eight percent of the variance in political understanding scores. In order to examine Hypothesis 2 more closely, students with the five highest and those with the five lowest scores on the activities questionnaire were

Table 5
Kruskal-Wallis Analysis of
Variance by Ranks of Political
Understanding Scores

	Cognitive Levels		
	Formal	Transitional	Concrete
	42 (10)*	38.5 (13)	34.5 (16)
	43.5 (9)	44.5 (8)	36.5 (15)
	53.5 (5)	39.0 (12)	51.5 (6)
	56.5 (3)	54.5 (4)	40.5 (11)
	57.0 (2)	57.5 (1)	
	37.5 (14)	49.0 (7)	
H (2) = 2.90 p .05			

* Ranks of scores are indicated by numbers in parentheses.

Table 6
Frequency Data and Chi-Square Analysis
of Cognitive Political
Levels

	Cognitive Level			Row Totals
	Concrete	Transitional	Formal	
Political Level*	2 15	4	0	19
	3 8	10	3	21
	4 1	3	4	8
Column Totals	24	17	7	
$\chi^2_{(4)} = 17.29 \quad p .01$				

*There are categorized scores based on the continuous scores
(see Appendix A).

compared at each grade level on political understanding. T-tests were conducted but no significant differences emerged giving no support to Hypothesis 2.

Political knowledge alone accounted for 83 percent of the variance lending strong support to Hypothesis 3. Also, considering that all five variables account for 87 percent of the variance knowledge of politics is overwhelmingly the best predictor of political understanding.

In addition to the support for Hypothesis 4 provided by the regression analyses, support also comes from the two-factor analysis of variance which examined the effects of sex and grade on political understanding. These results are presented in Table 7. As predicted, males scored significantly higher on political understanding than females.

Additional two-factor analyses of variance examined the effects of grade and sex on political knowledge, cognitive level, and extra-curricular activities. These results are presented in Table 8. There is a significant effect of grade on political knowledge and cognitive level. The higher grade students had significantly higher scores than lower grade students. The males scored significantly higher on these measures than females, and near significance ($p < .06$) on the extra-curricular activities measure. None of the grade by sex interactions were significant although cognitive level approached significance ($p < .07$). Examination of Table 2 reveals that the difference between males and females is particularly large at the grade 11 level. Comparison of the grade eight and 11 students (see Figure 1) suggests a grade by sex interaction. Two-factor analysis of variance results, however, (Table 9) indicate that only the main effects of grade and sex were significant. The interaction again approached significance ($p < .10$).

Table 7
 Analysis of Variance of
 Political Understanding Scores
 by Sex and Grade

Source	SS	df	MS	F
Sex	320.33	1	320.33	12.57**
Grade	2363.29	2	1181.65	46.38**
Sex x grade	80.54	2	40.27	1.58
Error	1070.00	42	25.48	
Total	3834.17	47		

**p .01

Table 8

Analysis of Variance of Political
Knowledge, Cognitive Level, and
Activities Scores

Source	df	Political Knowledge		Cognitive Level		Activities	
		SS	F	SS	F	SS	F
Grade	2	2241.50	34.46*	7.04	10.85**	90.17	0.73
Sex	1	320.33	9.85**	2.52	7.77**	238.52	3.84
Grade x sex	2	136.17	2.09	1.79	2.76	190.17	1.53
Error	42	1366.00		13.63		2608.13	
Total	47	4064.00		24.98		3126.99	

** p .01

FIGURE 1

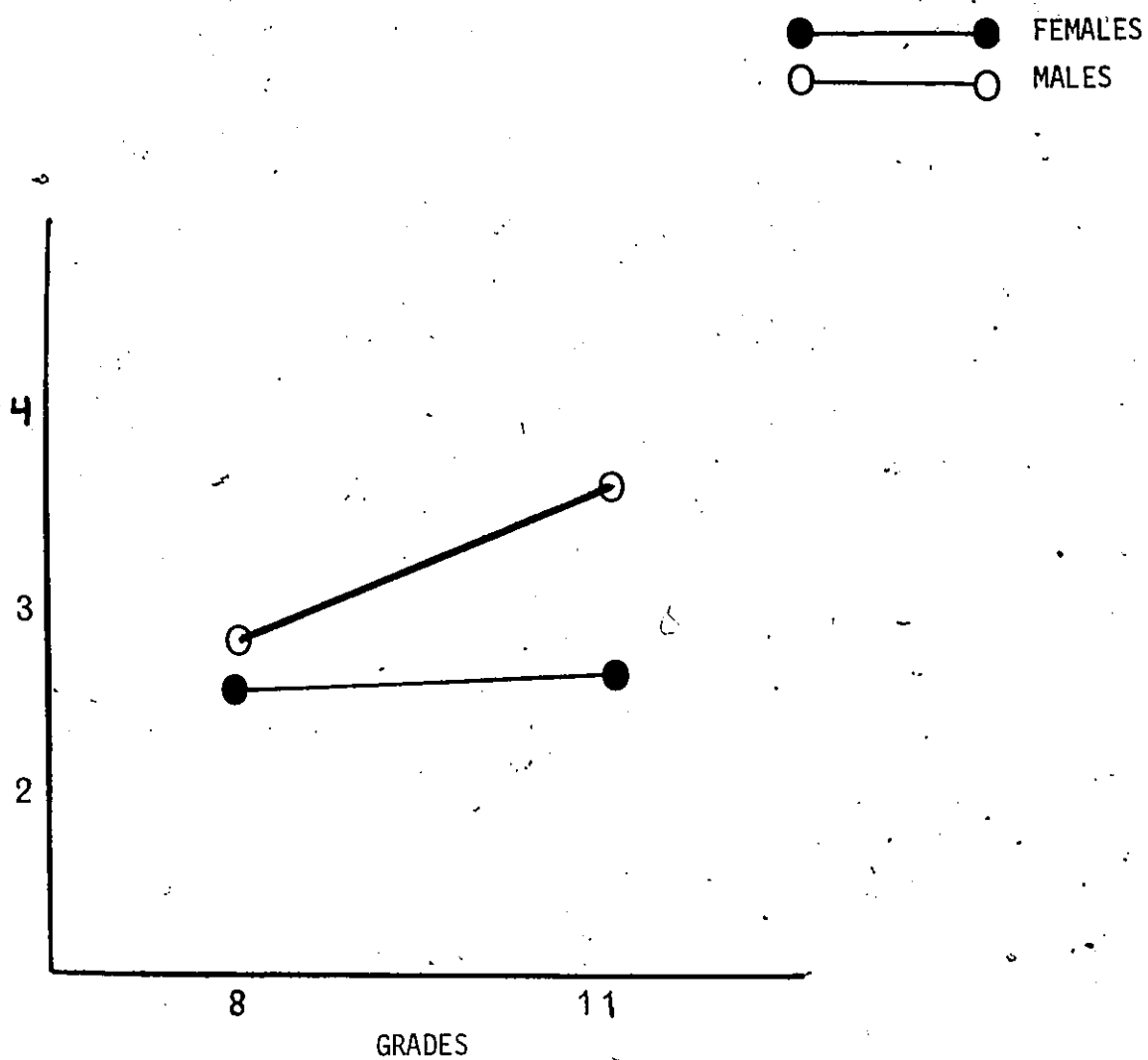


Figure 1. Mean scores for Grades 8 and 11 males and females on cognitive level.

Table 9
Analysis of Variance of
Cognitive Level

Source	SS	df	MS	F
Grade	2.00	1	2.00	4.98*
Sex	3.13	1	3.13	7.78**
Grade x Sex	1.13	1	1.13	2.80
Error	11.25	28	.40	
Total	17.50	31		

** p .01

* p .05

CHAPTER IV

DISCUSSION

This study was designed primarily to examine developmental changes in childrens' notions of the Canadian political system. The major question that guided the present study was the following: "How do Canadian children develop toward understanding their political system?" A second major purpose was to examine the relationship of political to cognitive development. It was also assumed that certain cognitive skills are necessary before a child can develop political understanding.

Based on these assumptions Hypothesis I was generated. It was expected that childrens' understanding of the political system would proceed from a level of fragmented, personal, concrete understanding to a more advanced, integrated, systematized level and that this development would be determined, in part, by the child's level of cognitive development. It was not expected that a child would be more politically advanced than cognitively.

The youngest children appeared to have some basic recognition of a distinct 'political' world. They knew the Prime Minister, that he 'rules,' and the people elected him. Other political figures were relatively unknown to these children. On the average these grade five children were more familiar with voting, and election conflicts over issues, than they were with political persons other than the Prime Minister. This is in agreement with Pammett's

suggestion (1971) that perhaps Canadian children learn about institutionalized aspects of the system earlier than they learn to identify political figures. It was only at the grade eight level that children identified the major political figures and understood the political nature of their roles. Here too, they displayed some conception of such aspects of the political system as the function of opposition parties, federal-provincial relations, and understood that by voting, people were having a 'say' in who they want. At the highest grade examined, students understood the roles of the various political offices, and understood the relationships between the various parts of the political system. Some, but by no means all, of the oldest students, clearly displayed an integrated and systematic understanding of the political system.

While a great number of students did not possess much understanding of their political system even at the eleventh grade, there were those who had a firm grasp of various aspects of the system, understood the nature of the Parliamentary system and clearly conceptualized the multi-dimensional nature of that system. These students appeared to have developed a differentiated and integrated conceptual framework for understanding their political system (Piaget, 1954).

Piaget's gauge of intellectual development is the manner in which a child thinks on subjects about which he has been taught nothing. He does allow that social transmission is a causal factor of development but it is important as an educative factor in the broad sense--transmission of knowledge from without to the child. It is important but insufficient to effect mental growth for it depends

upon maturation and direct experience to permit assimilation of what parents, school and general social milieu seek to teach the child. He assumes that only the spontaneous concepts, as assessed here by the cognitive tasks, truly enlighten us on the special qualities of the child's thought. To Piaget, the development of those concepts are the very essence of a child's mental development and they determine the course of all subsequent developments.

While grade, political knowledge, and cognition were expected to be highly correlated and all to have some predictive power, cognitive level was expected to be the best predictor of political understanding. In these data, however, both political knowledge and grade are overwhelmingly better predictors than cognitive level. Even when children of the same grade but different cognitive levels were compared on political understanding, there were no differences that could be attributed to differences in cognitive level. The sample size examined was admittedly small, but the results do not suggest a strong relationship.

In general, however, the results provide some support for a relationship between cognitive and political development. When cognitive development was used as a single predictor it accounted for approximately 30 percent of the variance in political understanding.

Based on analogous work in moral development (Kohlberg, 1964, 1964, 1968), it would be expected that cognitive development would be a necessary but not sufficient prerequisite to political development. Upon close examination it does not appear that the results support the position that cognitive development determines

development in other areas. In 25 percent of the sample (as shown in Table 6), students' political development exceeded their cognitive development. There is, of course, the possibility that what were designated levels of political understanding are not distinctly different levels. At a minimum, however, it is clear that a child who can simply identify a few political persons and knows little about the institutionalized aspects of politics is at a qualitatively different level than one who understands the political institutions and can systematically integrate political structures.

While cognitive and political development are related, the nature of this relationship was not as expected. Piaget's position maintains that cognition always precedes development in other areas. Nevertheless, there were those whose level of political understanding exceeded their cognitive level. Piaget also asserts that only such non-spontaneous skills as those reflected by the cognitive tasks used in the present study reflect mental development. Since development in other areas does not differ in any essential way from cognitive skills, Piaget maintains that it is pointless to consider the two separately. Yet, these findings indicate that the development of these two concepts may not be similar and thus, the development of political understanding may have to be considered apart from the development of 'cognition.'

These data can also be examined from a position alternative to that of Piaget. Vygotsky (1962) emphasizes the importance of the development of non-spontaneous concepts; concepts a child develops as a result of tuition. Politics is one such concept. He maintains that the development of such concepts is another process.

in concept development and that the two develop along different paths.

According to Vygotsky, the development of non-spontaneous concepts precedes the development of spontaneous ones. Such a position receives support from these data. A fourth of the students had levels of political development higher than their cognitive development. Clearly the relationship of cognition to political development is not simply that the former precedes the latter. However, it is not simply the reverse with political development always preceding cognition. Not all students had equal or higher levels of political understanding. But this too might be expected from Vygotsky's position. Although he maintains that, in the course of normal development, spontaneous concepts usually lag behind the non-spontaneous ones, the reverse is thought to occur when tuition does not provide the necessary material. He sees instruction as one of the principal sources of a school child's concepts and sees it as a powerful force directing their evolution. When political understanding lags behind cognitive development, as was true for some students, it is believed that the necessary material was not provided.

While it is beyond the scope of this study to investigate the relationship of instruction to political development, perhaps some light can be shed by examining further political knowledge and its relationship to political understanding. Since politics is something a person cannot directly experience, we assume that development of political understanding requires information from other people. It is further assumed that political knowledge gives us some indication of the amount of instruction or input from the environment.

It was found that the best predictor of political understanding was political knowledge. Eighty-three percent of the variance in political understanding was accounted for by this variable. The more students could identify political persons (questionnaire items, for the most part, required identification of political figures), the more he/she could understand the political system regardless of cognitive development.

Assuming the importance of instruction in political development, it would be expected that students whose political understanding exceeded their cognitive development would have higher political knowledge scores than those whose cognitive level was higher. As can be seen in Appendix G, which presents such comparisons on political knowledge, this was clearly the case. These students had political knowledge scores approximately twice as high as those whose cognition was more developed than their political understanding. The student whose cognitive level was concrete while political understanding was at a formal level, had one of the highest (i.e., 32) political knowledge scores of the total sample.

These data give some support for Vygotsky's position that the development of a non-spontaneous concept such as politics and cognition do not necessarily develop in the same manner. Additionally, these data suggest that instruction by providing information, may be a principal source of the school child's political development.

Before any definite conclusions can be reached regarding the relative merits of a Vygotsky versus a Piagetian position for explaining the relationship between cognitive and political development, the issue of measurement of these developments must be considered.

Perhaps a stronger relationship between Piaget's cognitive development and political understanding would emerge if a more elaborate and varied set of assessment procedures for cognition were utilized. Piaget (1972) has suggested that, unlike the early stages of reasoning, formal operational reasoning may not be applied to all problems at the same time. Inclusion of more tasks may identify more accurately those students who have completed transition to predominantly formal thought. It may be that these developments are in fact more closely related than the present data indicate.

The political understanding measure in the present study was an assessment of a child's comprehension of the Canadian political system. A stronger relationship between political and cognitive development may have emerged if a different measure of political development had been used. Others who have reported strong relationships between political (Adelson, 1971; Merelman, 1969, 1971) and moral development (Kohlberg, 1963, 1969) to cognition have assessed reasoning about a political or moral dilemma rather than a specific system. The child is required to reason about what he/she thinks is morally or politically the thing to do in a given hypothetical situation. Perhaps such reasoning requires more complete formal thinking than comprehending a given political system. However, recently Kuhn, Langer, Kohlberg, & Haan (1977) report that while formal operations appears to be necessary for both advanced moral and political development, there is weaker evidence to support formal operations being necessary for principled social concept level.

A major task that remains is to determine more adequate assessment measures of both intellectual and political developments in order

to clarify the relationships between developments in both of these areas.

As predicted in Hypothesis 4, there were differences in political understanding between males and females. Differences also emerged in political knowledge. What was perhaps somewhat surprising was the magnitude and consistency of the sex differences. In light of the changing role of women and the attention paid to sex-role stereotyping, the clear superior performance of males was not expected to such a degree.

These differences are in agreement with the proposition about the lower degree of political involvement among North American women (Maghami, 1976). Men typically show up more often at the polls, have engaged more often in political organizations and have manifested greater political awareness and concern (Lane, 1959; Lipsitt, 1960; Richards, 1973). Male dominance has been noted as well at all levels of government, where men have clearly overshadowed women in power and numbers and continue to do so. Political socialization assumes that the political habits of people are formed primarily before adulthood. The differences in orientations of men and women to politics result from the same dynamics of childhood learning as other sexual differences. Generally speaking, boys become boys by modeling and being reinforced for behaving like men, whereas girls become girls by modeling and being reinforced for behaving like women. Even as early as the fifth grade, adult patterns in political development seem to be reflected. The realities and the symbols have produced a picture of the adult world that at an early age lead girls to become less interested in and knowledgeable about politics than boys. Interestingly,

the interviewers noted that at all grade levels examined, girls were more likely to comment that they "don't know much about politics" or were "not interested" than boys. The frequency of these comments seemed to increase with grade in keeping with the increasing gap between males and females' understanding of and knowledge about politics.

Interestingly, such differences between the sexes appear not to be confined to the world of politics. Males also outperformed females on the Piagetian measures of cognitive development. Although acquisition of Piagetian formal operations has been much less investigated than concrete operations (Neimark, 1975), sex differences have been reported (Dulit, 1972) favouring boys on the Piaget and Inhelder formal operational tasks. Similarly, Keating and Schaefer (1975) report sex differences favouring boys on these tasks. In line with the present interviewers' impressionistic observation, these authors reported that girls appeared on the average to be less involved in and committed to the solution of the problems and more willing to "live with" an unsatisfactory answer even when they themselves perceived it as such. In this study, girls were noted to say that they could do no more, and often failed to attempt more even while claiming that they knew their solution was not correct. Boys, on the other hand, were more likely to ask that they could have more time and to insist that they could, with time, succeed. There is the possibility of the effect of interviewer bias since both interviewers were women, but these results are consistent with those of the Keating and Schaefer study in which this factor was controlled.

Perhaps females are not less competent than males but rather 'perform' at a lower level. It is possible that females' performance may have been enhanced by providing some external motivation in order to ensure that they adequately attend to the tasks presented.

Maccoby and Jacklin (1974) concluded that there was little support for the hypothesis that females are less task oriented than males. It is important to note that Maccoby and Jacklin's review and conclusion were restricted primarily to the behavior of children. As Block (1976) has observed, the likelihood of finding sex differences in psychological variables tends to increase with age. That evidence of sex differences in task orientation may be found more readily among late adolescents and adults was confirmed by Schneider and Melburg (1979) who concluded that among college students, males are more task oriented on a wide variety of indices.

It is suggested that differences between males and females reflect a motivational or style characteristic with respect to these tasks and perhaps a general characteristic emerging in full form in adolescence which influences the general decline of women in academic concerns and interests as well as more general social concerns (e.g., politics).

Engagement in extra-curricular activities which were thought to enhance role-taking skills was found to be related to political understanding as hypothesized. However, as was cognitive development, it was assumed in more powerful predictor variables. Engaging in such activities may not operate by stimulating general cognitive development as suggested by Kohlberg (1968), but rather affect

development by increasing one's information of the particular concept under development.

It has long been assumed, particularly by educators (Patrick, 1969; Abramson, 1970), that an important underlying function of the educational system is to support a democratic political system by producing concerned citizens of the type found in a classical democracy--that is, citizens interested in the social and political affairs of the changing environment.

These results, particularly those at the secondary educational level, tempers any enthusiasm educators might have developed from early studies (Easton & Dennis, 1965; Greenstein, 1965; Hess & Torney, 1967), for the role of the school as a "democratizing influence." Even at the eleventh grade level, many children did not possess an adequate understanding of their own political system.

These results and others (Langton & Jennings, 1968; Merelman, 1972) question the value of high school in promoting knowledgeable citizens. The political knowledge measure was primarily an assessment of the students' ability to identify current parties. It would be expected that at least a reasonably informed adult citizen would possess such information. Nevertheless, these students possessed very low levels of knowledge even though the oldest of the students were nearing the completion of high school.

Educators should not only be concerned with students' general cognitive development and acquisition of information, but also with promoting understanding in all areas. Perhaps, as Vygotsky (1962) suggests, development in other areas will promote cognitive development. Educators should note the general low level of

political development in Canadian school children and take steps to increase instruction in the area.

Implications and Suggestions for Future Research

These results can be considered to be equally consistent with both a Piagetian and a Vygotsky position. A relationship between political and cognitive development was evident. Future research should attempt to comparatively evaluate the two positions and thus, clarify the nature of the relationship between political and cognitive development.

More research is needed to clarify the importance of information in developing political understanding. Variables that are critical in one person's becoming more informed than the next and the explanation of why political information may lead to the development of political understanding needs to be investigated.

Since differences between males and females in political understanding and other measures were evident even at the lowest grade level studied here, it would be advisable to study younger children in order to determine when such differences begin to appear.

The suggestion that there is a motivational or style characteristic that results in inferior performance by females needs to be investigated. Further, how to avoid such a style needs to be examined.

The rush of enthusiasm for studying the pre-adolescent has been replaced. Gradually attention is turning to the entire life span. There is perhaps an initial temptation to regard adulthood or post-adolescence as a more or less undifferentiated span of life (at least until senescence sets in). But, there is much reason to think that

it is not at all undifferentiated politically. Certainly, these data point to the increasing gap between males and females on various measures. Perhaps the study of political socialization in a developmental context will be able to identify differences between particular stages in later development.

These results also point to the importance of assessing cognitive development rather than assuming it from age of subjects as many investigators have done (Adelson & O'Neil, 1966; Gallatin & Adelson, 1971; Sullivan, Marcus & Minns, 1975). Although the oldest of these students were at an age (17 years) at which it is generally assumed formal operations are present, clearly they were not functioning at this level. This was particularly true for the females. To merely assume level of cognitive development may lead to a misinterpretation of the relationship of cognition to political or other variables under investigation.

Sampling differences have been shown to make large differences especially when markedly different political climates are involved (Blacks, Middle-class whites, Quakers). In light of these findings and the knowledge of regional differences in political knowledge and attitudes of Canadian adults (Simeon & Elkins, 1974), generalization to Canadian children in areas other than the Atlantic are cautioned against. Future studies should be extended to include people from other regions of Canada before a comprehensive picture of Canadian children's political development can be painted.

APPENDIX A

Canadian Political Understanding

Interview and Scoring Procedures

MONARCHY

Who is the Queen?

Why do we have one?

What does she do?

How does she get to be Queen?

Do you think we need a Queen? Why? Why not?

Does she have helpers?

Who are they?

What do they do?

Are they useful?

GOVERNOR GENERAL

Have you heard of the Governor General?

What does he do?

How does a person get to be Governor General?

LIEUTENANT GOVERNOR

Have you heard of the Lieutenant Governor?

What does he do?

How does a person get to be Lieutenant Governor?

PRIME MINISTER (Premier) (Mayor)

How does a person get to be a Prime Minister? Premier? Mayor?

Who votes? What does he/she do?

EXECUTIVE

Does the Prime Minister have helpers?

Who decides who will help him?

How is this decision made?

What does his cabinet do?

PARLIAMENT

What is Parliament?

Why does Canada have one?

What do people in Parliament do?

Is it good to have a Parliament? Why?

SENATE

Why do we have a Senate?

What do Senators do?

How do you get to be one?

Do you think they work hard?

Do you think our Senate is useful? or good thing?

Why or why not?

FUNCTION OF OPPOSITION PARTY

What will happen if the winning party has only a few more seats than another party?

Is that a good thing or not?

What will happen if winning party has many more seats, say twice as many as other parties combined? Is that a good thing or not?

What do people who aren't on the winning team do? Is there a name for them? Is it good to have a lot of people not on government?

CONCEPTION OF ISSUES CONFLICT

Was assessed by examining questions relating to opposition party and voting.

CONCEPTION OF POPULAR SOVEREIGNTY

Could we have a bad Prime Minister?

What would he do?

What could we do?

FEDERAL/PROVINCIAL RELATIONSHIP

Why do we have two governments?

Do they do the same thing?

Who decides on how it is decided?

Is one the boss? Who rules what?

Are there ever arguments?

What happens when there are arguments?

Who do you think will win?

Why?

If child was unsure of what such an argument might consist of, the following example was given.

There is oil off the coast of Nova Scotia. The province says Nova Scotia owns it but the Federal (Canadian) government says it belongs to them. What might be done to settle such an argument. How do we know who is correct?

MASS vs. ELITE POWER

Could we ever had a bad Prime Minister?

What would he do to be bad?

What could we do?

Could there ever be a bill that was made into law which is not good for the people of Canada? e.g., Government decided everyone had to go to school until 25. Lots of people against it.

If that happened, is there anything we could do about it?

ELECTORAL PROCESS AND VOTING

What happens when there is an election?

Who can be a candidate?

If you want to run for office do you have to belong to a party?

Does it cost money to be a candidate?

Where do you get the money?

If you want to become a candidate and belong to a party, how do you become a candidate for that party?

What do you do when you become a candidate?

What happens on election day?

What does voting mean?

Why do we vote?

Will you vote when you are older? Why? Why not?

Do you know who you will vote for?

Why will you vote that way?

ELECTION OF THE PRIME MINISTER (PREMIER)

How does one get to be Prime Minister (Premier)

Who votes?

Does everyone in Canada (Nova Scotia) vote?

THE JUDICIARY

When a bill comes to be a law who sees to it that it is followed?

What happens if there is an argument over the law? For example, if some say it means one thing and others say it means something else?

Is there anyone who decides who is right?

How do you get to be a judge?

Do they belong to a party?

If the child was unsure of what such an argument might be, the following example was given.

A law was made that said that all children must be off the street by 8 p.m. If children did not obey they would be fined.

A person 15 years old received such a fine but refused to pay since she believed that children meant anyone younger than 14.

Is there anyone who decides if she is right or not?

SCORING

QUEEN

1. Child knows Queen is special (e.g. dresses up, wears crown).
2. Knows Queen. Does not distinguish between real and ceremonial power.
3. Knows Queen is in ceremonial position.

PRIME MINISTER

1. Does not know Prime Minister.
2. Knows Prime Minister. Knows he is voted in. Sees him similar to Premier.
3. Knows Prime Minister and that he is different from and similar to Premier. Knows he is head of the Canadian government.

PREMIER

1. Does not know Premier.
2. Knows Premier and that he is voted in. Sees him like Prime Minister.
3. Knows that Premier's position is similar to and different from that of Prime Minister even if can't describe tasks accurately.

GOVERNOR-GENERAL

1. No idea of Governor-General
2. Knows about the Governor-General. Does not distinguish between ceremonial and real power.
3. Knows Governor-General is in a ceremonial position, representing the monarchy in Canada.

LIEUTENANT-GOVERNOR

1. No idea of Lieutenant-Governor.
2. Knows about the Lieutenant-Governor. Does not distinguish between ceremonial and real power.
3. Knows Lieutenant-Governor is in a ceremonial position representing the Governor-General (monarch) in the province.

PARLIAMENT

1. No idea of what Parliament is.
- 1.5 place.
2. Parliament is associated with a place where people talk or a group of people who talk or make laws.
- 2.5 Group of people, different sides.
3. Sees parliament made up of parties. Knows parties differ. Sees it as conflict without cause--just is.
- 3.5 Argue about laws or government policies.
4. Conception of Parliament made up of parties competing for the right to exercise power and only one of them doing so. A conception of parliament passing laws which reflect the will of the people. An understanding of conflict being issue based. Conception of party system as a whole.

EXECUTIVE

1. No idea who helps him.
- 1.5 Helps chores, typing, etc., non-political type of help.
2. Does not distinguish between executive and legislative. Helpers may be Premier, Governor-General, etc. People who help him make decisions.

Representatives help him.

2.5 Party helps him to run country.

3. Recognizes there are special "ministers" or "cabinet" like board. Helps Prime Minister in decisions, separate from legislature but doesn't differentiate between ministers.

3.5 Knows cabinet does different jobs but can't identify.

4. Distinguishes between the executive and legislative parts of government (structure of government). Recognizes the multiplicity of governmental activities (different ministers in charge of different things). May see legislative (private members) as helpers too, but in terms of being in the government--representing the people.

FEDERAL-PROVINCIAL RELATIONS

1. No idea of federal-provincial relations.

1.5 Knows there is one government. Distinctly identifies 1 of the

2. 1 is all we need.

2. Some notion there are two governments. See them as separate.

2.5 One as boss. Awareness of autocratic relationship or Prime Minister as the boss.

3. Realization of two different governments. Gives them parallel tasks, aware of relationships between the two, federal supercedes provincial, bigger, etc.

3.5 Some awareness of non-overlapping functions.

4. Sees two governments--different and similar tasks. Realizes conflict over issues. Sees multiple relationships between the governments even if can't describe accurately.

Idea of hierarchy with Canadian government more powerful.

Recognizes mechanism that allows resolution.

ISSUES-CONFLICT

1. No idea of conflict. No preference. Don't know of vote.

2. If state preference, no understanding of why or State
"I like person." Not someone mean, trustworthy.

2.5 Vote for best one or one I want best for me. What they'll do.

3. Sees two sides and that two sides are different.

4. Idea of issue conflict. Child is aware of issues and conflicts
over policy is seen as central to whole idea of politics.

May derive policy disputes from group interests and general
ideologies.

MASS vs. ELITE POWER

1. Yes, arrest him. He is a bad person.

1.5 All humans can be bad, can be criminal, cruel.

2. Can't have bad Prime Minister or sees bad Prime Minister as
someone who would not do something in his job, put people in jail, be
lazy, not lay down the laws.

Do about it -- gets fired by Queen or someone else.

2.5 Make laws hard. Harms others (not themselves) in political
sense, e.g., steal because is Prime Minister. Could elect another -- law
no sense that this is system.

3. Sees bad Prime Minister as someone who fails to do his job. Sees
authority with the political elite not with mass, who have a sanction only

in extreme circumstances. Something to do with office for personal gain.

4. See bad Prime Minister as a person who takes policy stances people disagree with, against majority opinion, or takes some plausible political action that in fact is bad for the country. Sees vote as revocable act of choice and election as a sanction which can be used against an unsatisfactory Prime Minister.

SENATE

1. Does not know senate.

1.5 Heard of it in U.S. or not in Nova Scotia.

2. Part of government. Not sure, rules, voted in. Advisors.

2.5 Separate from Parliament. Senate seen as ministers.

3. Sees them as part of government, helping to rule and may know that they are appointed.

3.5 Pass bills too.

4. Knows the senate acts as a check, functions as an upper house. Knows provinces have no senate.

FUNCTION OF OPPOSITION PARTIES

1. No idea. One party.

1.5 Knows Parties. Can name. Knows there is more than one party.

2. Knows there are parties and have idea of conflict between parties.

2.5 Knows parties and one party controls.

3. Describe opposition party as being in conflict with major party in the sense of competing in elections.

3.5 Opposition

few or a lot

Don't have grasp on both or idea of check

Personalistic

4. Sees opposition party as representing different points of view. Could serve as check on government, or also hinderance in advancing legislation.

ELECTORAL PROCESS AND VOTING

1. No idea of elections.

2. Idea of vote as a decision-maker. Direct election of everyone-- no idea of general elections with people voting for MPs who determine, by Party Majority, who is to be Prime Minister (premier).

2.5 Knows few elect either Prime Minister or Premier. Unclear as to details. Knows Prime Minister or Premier.

3. Know everyone has a say in the appointment of political figures. Have idea of general election, with people voting for members of Parliament who determine, by party majority, who is to be Prime Minister (premier).

Vote is seen as a revocable act of choice and election as a sanction which can be used against an unsatisfactory incumbent.

4. Differences in opinion or policy disagreements are seen as underlying reason for electoral competition.

JUDICIARY

1. No idea of judiciary or who decides.

2. Law--policemen; Prime Minister; Queen or Government.

3. Courts

4. Judiciary interprets laws, supposedly unbiased. No political affiliation.

ELECTION OF PRIME MINISTER

1. No idea of election of Prime Minister.

2. Knows Prime Minister is elected but thinks he is directly elected by all voters.

2.5 Has idea that not all vote for Prime Minister.

3. Knows Prime Minister is first elected leader of party by party members, and that he is leader of party with most seats in the Parliament.

ELECTION OF PREMIER

1. No idea about election of Premier.

2. Knows Premier is elected but thinks he is directly elected by all voters.

2.5 Has idea that not everyone votes for Premier.

3. Knows Premier is first elected as party leader by party members and that he is leader of party with most seats in the Provincial Legislature.

LEVELS OF CHILDREN'S UNDERSTANDING OF POLITICS

1. The child confuses the political and non-political world. There is no conception of politics as a distinct sphere of activity.

2. The child identifies a distinct political world. Knows political figures but shows confusion among them--in names, titles, jurisdictions, methods of appointment and tasks. Does not distinguish between levels of government, between executive and legislative or between ceremonial positions and positions of real power.

Idea of political person is idea of telling people what to do. No idea of hierarchy--one person gives instructions.

Know about voting and that people get appointed by voting. Know of political parties.

3. The child places major political leaders in vertical relationships but focuses on one link at a time. He/she has idea of political figures having opposing intentions and disagreements over things to be done. The child knows of 'laws,' that political power is institutionalized and not simply personal and that there is a permanent apparatus of power. The child knows the territory of each of the major political figures and gives them parallel tasks in different areas. The child knows that everyone votes to have a say in appointment of political figures; that parties are in conflict with each other, that parties produce leaders and parties are units of government.

4. The child has a firm idea that different political positions have different tasks associated with them even if can't describe them accurately.

Has a perception of multiple relationships among political actors,


conception, hierarchical role structure. Realizes the instrumental character of political action and the fact that different courses of action are supported in order to realize different goals.

Realizes that power exercised by political figures derives not from above but below--conception of political office holders as servant of popular will appointed and dismissed according to that will. Conception of parties competing for right to exercise power, and only one of them doing so at a time.

APPENDIX B
Political Knowledge Questionnaire

APPENDIX B

Political Knowledge Questionnaire

1. Who is the Prime Minister of Canada?
 2. How long has he been Prime Minister?
 3. What party does he belong to?
 4. What are the three main parties in the Federal Parliament?
 5. Which is the official opposition party?
 6. Who is the leader of the opposition party?
 7. How many years does a Member of Parliament serve in Parliament?
 8. Who is the Governor General of Canada?
 9. Who is the Minister of External Affairs?
 10. Who is the Minister of Fisheries?
 11. Who does the Governor General represent?
 12. Who is Canada's Chief Justice?
 13. How long can a person be a Senator?
 14. Name a member of Parliament?
 15. Who is the Premier of Nova Scotia?
 16. How long has he been Premier?
- 

17. What Party does he belong to?
18. What are the parties in the Provincial Legislature?
19. Which is the Opposition Party?
20. Who is the leader of the Opposition Party?
21. Who is the Provincial Finance Minister?
22. Who is the Provincial Minister of Education?
23. Who is the Lt. Governor of Nova Scotia?
24. Who does he/she represent?
25. Who is the Provincial Fisheries Minister?
26. Name a member of the Nova Scotia Legislature.
27. Who is the Mayor of Dartmouth?
28. How long has he/she been mayor?
29. How many Alderman are there in Dartmouth?
30. How long is an Alderman elected for?
31. How often does City Council meet?
32. Name one Alderman.
33. Who is the President of the United States?

34. To what party does he belong?
35. What are the major political parties in the United States?
36. Who is the Secretary of State?
37. Who is the Prime Minister of Britain?
38. Who is the President of Egypt?
39. Who is the President of France?
40. Name one country with a dictatorship.
41. Name one country ruled by a King or Queen.
42. Name one country where the major party is socialist.

APPENDIX C

Extra-Curricular Activities Questionnaire

1. What sports to you play?

* 2. Have you ever been on a team?

3. If yes, name the teams and the number of years you played on the team:

Team

No. of Years

* 4. Have you ever been team captain?

5. If yes, how many times have you been captain?

* -6. Have you ever belonged to any clubs?

7. If yes, list the clubs you have belonged to:

8. Have you ever had a special job in any of these clubs? (for example, have you ever been President or Secretary?)

* 9. Do you have class elections?

*10. If yes, have you ever tried to be elected?

Class President: _____
Secretary: _____
Treasurer: _____
Vice President _____
Other: _____

*11. Have you ever been elected:

Class President: _____
Class Secretary: _____
Class Treasurer: _____
Class Vice President _____
Other: _____

*Included in total score

APPENDIX D
Cognitive Development Interview
and Scoring Procedures

The child was asked the following questions. The interviewer always ascertained that the child understood it well. When it was necessary, the wording was changed using terms more familiar to the child. The interviewer was careful never to suggest more to the child than is included in the questions.

Conservation of weight

The child was presented with two identical balls of plasticine.

"Do you think these balls weigh the same?"

If the child did not think they weighed the same then he/she was asked to take away or add to them until he/she believed they weighed the same.

One of the balls was transformed into a sausage shape, and the child was asked the following question:

"Do the two balls still weigh the same or is one heavier than the other one?"

Why do you think that?

The plasticine was changed into the shape of a pancake.

The above questions were repeated.

If the child gave different answers to the two sets of questions the procedure was repeated using another different shape.

Class inclusion

The child was presented with different shapes and was asked to "please put together the things that you think go together" and then asked questions bearing on inclusion relations.

"Which would make a bigger bunch: all of the rectangles or all of the shapes?"

This questioning determined the child's ability to think simultaneously in terms of the whole and its parts.

Conservation of volume

The child was presented with two identically shaped cylinders of different weights and was asked "are they the same weight or is one heavier? Which is the heavier one?"

Also there were the two identical jars partly filled with water.

"Will the cylinders push the water up the same in both jars or will one cylinder push the water up more?"

"Which one? Why do you think that?"

The child was allowed to investigate by placing the cylinders in the jars. Then the child was asked why he/she thought what happened, happened.

Thinking about One's Thinking

The child was shown the following as the interviewer read it. The interviewer told the child that she would ask him/her a question about what she was reading.

Blonde hair turns green on St. Patrick's day

Barbara has coloured her hair blonde

It will turn green on St. Patrick's day

The child was asked:

"Do you think it is true that Barbara's hair will turn green on St. Patrick's day?"

"Why" or "Why not?"

Proportionality

The child was presented with a card. On one side was a 10 inch stick man and the other a 6 inch stick man. There was a chain of large and one of the small paper clips and other single clips.

The child was asked the following:

"Please measure the length of the stick man (tall man) using these paper clips (large)."

"Please measure this stick man (short man) using the large clips."

Then the child was asked to measure the length of the small stick man using these paper clips (small).

Then the child was asked to predict how many of the small paper clips it will take to measure the other stick man.

"How many of these paper clips will it take to measure the other stick man?"

"How did you decide that?"

Then the child measured it. If the child did not predict correctly the child was asked if he/she could now determine a way to do it without measuring with the clips.

SCORING - Cognitive Development

Conservation of Weight

1. No conservation.
2. Transitional-logical awareness and justification but inconsistently employed.
3. Conservation with a statement of logical justification (e.g., reversibility, reciprocity, negation).

Class Inclusion

1. No constant grouping--small partial alignments. No guiding plan like a system of rules which organize the way in which he/she arranges objects.
2. Collections which appear to be real classes. Forms classes and arranges them hierarchically, but fails to comprehend one crucial aspect of the hierarchy she/he has constructed. No understanding of the relations among different levels of the hierarchy.
3. Construct hierarchical classifications and comprehends inclusion.

Conservation of Volume

3. Does not predict accurately.
4. Predicts incorrectly but explains event after seeing it.
5. Successful prediction and explanation.

Thinking about One's Thinking

3. Blonde hair does not turn green on St. Patrick's Day. No reasoning from the premise, 'Blonde hair turns green.'

4. 'If natural', turns green.
5. Formal operational child will be able to start with premise and reason from that. The child will answer yes when asked if last statement is correct and be able to justify it.

Proportionality

3. Incorrect prediction, e.g. adds.
4. Know it is not addition, has some idea of proportionality but no idea of how to do it.
5. Uses ratios to arrive at answer.

APPENDIX E
Additional Descriptive Statistics

Means (Standard Deviations) for Political
Understanding by Grade

	Grade		
	5	8	11
Queen	1.9 (0.50)	2.1 (.44)	2.6 (.42)
Prime Min.	2.1 (0.25)	2.4 (.51)	2.8 (.40)
Premier	1.9 (0.50)	2.4 (.51)	2.8 (.40)
Mayor	1.7 (0.60)	2.4 (.50)	2.6 (.51)
Governor Gen.	1.1 (0.34)	2.1 (.68)	2.2 (.91)
Lieut. Gov.	1.0 (0.00)	1.5 (.63)	1.8 (.83)
Parliament	1.7 (0.48)	2.2 (.35)	2.9 (1.07)
Executive	1.8 (0.52)	2.3 (.60)	2.8 (.81)
Senate	1.1 (.29)	1.8 (.72)	2.5 (1.13)
Opp. Party	1.3 (.40)	2.6 (.94)	3.3 (.63)
Elec. of Pr. Min	2.0 (.29)	2.0 (.29)	2.4 (.51)
Elec. of Premier	1.8 (.44)	2.2 (.40)	2.5 (.50)
Elections	2.0 (.13)	2.1 (.39)	2.8 (.83)
Fed. prov. relations	1.3 (.51)	2.2 (.70)	2.7 (.73)
Issue con- flict	2.2 (.44)	2.7 (.36)	3.3 (.54)
Mass vs. elite power	2.1 (.47)	2.6 (.48)	3.0 (.66)
Judiciary	1.8 (.54)	1.9 (.34)	2.9 (1.09)

Means (Standard Deviations) for Political
Understanding by Sex

Variable	Females	Males
Queen	2.2 (.54)	2.2 (.55)
Prime Minister	2.3 (.44)	2.6 (.50)
Premier	2.2 (.57)	2.6 (.58)
Mayor	2.1 (.65)	2.3 (.64)
Governor General	1.6 (.71)	2.0 (.91)
Lt. Governor	1.4 (.58)	1.5 (.78)
Parliament	2.1 (.70)	2.4 (.96)
Executive	2.1 (.61)	2.6 (.84)
Senate	1.7 (.77)	2.0 (1.10)
Opposition Party	2.1 (1.05)	2.8 (1.01)
Election of P.M.	2.2 (.40)	2.2 (.45)
Election of Premier	2.1 (.45)	2.2 (.59)
Elections	2.2 (.46)	2.5 (.75)
Federal-Prov. Relations	1.7 (.64)	2.4 (.94)
Issues Conflict	2.6 (.50)	2.9 (.75)
Mass vs. Elite Power	2.4 (.43)	2.7 (.78)
Judiciary	2.1 (.85)	2.3 (.90)
Political Understanding	34.8 (7.06)	40.0 (10.15)

Means (Standard Deviations) for Political
Understanding by Grade and Sex

Variable	Grade					
	5		8		11	
	Female	Male	Female	Male	Female	Male
Queen	1.9 (.35)	1.9 (.64)	2.0 (.54)	2.1 (.35)	2.6 (.50)	2.6 (.35)
Prime Minister	2.0 (0.00)	2.1 (.35)	2.1 (.35)	2.8 (.46)	2.6 (.52)	3.0 (.00)
Premier	1.8 (.46)	2.0 (.54)	2.1 (.35)	2.8 (.46)	2.6 (.52)	3.0 (.00)
Mayor	1.5 (.53)	1.9 (.64)	2.1 (.35)	2.6 (.52)	2.6 (.52)	2.5 (.54)
Governor Gen.	1.0 (.00)	1.3 (.46)	1.8 (.46)	2.4 (.74)	2.1 (.83)	2.3 (1.04)
Lt. Governor	1.0 (.00)	1.0 (0.00)	1.5 (.54)	1.5 (.76)	1.8 (.71)	1.9 (.99)
Parliament	1.6 (.52)	1.8 (.46)	2.1 (.18)	2.3 (.46)	2.5 (.93)	3.3 (1.13)
Executive	1.6 (.35)	1.9 (.62)	2.1 (.69)	2.6 (.42)	2.4 (.50)	3.2 (.92)
Senate	1.1 (.35)	1.1 (.23)	1.8 (.80)	1.9 (.69)	2.0 (.85)	3.0 (1.20)
Opp. Party	1.1 (.23)	1.5 (.46)	2.0 (.93)	3.2 (.46)	3.1 (.73)	3.6 (.42)
Elec. of P.M.	2.1 (.18)	1.9 (.35)	2.0 (.38)	2.1 (.18)	2.4 (.52)	2.5 (.54)
Elec. of Prem.	1.9 (.42)	1.8 (.46)	2.0 (.27)	2.3 (.46)	2.4 (.50)	2.6 (.52)

cont'd.....

Variable	Grade					
	5		8		11	
	Female	Male	Female	Male	Female	Male
Elections	2.1 (.18)	2.0 (.00)	2.0 (.46)	2.3 (.27)	2.5 (.54)	3.1 (.99)
Fed.-Prov. Relations	1.1 (.35)	1.5 (.60)	1.8 (.46)	2.6 (.73)	2.6 (.54)	3.2 (.59)
Issues	2.1 (.23)	2.3 (.60)	2.6 (.32)	2.8 (.37)	3.1 (.42)	3.6 (.52)
Mass vs. Elite power	2.2 (.37)	2.1 (.56)	2.5 (.53)	2.6 (.44)	2.6 (.32)	3.4 (.62)
Judiciary	1.9 (.64)	1.8 (.46)	1.9 (.35)	1.9 (.35)	2.6 (1.19)	3.1 (.99)

APPENDIX F
Additional Statistical Analyses

F Ratios for Political Understanding

Source	df	Queen	Prime Minister	Premier	Mayor
Grade	2	10.13**	18.44**	19.31**	12.40**
Sex	1	0.21	13.83**	11.29**	2.74
Grade x Sex	2	0.07	2.05	0.79	1.60

	df	Gov. Gen.	Lt. Gov.	Parliament	Exec.
Grade	2	11.77**	6.89**	11.96**	11.29**
Sex	1	2.91	0.05	3.15	7.94**
Grade x Sex	2	0.59	0.05	0.99	0.54

	df	Senate	Opp. Party	Elec. P.M.	Elec. Prem.
	2	13.19**	48.30**	7.04**	9.62*
	1	2.62	16.68**	0.00	0.66
	2	2.19	2.25	0.74	1.37

Cont'd.....

	df	Elections	Fed/Prov.	Issues	Mass vs. Elite
	2	11.02**	26.00**	29.51**	12.86**
	1	3.33	18.28**	6.43*	4.29*
	2	1.79	1.06	1.11	4.55*

Source	df	Judiciary
Grade	2	10.44**
Sex	1	0.34
Grade x Sex	2	.80

** p < .01

* p < .05

U

Ratios for Cognitive Development

Source	df	Weight	Class Inclusion	Volume	Thinking	Proportionality
Grade	2	3.32*	11.67*	5.52**	7.34	9.52**
Sex	1	0.36	11.67*	3.54-	2.74-	2.73-
Grade x sex	2	1.90	11.67	0.57	0.71	2.86-

** .01

* .05

APPENDIX G

Means for Political Knowledge by Cognitive
Level and Political Understanding

Political Understanding	Cognitive Level			
	Concrete	Transitional	Formal	
2	5.2 N=15	4.3 N=4		x = 5.0
3	13.5 N=8	12.4 N=10	16.7 N=3	x = 13.4
4	32 N=1	26.7 N=3	27.8 N=4	x = 27.9
	x = 9.1	x = 13	x = 23	x = 12.5

REFERENCES

- Abramson, P. R. Political socialization in English and American secondary schools. High School Journal, 1970, 54, 68-75.
- Abramson, P., & Ingelhart, R. The development of systematic support in four western democracies. Comparative Political Studies, 1970, 2, 419-442.
- Artenton, F. C. The impact of Watergate on children's attitudes toward political authority. Political Science Quarterly, 1974, 89, 269-288.
- Artenton, F. C. Watergate and children's attitudes toward political authority revisited. Political Science Quarterly, 1975, 90, 477-496.
- Belovari, S., Cook, G., Murphy, J., Nicholson, N., & Williamson, J. Political orientations in students in Southern Ontario. The History and Social Science Teacher, 1976, 11, 33-42.
- Blatt, M., & Kohlberg, L. The effects of a classroom discussion program upon the moral levels of pre-adolescents. Merrill-Palmer Quarterly, 1969.
- Block, J. H. Assessing sex differences: Issues, problems, and pitfalls. Merrill Palmer Quarterly, 1976, 22, 283-308.
- Broughton, G. The cognitive developmental approach to epistemology and its relation to logical and moral stages. Paper presented at the Society for Research in Child Development. Denver: April, 1975.
- Campbell, A., Converse, P., Miller, W., & Stokes, D. The American Voter, New York: 1960.
- Connell, R. W. The child's construction of politics. Victoria: Melbourne University Press, 1971.

Dawson, R., & Prewitt, K. Political socialization, 1969, Boston:

Little, Brown and Co.

Dennis, J., & McCrone, D. Pre-adult development of political party

identification in western democracies. Comparative Political Studies,

1970, 26, 243-263.

Dulit, E. Adolescent thinking a la Piaget: The formal stage. Journal of

Youth and Adolescence, 1972, 1, 281-301.

Easton, D., & Dennis, J. The child's image of government. The Annals of

American Academy of Political and Social Science, 1965, 361, 40-57.

Easton, D., & Dennis, J. Children in the political system. New York:

McGraw-Hill, 1969.

Easton, D., & Hess, R. The child's political world. Midwest Journal of

Political Science, 1962, 6, 229-246.

Flavell, J. The developmental psychology of Jean Piaget. New Jersey:

Van Nostrand, 1963.

Gallatin, J., & Adelson, J. Legal guarantees of individual freedom: A

cross-national study of the development of political thought. Journal

of Social Issues, 1971, 27(2), 93-108.

Green, E. The political socialization of black inner-city children. In

A. Orum (Ed.), The seeds of politics: Youth and politics in America.

New Jersey: Prentice-Hall, Inc., 1972.

Greenberg, E. S. Children and government: A comparison across racial

lines. Midwest Journal of Political Science, 1970, 14, 249-275. (a)

Greenberg, E. S. Black children in the political system. Public Opinion

Quarterly, 1970, 34, 333-345. (b)

Greenstein, F. The benevolent leader. American Political Science Review, 1960, 54, 934-943.

Greenstein, F. Children and politics. New Haven: Yale University Press, 1965.

Greenstein, F. The benevolent leader revisited: Children's images of political leaders in three democracies. American Political Science Review, 1975, 69, 1371-1398.

Haier, E., & Keating, D. Moral reasoning, formal operations and intellectual precocity. Unpublished research. University of Minnesota, 1975.

Hess, R., & Torney, J. The development of political attitudes in children. New York: Armour Press, 1967.

Hoffman, M. L. Moral development. In P. H. Mussen (Ed.), Carmichael's Manual of Child Psychology. Vol. 11. New York: Wiley, 1970.

Hyman, H. Political socialization. New York: The Free Press of Glencoe, 1959.

Inhelder, B., & Piaget, J. The growth of logical thinking from childhood to adolescence. New York: Basic Books, 1958.

Jahoda, G. Children's Concepts of nationality: A critical study of Piaget's stages. Child Development, 1964, 35, 1081-1092.

Jaros, D., Hirsch, H., Fleron, F. The malevolent leader: Political socialization in an American subculture. American Political Science Review, 1968, 62, 564-575.

Jaros, D., & Kolson, K. The multifarores leader: Political socialization in Amish, "Yanks," and Blacks. In R. Niemi (Ed.), Politics of Future Citizens, San Francisco: Jossey-Bass, 1974.

- Keating, D., & Schaefer, R. Ability and sex differences in the acquisition of formal operations. Unpublished Manuscript, University of Minnesota, 1975.
- Kohlberg, L. The development of modes of moral thinking and choice in the years ten to sixteen. Unpublished doctoral dissertation, University of Chicago, 1958.
- Kohlberg, L. Moral development and identification. In H. W. Stevenson (Ed.), Child Psychology. Sixty-second yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1963.
- Kohlberg, L. Development of moral character and ideology. In M. L. Hoffman and L. W. Hoffman (Eds.), Review of Child Development Research. Vol. 1, New York: Russell Sage Foundation, 1964.
- Kohlberg, L. A cognitive-developmental analysis of children's sex-role concepts and attitudes. In E. E. Maccoby (Ed.), The development of sex differences. Stanford, Calif.: Stanford University Press, 1966.
- Kohlberg, L. Moral development. In International Encyclopedia of the Social Sciences. New York: MacMillan, 1968.
- Kohlberg, L. Stage and sequence: The cognitive-developmental approach to socialization. In D. H. Goslin (Eds.), Handbook of Socialization: Theory and Research. Chicago: Rand McNally, 1969, p. 347-481.
- Kohlberg, L., & Kramer, R. Continuities and discontinuities in childhood and adult moral development. Human Development, 1969, 12, 93-120.

- Kohlberg, L., & Gilligan, C. The adolescent as a philosopher: The discovery of self in the post conventional world. Daedalus, 1971 1051-1086.
- Kohlberg, L., & Turiel, E. Moral development and moral education. In G. Lesser (Ed.), Psychology and Educational practice. Chicago: Scott, Foresman, 1971.
- Kohlberg, L., & Zigler, E. The impact of cognitive maturity on the development of sex-role attitudes in the years four to eight. Genetic Psychology Monographs, 1967, 75, 89-165.
- Kuhn, D., Langer, J., Kohlberg, L., Haan, N. The Development of Formal Operations in Logical and Moral Judgment. Genetic Psychology Monographs, 1977, 95, 97-188.
- Lane, R. E. Political Life. Ill: Glencoe, 1959.
- Langton, K. P., & Jennings, M. K. Political socialization and the high school civics curriculum in the United States. American Political Science Review, 1968, 62, 852-867.
- Lazarsfeld, B. F., Berelson, B., & Gaudet, H. The People's Choice. New York, 1944.
- Liebschutz, S., & Niemi, R. Political attitudes among black children. In R. Niemi (Ed.), The politics of future citizens. Calif.: Jossey-Bass, 1974.
- Lipsett, S. M. Political Man. Garden City, New York, 1960.
- Maccoby, E. E., & Jacklin, C. N. The Psychology of Sex Differences. Stanford, Calif.: Stanford University Press, 1974.
- Maghami, F. G. Political knowledge among youth: Some notes on Public Opinion Formation. Canadian Journal of Political Science, 1974, 7, 334-340.

- Merelman, R. The development of political ideology: A framework for the analysis of political socialization. The American Political Science Review, 1969, 63, 750-767.
- Merelman, R. The development of policy thinking in adolescence. The American Political Science Review, 1971, 65, 1033-1047.
- Merelman, R. M. The adolescence of political socialization. Sociology of Education, 1972, 45, 134-166.
- Neimark, E. D. Intellectual development during adolescence. In F. D. Horowitz, E. M. Hetherington, S. Scarr-Salapatik, and J. Siegal (Eds.), Review of Child Development Research: Vol. 4, Chicago, University of Chicago Press, 1975.
- Orum, A., & Cohen, R. The development of political orientations among black and white children. American Sociological Review, 1973, 38, 62-74.
- Pammett, J. The development of political orientation in Canadian school children. Canadian Journal of Political Science, 1971, 4, 132-140.
- Patrick, J. J. Implications of political socialization research for the reform of civic education. Social Education, 1969, 33, 15-3.
- Piaget, J. The Child's Conception of the World. New York: Harcourt, Brace, 1929.
- Piaget, J. The Psychology of Intelligence. New York: Harcourt, Brace, 1950.
- Piaget, J. The Construction of Reality in the Child. New York: Basic Books, 1954.
- Piaget, J. Intellectual evolution from adolescence to adulthood. Human Development, 1972, 15, 1-12.
- Piaget, J., & Inhelder, B. The Early Growth of Logic in the Child. (Trans. E. A. Lunzer, & D. Papert.) London: Routledge & Kegan Paul, Ltd., 1964.

Riccards, M. P. The Making of the American Citizenry: An Introduction to Political Socialization. New York: Chandler, 1973.

Rich, H. - The effect of college on political awareness and knowledge. Youth and Society, 1976, 8, 67-80.

Roig, C., & Billon-Grand, F. La socialisation politique des enfants. Cahiers de la foundation Nationale des sciences Politique, No. 163, Paris, 1968.

Schneider, F. W., & Melburg, V. Sex differences in person orientation and task orientation. Sex Roles, under editorial review.

Sears, D. Political attitude through the life cycle. San Francisco: W. H. Freeman, 1975.

Selman, R. Social cognitive understanding: A guide to educational and clinical practice. In T. Lockona (Ed.), Moral development and behavior. New York: Holt, 1976.

Sigel, R. Image of a President: Some insights into the political views of school children. American Political Science Review, 1968, 62, 216-227.

Simeon, R., & Elkins, D. Regional Political Cultures in Canada. Canadian Journal of Political Science, 1974, 7, 394-437.

Sullivan, J., Marcus, G., & Minns, D. The development of political ideology: Some empirical findings. Youth and Society, 1975, 7, 148-170.

Tolley, H. Children and war: Socialization to international conflict. New York: Teachers College Press, 1973.

Turiel, F. An experimental test of the sequentiality of developmental stages in the child's moral judgement. Journal of Personality and Social Psychology, 1966, 3, 611-618.

Vaillancourt, P. Stability of children's survey responses. Public Opinion Quarterly, 1973, 37, 373-387.

Vygotsky, L. Thought and Language. (Trans. E. Hanfmann & G. Vakar). MIT Press, Mass., 1962.

Ziblatt, D. High school extra-curricular activities and political socialization. Annals, 1965, 361, 20-31.

VITA AUCTORIS

Patricia Canning was born in St. John's, Newfoundland on March 16, 1950. She received her primary and secondary education in St. John's, Newfoundland. She graduated with a Bachelor of Arts (Honours) from the University of Prince Edward Island in 1971. In 1976, she received her Masters Degree in Developmental Psychology at the University of Windsor.

Presently, she is teaching at Mount St. Vincent University, Halifax, Nova Scotia.