

THE UNIVERSITY OF MANITOBA

THE ROLE OF SOCIAL CLASS BACKGROUND IN THE DEVELOPMENT  
OF A SERVICE ORIENTATION AMONG CANADIAN DENTAL STUDENTS

By

LARRY K. BREMNER

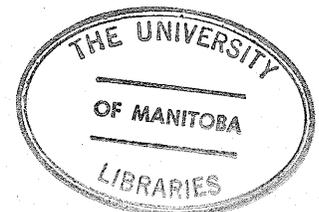
A THESIS

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

DEPARTMENT OF SOCIOLOGY

WINNIPEG, MANITOBA

AUGUST, 1977



THE ROLE OF SOCIAL CLASS BACKGROUND IN THE DEVELOPMENT  
OF A SERVICE ORIENTATION AMONG CANADIAN DENTAL STUDENTS.

by

LARRY K. BREMNER

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

Master of Arts

© 1977

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

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

## ABSTRACT

The importance of a service orientation to occupations claiming professional status is well documented throughout the occupational literature. By bringing together the areas of occupational recruitment and socialization the study examined the influence of social class background upon the development of a service orientation among Canadian dental students.

Data originally gathered during a national longitudinal study of Canadian dental students (1971-1974) were subjected to secondary analysis. Cumulative indices measuring the students' degree of service orientation at entry and exit were constructed, and together with a social class background variable, were subjected to statistical tests. It was found that upon entering the dental school the relationship between service orientation and social class background was negligible ( $r = .002$ ). Furthermore, the students displayed approximately the same degree of service orientation upon entry and exit regardless of social class background. The variation in the students' service orientation was found not to be influenced by social class background regardless of the type of school they were attending. These results led to the non-acceptance of all three hypotheses.

## ACKNOWLEDGEMENTS

I gratefully acknowledge the assistance of friends and colleagues whose unselfish sharing of knowledge aided in the completion of this thesis.

I would like to express my appreciation to the members of my committee for the time they have invested in the production of this thesis.

Dr. Angus E. Reid provided support, insights and criticism throughout the thesis, which were needed and appreciated. Through Dr. Reid I was able to receive support for the study from the Government of Canada, National Health Grant, 607-1017-21.

I would like to thank Dr. Alex Segal who gave freely of his time. His direction and guidance have been indispensable.

Also I would like to extend my thanks to Dr. O. Odum whose frank discussions and insights into dentistry were needed and appreciated.

Finally, to Svitlana, my wife, for her constant encouragement, understanding and never-ending support, thank you.

Larry K. Bremner

TABLE OF CONTENTS

<u>CHAPTER</u>		<u>PAGE</u>
I	SERVICE ORIENTATION AND THE PROFESSIONS	1
A.	Introduction	1
B.	The Dimensions of Professionalism	2
C.	Service Orientation: It's Theoretical Relevance	10
D.	Statement of Objectives	13
II	BECOMING A HEALTH PROFESSIONAL	15
A.	Recruitment: Anticipatory Socialization and Student Orientation upon Entering the Professional School	15
	Hypothesis I	21
B.	Secondary Socialization: Orientation Change in the School	21
	Hypothesis II	26
	Hypothesis III	26
III	METHODOLOGY	27
A.	Background of the Original Study	27
	Field Methods	28
B.	Operationalization	30
	Dependent Variable: Service Orientation	30
	Independent Variable: Social Class Background	33
	Test Variables: Sex, Mother Tongue, Marital Status, Size of Community, University	34
C.	Statistical Techniques Used in the Testing of Hypotheses	35
IV	THE DENTAL STUDENT: SERVICE ORIENTATION UPON ENTRY AND EXIT FROM THE PROFESSIONAL SCHOOL	38
A.	Recruitment: The Incoming Dental Student	38
	Background Characteristics	38
B.	Socialization: The Dental Student at Time of Exit	50
	Dental Education	50
C.	Findings: Hypothesis I	53
	Hypothesis II	57
	Hypothesis III	59
D.	Discussion	61

TABLE OF CONTENTS  
(continued)

CHAPTER		PAGE
V.	SUMMARY AND CONCLUSIONS	64
A.	Concluding Comments on the Development of a Service Orientation.	64
B.	Limitations of the Study	67
C.	Policy Implications	68
D.	Suggestions for Further Research	70

APPENDICES

- A. Questionnaire used in Study
  
- B. Factor Loadings of the Items used to create  
scale for measuring students' Service Orientation  
at Entry and Exit

BIBLIOGRAPHY

LIST OF TABLES

Table		Page
1.	Age at first thinking of a career in medicine, according to relationship to physicians.	17
2.	Frequency with which role models are named, according to time of decision.	18
3.	The overall response rates of students in each Canadian dental school while in their first and fourth years.	29
4.	Sex of incoming Canadian dental recruits as compared with Canadian medical recruits and the base population.	40
5.	Age of recruits upon entry to the dental school.	42
6.	Marital status upon entry to the dental school.	43
7.	Size of the home community of incoming dental students.	44
8.	Region of country from which entering dental students are drawn.	45
9.	Mother tongue of dental students entering in 1970.	47
10A.	Fathers' education for recruits entering in 1970.	48
10B.	Mothers' education for recruits entering in 1970.	49
11A.	Fathers' occupational background.	51
11B.	Social class background of recruits.	52
12.	Service orientation of first year Canadian dental students by social class background looking at the influence of the test variables.	55
13.	Level and amount of change in service orientation at entry and exit for overall sample.	56

LIST OF TABLES  
(continued)

Table		Page
14.	Level and amount of change in service orientation at entry and exit for overall sample by social class background.	58
15.	Students' service orientation mean scores at entry and exit by social class background and type of school.	60

## CHAPTER ONE

### SERVICE ORIENTATION AND THE PROFESSIONS

#### A. Introduction

This study examines the role played by social class background in the development of a 'service orientation' among Canadian dental students. In choosing this topic, an effort has been made to bring together two subject areas in the field of occupations and professions which have generally been treated separately: recruitment and socialization. A considerable amount of literature, pertaining to recruitment, has emerged in the last twenty years documenting the class origins of a wide variety of occupational groups (c.f. Becker, 1961; Porter, 1965; Merton, 1957; Reid, 1976.). While this work has contributed immensely to the understanding of patterns of social mobility in industrial societies, little effort has been made to understand the extent to which different social class backgrounds within an occupation contribute to variations in occupationally relevant attitudes and values. Likewise, studies of professional socialization (c.f. Clausen, 1968; Moore, 1970; Pavalko, 1971) although outlining a wide variety of factors which contribute to the development of these attitudes and values have thus far paid little attention to the role of social class background in this process.

In addressing the substantive issues in this study, the concept of professionalism as well as the significance of a service orientation to the professions and society will be described. A discussion of the theoretical relevance of a service orientation will be followed by a

review of the literature on occupational recruitment and socialization. Subsequently, specific hypotheses concerning the relationship between social class and professional service orientation will be developed, for testing in the present study.

B. The Dimensions of Professionalism

A major characteristic of modern society has been the increased professionalization of occupations; as Goode notes, an "industrializing society is a professionalizing society" (Goode, 1961). With the increased prevalence of professionalization in modern society has come a greater dependence of the members of contemporary society on the activities and skills of the professions. As Ritzer points out, "the more advanced a society is industrially, the more dependent it is on the professions and their expertise" (Ritzer, 1972:48). One of the outcomes of this ever increasing dependence has been the development of a large body of literature attempting to define the meaning of the concept 'profession'. Generally, it has been recognized that the term 'profession' does not imply a simple dichotomy between profession and non-profession but rather refers to a process occupations undergo involving a series of changes along specified dimensions (c.f. Wilensky, 1964; Caplow, 1964). These changes along what has been termed the 'occupational continuum' involve the acquisition of characteristics which indicate the degree of professionalization of the occupation. To facilitate comparisons between occupations and their degree of professionalization, a model has been developed which serves as an 'ideal type' of occupational organization.

Although components of professional models have varied, Hall

suggests that "there is a strong thread of common ideas throughout" (Hall, 1975:72). The professional model used here will be comprised of six of the most commonly used distinguishing characteristics of professionalism.<sup>1</sup>

Surfacing as one of the chief differentiating characteristics is a 'systematic body of theory' (c.f. Greenwood, 1957; Parsons, 1939; Hughes, 1965; Barber, 1965; Sherlock and Morris, 1967.). The premise that 'professions' are theoretically based is founded on the belief that the performance of a skill is the basic defining criterion for a less professionalized occupation. In comparison, professions are viewed as requiring the performance of a skill as well as mastery of the underlying theory. The inculcation of this theory occurs through prolonged training periods in the professional school. It is through the practical and intellectual experience undergone in the professional school that the neophyte acquires the technical competence and skills necessary for professional performance. As noted by Hughes, "it is part of the professional complex, and the professional claim, that the practice should rest on some branch of knowledge to which professionals are privy by virtue of long study" (Hughes, 1965:2). Moore emphasizes the importance of a body of theory by defining a profession as "an occupation whose incumbents create and explicitly utilize systematically accumulated general knowledge in solution of problems posed by a clientele" (Moore, 1970:54).

<sup>1</sup> The number of characteristics, depending on the professional model being employed has fluctuated from two to twenty-three. For a discussion of these characteristics see Ritzer (1972), Goode (1961), Goode (1972), Pavalko (1971), Freidson (1971), Wilensky (1964), Hughes (1958), Hall (1975), and Pavalko (1972). For a critique of these approaches see Johnson (1972) and Habenstein (1963).

Professional authority and the monopoly of judgement with which it invests the professional is the second distinguishing characteristic of professions. The existence of clearly defined clients and authority over them are the two basic components which comprise professional authority. Unlike non-professions, which are perceived as having customers, professions are envisaged as having clients (c.f. Ritzer, 1972; Hall, 1975; Barber, 1965; Parsons, 1951; Greenwood, 1972). The contrast between a customer and client is highlighted by the customer's ability to judge his own needs as well as the potential of the service to meet them. The client, in comparison, interacts with a professional who "is a technically competent person whose competence and specific judgements and measures cannot be competently judged by the layman (client). The latter must therefore take these judgements and measures 'on authority' " (Parsons, 1951:463). Parsons' perception of the ineptness of the client, in matters relating to the judgement of professional competence, is supported by Goode who posits that "the client does not usually choose his professional by a measurable criterion of competence, and after the work is done, the client is not usually competent to judge if it was properly done" (Goode, 1972:20). Presumably, a reason why the professions frown on advertising is that it would infer that the client is capable of making a competent choice among competing forms of service. Diametrically opposed to this situation is the customer in a non-professional relationship who is epitomized by the slogan: "The customer is always right" (c.f. Vollmer and Mills, 1966:12).

While the professional dictates what is good or bad for the client, there are no coercive sanctions backing up this authority. It

is purported to be in the client's best interest to heed the advice and it is through this assumption of authority the client derives a sense of security. The client abdicates his ability to judge the quality of services received, resulting in the professional being invested with a monopoly of judgement. This exemplifies the extent to which the authority lies with the professional in a professional-client relationship.

It has been suggested that occupations nearer the professional end of the continuum are dominated by an ideal of service to clients and public, while occupations closer to the non-professional end are motivated by self-interest (c.f. Ritzer, 1972; Greenwood, 1972; Goode, 1972; Wilensky, 1964; Pavalko, 1971; Cogan, 1953.). Thus, the third component of the professional model is a 'service orientation'. While occupational theorists have reached a consensus as to the importance of a service orientation to society and the professions, a divergence appears regarding the motivational forces behind the display of such an orientation. Traditionally, a service orientation has been seen as an altruistic response by the professions to the needs of the community. As Marshall states in his early article on the professions, "the professional does not work in order to be paid, rather he is paid so that he might work." (Marshall, 1939:37). Indicative of the arguments against altruism as the primary motivating force of a service orientation is the work of Moore who states "if in fact all or most professionals rendered regular unpaid services for needy clients, one could give credence to the norm of service. Actually such service is very rare" (Moore, 1970:15). Parsons agrees with Moore, noting that the primary difference between professionals' patterns of practice and those

of businessmen are institutional and not motivational. He suggests, although the professional is seen as placing welfare of client above his own self-interest, the symbolic rewards and success of the professional within the professional community necessitates the display of a service orientation. The institutionalization of the expected attitudes and behaviour of a service orientation leads Parsons to posit that "it is to a physician's self-interest to act contrary to his own self-interest" (Parsons, 1951:473). Ergo, self-interest not altruism, it is argued, motivates the professional to adhere to a service orientation which is a normative system of control.

It has been suggested that regardless of the motivational aspects contributing to the display of a service orientation "professionals are more likely to act with the community in mind and non-professionals are more likely to act in a self-interested manner" (Ritzer, 1972:59). This point, as illustrated later in this chapter, is of primary importance because the profession's powers and privileges are seen as being dependent on their displaying a service orientation.

The fourth characteristic of the professional model, 'autonomy', is indicative of the powers and privileges vested in the professions. These powers and privileges result from the community sanctioning the professions' authority within certain spheres.<sup>2</sup> Community approval may either be formal, enforced by the community legal system, or informal. Formal approval is exemplified by the power allocated to the

<sup>2</sup> This relates to what has been termed 'functional specificity' by Parsons (1951). This purports that the professional's authority is limited to those specific spheres in which he has been educated. An attempt by a professional to prescribe guides for facets of the client's life in which he has no theoretical competence is to enter a situation in which he himself is a layman.

professions in matters dealing with the setting up of professional schools and the determining of the appropriate character and curriculum of the training process. The professionals select their own recruits, train them formally in the professional school and informally in the professional culture. When accreditation and licensing procedures follow the training period the standards are set by the profession itself. The conceptual basis for this self control originates, for the professions, in the possession of a body of theory. Only those schooled in the skills and knowledge of the profession are regarded as competent to train or judge a professional. The lay community is viewed as being unable to comprehend these standards and therefore incompetent to judge or train professionals.

The professional privilege of 'confidentiality' which Greenwood (1972) termed "the ultimate in professionalization" is another example of professional autonomy. It is seen as fostering efficient performance because the client forfeits information which otherwise would not be divulged. This information is regarded as privileged communication and is solely for client and professional. Thus it appears to protect the rights of the client but it also importantly reinforces the autonomy of the professional.

The power and privileges described above are indicative of the monopoly granted the professions by the community. The acquisition of this monopoly is clearly dependent on the professions pursuit of the service ideal and not the doctrine of 'caveat emptor' (c.f. Goode, 1961; Barber, 1965; Moore, 1970; Parson, 1951).

Regulative codes of ethics are the next characteristic which differentiates between occupations in terms of their degree of

professionalization. They are in the form of codified statements compelling ethical behaviour from members of the profession and while less professionalized occupations also have codes, professional codes have been described as being more altruistic and service oriented in nature. Generally, these codes regulate what are deemed appropriate client-professional and colleague-colleague relationships (c.f. Pavalko, 1971; Barber, 1965; Hall, 1975).

The consultation-referral system is seen as informally enforcing these codes. This system, owing to the restrictions placed on advertising<sup>3</sup> and competition, is viewed as constituting the principle source of work for the professional. This consultation-referral system is reciprocal in nature, fostering a mutual interdependence. When the codes are violated and colleague resentment is aroused, sanctions may be applied to the violator through cessation of this system. Formal enforcement of these codes takes place through the professional association in the form of censure, criticism or being disbarred.

One function of these codes is to convey to the lay community the notion that only the highest levels of performance are tolerated by the profession. Also, by emphasizing their concern with client welfare these codes are used to indicate the profession's service orientation. Furthermore, the codes reinforce the belief that effective self regulation and ethical performance of duties precludes community intervention in controlling the professions.

---

<sup>3</sup> There are several reasons for restrictions on advertising within the profession. Basically they are: (1) to reinforce the professional's authority; advertising presupposes that the client is competent enough to make a choice; and (2) by not advertising the professional is sharply differentiated from the businessman serving to emphasize the profession's service orientation.

Emerging from the five characteristics already discussed is the last dimension of the professional model, i.e., a 'professional culture'. The professional culture is a consequence of possessing the above five distinguishing characteristics of professionalized occupations. This results in the professional sub-culture being different from any other occupational group (c.f. Greenwood, 1972; Goode, 1972; Ritzer, 1972; Hall, 1975.). The norms, values and symbols,<sup>4</sup> and sense of common identity contained within this culture serve to differentiate the professional from the laity. Hall (1975) suggests that the more developed the professional culture, the greater the social distance between the profession and laity.

The six characteristics outlined provide a conceptual model which can be applied in showing what the professionalization process involves, and ideally, what differentiates a profession from other occupations. As Sherlock and Morris submit in their work dealing with the evolving of a professional paradigm, "it is this combination of systematic, often esoteric knowledge, technique, and self-control through a system of ethics ... all developed to a high degree ... which ... differentiates the professional man as an ideal type from members of other vocations" (Sherlock and Morris, 1967:42).

The development of these characteristics may occur on either the group or individual level. This study, by observing the collective effects of the professional socialization process, focuses on changes

<sup>4</sup> Some examples of these norms which serve as a guide to behaviour are: how to get into professional school; how to attract a sponsor; how to find patients. Examples of symbols are: distinctive crest, insignias, emblems, folklore, heros. The values are: importance of service to the community; authority over clients; self-control and theoretical objectivity.

occurring in one particular characteristic of the individual's professionalism - service orientation. The decision to utilize service orientation was based on its importance to the development of the other characteristics, as well as the role it plays in ensuring that the professions are meeting the needs of society. The primacy of a service orientation, to society and the professions themselves, will now be discussed in greater detail.

C. Service Orientation: It's Theoretical Relevance

The power and privileges wielded by the professions as well as society's increasing dependence on them, has led to increased concern over their ability to meet the needs of modern society. This issue of 'social control' has, as Rueschemeyer (1964) points out, left society in a paradoxical situation vis-a-vis the professions. The professions' "high degree of learned competence creates special problems of social control; laymen cannot set concrete goals for the professionals' work. This means that the two most common forms of social control of work in industrial societies: bureaucratic supervision by virtue of form of position and judgement by the consumer have only limited applicability. The need for social control on the other hand is especially urgent because of the values and interests which are at stake." (Rueschemeyer, 1964:17). If traditional mechanisms of social control are not applicable to the professions, how does one ensure that their activities are consistent with societal needs? According to occupational theorists this consistency is maintained because of the essential 'moral' nature of professional work (Parsons, 1951; Marshall, 1939; Goode, 1960; Moore, 1970; Barber, 1965.).

The element of professional morality which has received the greatest attention from students of the professions is their 'service orientation'. As well as being regarded as a normative system of control compelling the professions to meet society's needs, the possession or absence of a service orientation is seen as determining the degree of prestige, lay involvement in controls, and community sanctions the professions enjoys.

The maintenance of community confidence in the profession precludes it from acting in its own self-interest. Client vulnerability, as well as technical incompetence, necessitates the professions communicating to the public that the doctrine of 'caveat emptor' is not being pursued. Community confidence is essential for the maintenance of the profession's monopoly (c.f. Greenwood, 1972; Parsons, 1951.). As Goode (1972) observes, without the confidence of the community the professional would inevitably suffer a loss of prestige and be subjected to stricter lay controls. Therefore it is not surprising that Cogan, after surveying fifty or more authorities, states that "the profession ... considers its first ethical importance to the community that the idea of service be a primary goal and part of the ideological make-up of the professional" (Cogan, 1953:35). Indeed, according to Wilensky, the existence of such an orientation is "the pivot around which the moral claim to professional status revolves" (Wilensky, 1964:40). This theme is reflected in the work of Parsons who suggests that placing client before self is a major characteristic which distinguishes professional from entrepreneurial forms of organized work. As he notes in his essay relating to the doctor-patient relationship, the 'ideology' of the profession lays great emphasis on the obligation of the

physician to put the "welfare of the patient" above his personal interest, and regards "commercialism as the most serious and insidious evil with which it has to contend" (Parsons, 1951:435). It is this apparent self-denial that has led society to respond by investing the profession with its prestige (c.f. Goode, 1972).

Some sociologists perceive service orientation as a characteristic from which all others are derived. Goode (1961), in his work dealing with the emerging profession views prolonged specialized training in a body of abstract knowledge and a service orientation as 'core' characteristics from which all other professional characteristics are derived. Wilensky echoes Goode by stating that "the degree of professionalization is measured not just by the degree of success in the claim to exclusive technical competence, but also by the degree of adherence to the service ideal" (Wilensky, 1964:141). Supportive of this is Barber (1965) who notes that where a body of knowledge exists it is essential that a service orientation rather than self-interest is a primary motivating factor of professional behaviour.

The preceding discussion highlighted the importance that has been attributed to the possession of a service orientation. In order to retain the community's confidence and the privileges this entails, the profession emphasizes that its primary nature is client welfare (service orientation) and not self-interest. This is viewed as constituting means of social control by the community, over the profession and leads some theorists to posit that service orientation is a prerequisite for other professional characteristics.

In the last twenty years, empirical studies of professional schools and their impact on students have been conducted for every

major profession. Apart from highlighting some major issues concerning the role of the student in the school (c.f. Bloom, 1965; Levenson, 1967) this research has tended to generate more controversy (c.f. Goulder, 1963) than consensus regarding factors related to students' adoption of professional ideology. Traditionally, the greatest emphasis has been placed on the school as the chief source of ideological conversion of student recruits. It is the contention of the present study that a major weakness of past research has been the tendency to view students within a given profession as relatively undifferentiated. Of special concern is the failure of most studies to take into account salient variations in student background characteristics, especially social class.

D. Statement of Objectives

The present study has as its major objective that of investigating the extent to which social class background contributes to one's ability to explain and predict variation in the development of a professional service orientation. In pursuing this objective a number of hypotheses dealing with this relationship are subjected to close scrutiny using data derived from a recently completed National Study of Canadian Dental Education. While a disproportionate number of dental recruits are drawn from high social class backgrounds, adequate variation exists allowing for the assessing of the effects of social class background on the development of a service orientation.

A two-staged analysis is employed in this study beginning with an examination of the relationship between social class background and service orientation of students upon entry into the dental school.

This is followed by an assessment of the nature of changes in orientation during the professional school experience. Such an approach allows one to observe two types of causal links between social class and service orientation.

- 1.) By measuring attitudes 'at entry' it is possible to assess the correlation between service orientation and social class background.
- 2.) In establishing the extent to which students within the various social class categories change their orientations while at school, it will be possible to ascertain the extent to which social class influences students' 'receptivity' to change during the schooling period.

Thus by using this approach it will be necessary to develop hypotheses dealing with

- a.) the relationship between social class and service orientation at entry;
- b.) the role of social class in altering the nature of the socialization experience of the student while in school.

For the first of these hypotheses the literature dealing with occupational recruitment will be reviewed and hypotheses for the second will be derived from a review of previous research on secondary socialization.

CHAPTER TWOBECOMING A HEALTH PROFESSIONAL

Given the importance which has been attached to the professional's service orientation it is not surprising that a major task of sociologists studying the organization of work has been to document the source of this element of professional ideology and in particular the mechanisms by which it is internalized by professional recruits.

Orville Brim (1966), in his studies of adult socialization asserts that the socialization process is a continuous process throughout life. With professional socialization as their focal point Olmstead and Paget (1969) suggest that this process is a special kind of socialization which incorporates aspects of both child and adult socialization. Surfacing from these treatments of the socialization process is the inference that the norms and values of the profession will be inculcated, because of the continuous nature of the process, before and during (as well as after) the professional school experience. The inculcation of these norms and values before and during the professional school experience is the concern of this study.

A. Recruitment: Anticipatory Socialization and Student Orientation upon Entering the Professional School

Some of the implications arising out of the socio-demographic studies dealing with occupational recruitment have a bearing on this study. The literature of specific concern to this study suggests that regardless of who enters a profession (on the basis of social class) students from

a high social class background are most likely to display the values and norms of the profession.

Anderson and Western note that although the decision to embark on a professional career is an important point in the socialization process, it is not the beginning (c.f. Anderson and Western, 1968). Evidence supportive of this can be found in the results of a survey conducted by Rogoff analyzing the occupational choice of 750 medical students. Over three-quarters of these students considered a medical career before the age of eighteen (c.f. Rogoff, 1957). This is consistent with the findings of a study conducted by Reid (1976) looking at the timing of career decisions of Canadian dental recruits. Approximately seventy-five percent of the recruits thought about becoming dentists before entering university. Sherlock and Morris, also addressing career decisions of dental recruits note "for the majority who enter dental school, the commitment to this career was largely forged in the later years of high school" (Sherlock and Morris, 1972:27).

Both Rogoff (1957) and Thielens (1957) suggest that there is a correlation between early career decisions and family backgrounds. Rogoff contends this is due to an 'early awakening' in students who have professionals in their immediate or extended families (see Table 1.). Thielens argues that early career decisions are most likely made by those who have role models available (see Table 2.) facilitating the anticipatory socialization process. It is during this 'pre-training' phase that the individuals acquire not only the general societal values but also some of the more visible professional values (c.f. Anderson and Western, 1968). The availability of role models who already hold

Table 1. Age at first thinking of a career in medicine, according to relationship to physicians.\*

	First thought of studying medicine		
	younger than 14 %	14 - 17 %	18 or older %
Father an M.D. (N = 136)	74	19	7
Other relative an M.D. (N = 199)	52	34	14
no relative in medicine (N = 406)	40	43	17

\* Adapted from: N. Rogoff, in Merton et al. (eds.),  
The Student-Physician, pp. 112, 1957

Table 2. Frequency with which role models are named, according to time of decision.\*

Students naming role models				
Time of decision	Medical students		Law students	
	N	%	N	%
Less than 2 years before entry	27	59	163	40
2 - 4 years before entry	48	69	48	46
more than 4 years before entry	59	71	36	53

\* adapted from: W. Thielens, in Merton et al. (eds.)

The Student-Physician, pp. 138, 1957.

professional values facilitates the anticipatory socialization of individuals from professional family backgrounds. These individuals, then, have the opportunity to internalize some of the norms and values deemed appropriate by the professions during the primary socialization process. Indeed, in one of the earlier studies of occupational recruitment, Hall (1948) implies that recruits from professional family backgrounds are more likely to internalize professional ideals before entering the professional school. Hall views the generation of ambition<sup>5</sup> as a process common to both professional and non-professional families but goes on to state that this ambition is more likely to be nourished by the professional family. This occurs because the non-professional family does not have the inside knowledge of the profession which enables redefinition and/or redirection of ambition<sup>6</sup>. Recruits from professional family backgrounds are seen on the other hand, as benefitting from role models and meaningful inside knowledge of the profession. This suggests that these recruits are more likely to have started internalizing professional ideals before formally entering the professional school.

Evidence consistent with Hall's is presented by Moore (1970) who agrees that anticipatory socialization is of major importance in the

---

<sup>5</sup> Hall perceives ambition as functioning to discipline present conduct in the interest of a future goal. These ambitions are social in character becoming internalized as 'drives'. The family is seen as playing a major role in the generation of these ambitions by envisaging career lines, helping establish the appropriate routines, and also by arranging the required privacy which reinforces the efforts of the student.

<sup>6</sup> This is exemplified by Quarantelli (1969) who notes that there was a tendency for students whose parental occupations were closest to dentistry to enter the field directly, whereas those whose parents worked in areas farthest from dentistry came into it in the most indirect way.

acquisition of occupational attributes. The 'hereditary' nature of professions, is viewed as providing adult role models for students from professional family backgrounds. Moore posits that these role models set expectations which induce normative compliance and a sharing of attitudes and beliefs. This argument suggests that students from professional family backgrounds entering the professional school have internalized norms deemed appropriate by the profession. This internalization of norms has occurred through the use of adult role models and the anticipatory socialization process.

A second body of evidence which suggests that individuals from a low social class background are less likely to display professional values than those with a high social class background is found in the literature on occupational aspirations and motivations. For example, it has been suggested that, unlike individuals of high social class backgrounds, individuals from a lower social class background have limited adult models of success achieved through education (Bell and Stub, 1968).<sup>7</sup> Others claim that monetary gain is an over-riding criterion used by individuals of lower social class in the career decision process (Breton, 1972; Ferrucci, 1967).<sup>8</sup> It has also been argued that wanting to escape one's background, as well as wanting to

<sup>7</sup> In many instances the success has not been achieved through socially approved means (legal methods). This is seen as contributing to a "limited number of adult models of success achieved through education available to the lower class child ... so the model of the successful educated individual is missing for many lower class youngsters" (Bell and Stub, 1968:126).

<sup>8</sup> Breton contends that students from white collar backgrounds tend to desire intrinsically rewarding activities (congeniality of career pattern to personality, interests and qualifications) while students from lower socio-economic backgrounds are more apt to stress economic considerations.

move upward socially, are extremely important concerns for those individuals of lower social class backgrounds, who do in fact achieve higher levels of education.<sup>9</sup> What this literature implies is that regardless of particular aspirations and/or motivational factors employed in the career decision process, individuals from lower social class backgrounds are more likely than individuals from higher social class backgrounds not to have internalized the values and ideals of the profession upon entry to the school. While most of the studies reviewed above did not deal directly with the case of the dental profession, their findings may be applied in the following way. If service orientation is really an aspect of the professional role in dentistry, one would expect students from higher social class backgrounds to be more likely to acquire such a predisposition before entering the dental school; or stated as a hypothesis, the literature suggests the following:

- i "The higher the student's social class background, the more likely he or she will display a service orientation at entry."

B. Secondary Socialization: Orientation Change in the School

The second concern of this study - the relationship of social class and orientation development and/or change during the professional

<sup>9</sup> Breton (1972) suggests that the setting of very high goals (higher education) is a means through which members of disadvantaged groups deny their background. Bell and Stub agree, stating "strong personal desire to move socially upward and the push of wanting to escape lower class origins" are factors to be considered when viewing students from lower social class backgrounds achieving levels of higher education (Bell and Stub, 1968:127).

school experience - will now be addressed. The focus of this section will be upon one area of particular significance to this study, attitude generation, as well as peer group influence, within the school.<sup>10</sup> The work of Merton (1957), Becker (1961) and Abrahamson (1967) are representative of this literature. Peer group influence is seen by them as being of major importance to the socialization process.<sup>11</sup> Also, they view the peer group as accounting for reduced variations in the socialization process as well as allowing one to predict what direction these reductions will take.

While both Merton and Becker agree on the importance of peer group influence during the socialization process, one should keep in mind that they have divergent perceptions as to what is being affected by this influence. Merton sees the peer group as important in the inculcation of values and attitudes of the profession. This is reflective of Merton's conception of the medical school being an institution within the medical profession. Becker, however, who perceives the medical school as a separate and distinct institution, a graduate school, views the influence of the peer group as important for attaining of knowledge and skills. The point of importance for this study however, is that although Merton and Becker arrive at different conclusions as to the results of the professional socialization process, they both agree on the importance of the peer group within this ongoing process.

<sup>10</sup> For a review of the major studies see Bloom (1965), Levinson (1967) and Pavalko (1971).

<sup>11</sup> This socialization process is commonly referred to as 'secondary socialization' by sociologists. It is more voluntary than 'primary socialization' because a person has the right to initiate or terminate experiences and it usually occurs in organizational settings.

For instance, it becomes apparent that peer group influence holds a prominent position in the professional socialization process, as envisaged by Merton. It is through this process that the students selectively acquire "their values and attitudes, interests, skills, and knowledge ... in short, the culture ... current in groups which they are, or seek to become a member" (Merton, 1957:287). While the teaching of knowledge and skills is the most obvious part of professional school learning, the acquiring of values and attitudes (role acquisition) is also an integral part of the professional socialization process. It is here in the process of role acquisition that the influence of peers is viewed as being important. Through interaction with peers and due to peer influence (indirect learning) Merton views the inculcation of attitudes, values, and behaviour patterns as occurring.<sup>12</sup>

An indication of the significance Becker attributes to peer group influence in the socialization process can be found in the emphasis he confers upon the collective nature of socialization. The lack of freedom, for individuals undergoing professional socialization, to change their ways is seen by Becker as a result of the collective nature of the socialization process.<sup>13</sup> Becker goes on to say that "group activities are built around this kind of work-a-day perspective,

<sup>12</sup> The process through which the neophyte acquires these attitudes is seen by Merton as being classified into two broad classes. The first is 'direct learning' which is exemplified by various types of instruction. The second class is termed 'indirect learning' and is viewed as taking place through contact with professors and peers accounting for the development of attitudes, values and behaviour patterns.

<sup>13</sup> A person alone, according to Becker's viewpoint, is much freer when it comes to making a decision about changing his ways than a person who is constrained by his fellow trainees.

constraining the students in two ways. First, they do not express the lay idealistic notions they may hold, for their culture does not sanction such expression; second, they are less likely to have thoughts of this deviant kind when they are engaged in group activity" (Becker, 1958:54). Parenthetical to the above notion is Becker's suggestion that variations in response (different reactions to the same socialization process) arising from prior experiences (background differences) are drastically reduced due to the collective nature of the socialization process. He sees this as occurring "because the solutions the group reaches have, for the individual being socialized, the character of 'what everyone knows to be true', he tends to accept them" (Becker, 1964:47).

The development of 'cynicism' during the professional school experience is viewed by Becker as another example of the collective nature of the socialization process which can best be explained in terms of 'situational adjustment'. That is, the student turns himself into the kind of person the situation demands. As disillusionment, arising from the school not meeting the student's expectations, sets in, the student becomes aware of the necessity to become 'test wise'. The naive idealism is replaced with a practical concern of getting through school. The collective nature of this process is illustrated by the fact that students removed from the influence of the student culture become openly more idealistic. As the school experience draws to a close a new 'enlightened idealism' appears and the "cynicism specific to the school situation also comes to an end" (Becker, 1965:54).

Another example of the importance which has been attached to the influence exerted by the peer group in the socialization process can be

found in the work of Abrahamson (1967). What has emerged from his work is the conclusion that peer group influence will not only lead to reduced variations in orientations (when present) but also will allow one to predict in what direction the reduction will occur. Abrahamson views the transmission of the values and norms of the profession to the neophyte as occurring through the peer group. Also, he advances that "whenever status differences are present in a situation, there is probably a tendency for those in subordinate positions to emulate behaviour of high status occupants ... (and) ... the students' dependency upon both professors and peers to define reality is clearly seen" (Abrahamson, 1967:20). What this implies for students of varying social class backgrounds undergoing the professional socialization process, is that fluctuations in orientations, stemming from their various social class differences, would be reduced (when present) as students of lower social class backgrounds accept their peers' (of higher social class backgrounds) definitions of reality.

The above discussion highlights an agreement, appearing in the professional socialization literature, on the crucial role played by the peer group in the socialization process. If what is suggested is a valid indicator of the professional socialization process, then it relates to this study in the following ways. Through peer group pressure variations in internalized values, norms and ideals displayed upon entering the school will be reduced at time of exit. This is expected because the students will be involved in 'role acquisition' as well as learning the culture, the values and ideals of the profession. In addition, variations in the same socialization process arising out of 'prior experiences' will be reduced due to the 'collective' nature of

the socialization process. Also, variations in orientations will be reduced as the students of lower social class backgrounds emulate the behaviour of students from higher social class backgrounds. This allows for the development of additional hypotheses for testing. They are as follows:

- ii The variation in service orientation among students of different social class background will be greater at entry than at exit.
  
- iii Students of lower social class background are likely to develop a higher level of service orientation during the process of professional socialization, while students of higher social class background will display a relatively high level of service orientation both upon entry and exit from the professional school.

CHAPTER THREEMETHODOLOGY

Theoretical issues pertaining to service orientation and the professions were the focal point of the first two chapters. This chapter provides the reader with a description of the research methodology employed in testing the hypothesized relationships. In doing so it refers to: A.) the background of the original study, including a discussion of field methods; B.) strategies for operationalizing the variables; and C.) the statistical techniques used in the manipulation of the operationalized variables.

A. Background of the Original Study

The data that are being subjected to secondary analysis were originally collected as part of a study initiated in the fall of 1970 by the Association of Canadian Faculties of Dentists (A.C.F.D.).<sup>14</sup> Concern with the role of dental education in facilitating changes in the structure of dental practice provided the impetus, and it was hoped data, information and insights produced would be utilized by Canadian dental schools in training dentists for the future patterns of practice (c.f. Reid et al., 1972). The A.C.F.D. study gathered extensive longitudinal data on four cohorts of dental students enrolled in the nine Canadian dental schools in 1971.<sup>15</sup> The present analysis draws on

<sup>14</sup> Original funding was obtained in 1970 from the Department of Health and Welfare for three years. In 1974 supplementary one year funding was obtained.

<sup>15</sup> The cohorts included all four years of students enrolled in dental programs.

one of the cohorts consisting of students entering the dental school in 1971 and exiting the dental school in 1974.

(i) Field Methods

Throughout the months of January and early February 1971 a one hour period was set aside by the dental school administration during which the questionnaire (see Appendix A) was group administered to all<sup>16</sup> the first year classes of dental students in Canada.<sup>17</sup> It was emphasized at the time of administration of the questionnaire that student participation was strictly on a volunteer basis, and that no one connected with dental education would have access to any individual replies.

The overall response rate in 1971 was in excess of 90% (see Table 3.). These students were re-surveyed using the same in-class procedures in 1974 with a response rate approaching 70% (see Table 3.). The 1974 respondents were matched to their 1971 questionnaire and it is this matched file (consisting of 276 cases) which comprises the sample in the present study.

The decrease in the response rate in 1974 is indicative of one of the methodological problems faced when conducting longitudinal studies; that of attrition. Accounting for the non-responses may be the dental education process itself. Unlike the first two years in the dental school, which are exemplified by classroom instruction, the last two

<sup>16</sup> Questionnaires for the Universite de Montreal were translated into French.

<sup>17</sup> Although the questionnaires were not administered until January, it was felt that not enough time had elapsed for school based changes to effect student responses.

Table 3. The overall Response Rates of Students in each Canadian Dental School while in their First and Fourth Years

SCHOOLS	First Year (1971)			Fourth Year (1974)		
	Pop. Size	No. of Respondents	Completed Questionnaires	Pop. Size	No. of Respondents	Completed Questionnaires
	(n)	(n)	(%)	(n)	(n)	(%)
U.B.C.	40	35	88	38	21	55
ALBERTA	44	41	93	40	19	48
SASK.	11	9	82	11	9	82
MANITOBA	33	32	97	30	15	50
WESTERN	53	46	87	50	44	88
TORONTO	125	124	99	115	70	61
McGILL	28	25	89	26	26	100
MONTREAL	82	81	99	78	52	67
DAIH.	27	22	81	25	25	100
TOTAL	443	415	94	413	281	68

years are marked by the clinical experience.<sup>18</sup> The class room setting for administration of the questionnaire, in fourth year, might not have been effective in reaching all the students involved in dental clinics. This as well as drop-out rates, weather conditions etc., must be taken into account when looking at the lower response rates in 1974. The size of the sample and the still high response rates support the use of this matched file.<sup>19</sup>

The time interval between questionnaires ( $3\frac{1}{2}$  years), the design of the questionnaire, as well as the national scope of the study, aided in compensating for the usual data collection problems faced in longitudinal studies. Multiple indicators were used to counteract the students' sensitization to measures. The interval between the administration of the questionnaire was seen as diminishing the probability of the students, through recall, giving responses corresponding to their original answers (artificial constancy). Also, the national scope of the study and the size of the sample was used to compensate for the lack of a control group.

## B. Operationalization

### (i) Dependent Variable: Service Orientation

The immediate concern here is to operationalize service orientation in such a way as to offer conceptual as well as

<sup>18</sup> The dental education process is discussed in greater detail in Chapter four.

<sup>19</sup> Analysis of background characteristics of the respondents in the 'matched file' indicates it is representative of the population from which it was drawn, as well as the population of students entering and graduating from Canadian dental schools during the previous decade. A detailed description of background characteristics is presented in Chapter four.

methodological clarity.

While there were numerous items dealing with the attitudes of dental students (see Appendix A) to various aspects of dentistry included in the questionnaire, there was no 'one' item which best dealt with the dimension 'service orientation'. It was decided to construct a composite index which would be comprised of several items and which would in fact be measuring the service orientation dimension. While eight items to be entered into an index were arrived at, offering face validity, it was felt a stronger validation of the index was warranted. Consequently these eight items were factor analysed using principle component analysis which employed the varimax rotation procedure. Factor analysis allows for the uncovering of underlying dimensions, or patterned variation and reduces them to a minimum number of causes or explanations. Thus, as suggested by Nie et al., this data reduction capability of factor analysis reduces the data to a smaller set of "factors or components that may be taken as 'source variables' accounting for the observed interrelations in the data" (Nie et al., 1975:469).

The varimax procedure attempts to maximize the number of high loadings on each factor while minimizing the number of factors with high loadings for each variable. Rummel (1970) posits that orthogonal rotation involves the rotation of factors until each better defines a separate cluster of highly interrelated variables. That is, varimax rotations refers to the rotation of factors until they define distinct clusters of intercorrelations with each factor being colinear.

The factor loadings emerging from this technique were then used as indicators of how well each item correlated with the underlying dimension (service orientation) as well as how valid an indicator of

service orientation each item is (c.f. Hunter, 1973). (A list of the items with the factor loadings in 1971 and 1974 may be found in Appendix B). These items were then subjected to four initial and derived factor solutions<sup>20</sup> as a safeguard against the dimension (service orientation) not being an artifact of the statistical technique used. As suggested by Hunter and Latif, "if one finds a factor which appears across all combinations of initial and derived solutions, he will be in a position to say with some confidence, that the findings are not simply artifacts of the model used" (Hunter and Latif, 1973:312).

Composite indices measuring service orientation at time one (SERVOR 1) and at time two (SERVOR 2) were then constructed. These indices, each composed of the eight items then offered face and factorial validity.<sup>21</sup> The scores on the indices ranged from eight to thirty-seven. The students' responses were recoded so that the higher score would indicate a high service orientation. That is, the closer the score approached thirty-seven the higher the service orientation the student was interpreted as having. Conversely, the closer the score approached eight, the lower the service orientation the student was interpreted as having.

---

<sup>20</sup> The initial solutions were principle component, Alpha, Rao, Image. The derived was Varimax.

<sup>21</sup> For a more detailed discussion of factor analysis see Rummel (1970), Nie et al.(1975).

(ii) The Independent Variable: Social Class Background

As noted in the earlier chapters, the development of a service orientation is viewed as being contingent upon the recruits' social class background as well as the professional school experience. The strategies used in the operationalization of this concept will now be discussed.

Socioeconomic Status

For the purposes of this thesis socioeconomic status (SES) was measured by Blishen (1961) index scores. Occupational characteristics of males in the labour force were used in the construction of this index "on the assumption that the family's social status is dependent upon occupation of the husband rather than the wife when both are working" (Blishen, 1972:497). The Blishen socioeconomic index was calculated by assigning scores, based on educational, income and prestige levels, to each of the 320 occupations obtained from the 1961 census. Ranking of these occupations then took place according to their socioeconomic values. The occupation of the student's father or guardian, obtained from the questionnaire (see Appendix A) was coded according to their position on this index.<sup>22</sup>

Separate indicators of parents' education appearing on the questionnaire (see Appendix A) were then utilized to validate the index scores. Owing to educational level being calculated in the construction of the index a high correlation was expected between parents' education

<sup>22</sup> For a fuller discussion of this socioeconomic index see Blishen (1967:541-553; 1972:495-507; 1976: 71-79).

and the Blishen index. It was found that the relationship between father's education and Blishen was significant at the .001 level ( $r = .5677$ ). The association between mother's education and Blishen, while not as strong ( $r = .3369$ ), was also significant at the .001 level. It was decided, due to the strength of association between parents' education and the Blishen index, to utilize the index as the single indicator of the independent variable, social class background.

(iii) Test Variables

- a.) Hypothesis One: Sex, Mother Tongue, Marital Status,  
Size of Community.

In looking at the relationship between service orientation and social class background the effects of the above items were examined. Students' responses to the items which appeared on the questionnaire (see Appendix A), were coded and entered as independent variables into the multiple regression equation. This resulted in the measure of association describing the relationship between service orientation and social class background being provided while adjusting for the effects of the test variables.

For purposes of analysis in this study, the item dealing with marital status was dichotomized into 'married' or 'single' categories (see Appendix A).

Through the use of 'dummy variables' the items dealing with 'marital status', 'sex' and 'mother tongue' were recoded facilitating their use with interval levels of measurement. The 'dummy variables' were created by treating "each category of a nominal variable as a

separate variable and assigning arbitrary scores for all cases depending on their presence or absence in each category" (Nie et al., 1975:374).

The size of community referred to the community in which the student resided during their high school years (see Appendix A).

b.) Hypothesis Three: University

In testing the third hypothesis university was trichotomized on the basis of student population, and then held constant. The three variables were: large French school (Universite de Montreal), large English school (University of Toronto), small English school, comprised of the remaining seven universities. This allowed for observations regarding the effects of school size on the development of students' attitudes.

C. Statistical Techniques Used in the Testing of Hypotheses

The initial step taken in testing the first hypothesis was to utilize the coefficient of correlation (Pearson's  $r$ ). The decision to use this coefficient was based on its ability to measure the degree of linear association between interval level (or higher) variables.<sup>23</sup>

Also, the coefficient's range of values  $-1$  to  $+1$  allows for easy interpretation of the direction and strength of association (c.f. Loether and McTavish, 1976; Freund, 1973).

As an attempt to explain more fully the relationship

<sup>23</sup> The continuous nature of the dependent variable supported its being subjected to this more powerful statistical test (c.f. Lin, 1976).

expressed by the coefficient of correlation, it was then decided to utilize the multiple regression technique as provided for by the Statistical Package for the Social Sciences (S.P.S.S.). Owing to the multivariate nature of the analysis, regression was viewed as a particularly appropriate technique. The ability of multiple regression to allow one to evaluate the overall contribution of all the independent variables as well as evaluating the contribution of an individual independent variable with the influence of the others controlled was the primary factor in deciding on its usage. Basically, regression analysis explains the sources of variation in the dependent variable with the main focus being on the "evaluation and measurement of the overall dependence of a variable on another set of variables" (Nie et al., 1975:321). Also multiple regression, through the use of 'dummy' variables allows variables measured on a nominal scale to be entered into the regression, allowing for a more powerful statistical test than available at the nominal level. As noted by Kerlinger and Pedhazur (1973), "multiple regression has the fortunate ability to handle different kinds of variables with equal facility (ibid., p.8). The statistics available through the use of this technique are easily interpreted and provide researchers with information as to whether the relationship is statistically significant (F ratio), the magnitude of the relationship ( $R^2$  - coefficient of determination - what percentage of variance in the dependent variable is accounted for by a single or multiple independent variable, range 0 to 1.00), the coefficient of correlation (R) and standardized coefficients (Beta weights). Nie suggests that Beta weights may provide the only sensible way to compare the "relative effect on the dependent variable of each independent variable when there are two or more independent variables

measured on different units" (Nie et al., 1975:325).<sup>24</sup>

Mean scores and student's *t* were the last procedure employed in the statistical testing of hypotheses. The mean score rather than the standard deviation was used owing to the concern with both level and direction of students' change in service orientation. While standard deviation acts as an indicator of the amount of change, it does not provide information on direction, thus necessitating the choice of mean (c.f. Kolstoe, 1969; Nie et al., 1975). Student's *t* (*t* test) was then utilized to determine whether the mean score differences were significant, allowing for decisions to be made in accepting or rejecting the hypothesis under test.

Throughout the testing of hypotheses the .05 significance level was employed. This ensured that the results obtained occurred by chance only five times out of one hundred.

The two previous chapters provided the theoretical rationale for pursuing the research problem of the present study. Methodological considerations involved in the study were then delved into in this chapter. The following chapter will address the findings from studying the development of a service orientation. In doing so a description of the socio-demographic characteristics of the dental recruits as well as the dental education process will be presented.

---

<sup>24</sup> For a more detailed discussion of regression and multiple regression analysis see Kerlinger and Pedhazur (1973); Huntsberger and Billingsley (1973); Nie et al. (1975) and Muelleur (1970).

CHAPTER FOURTHE DENTAL STUDENT: SERVICE ORIENTATION UPON ENTRY AND EXIT FROM  
THE PROFESSIONAL SCHOOL

This chapter commences with a description of Canadian dental recruits' background characteristics. Following this, the nature of the dental education process, through which recruits are transformed from neophyte to practitioner will be discussed.

The results of statistical tests involving the three hypotheses will then be presented.

A. Recruitment: The Incoming Dental Student

(i) Background Characteristics

The analysis of background characteristics proved useful for several reasons. Comparisons made to the population from which the sample was drawn allowed for decisions to be made regarding representativeness. Furthermore, by drawing parallels with existing research, it was possible to note changes that have taken place in the type of student entering the school.

Sex

A continuing aspect of dentistry in Canada has been male dominance. As noted by Talbot (1961), two percent of all dentists in Canada in 1958 were women. Vickers (1976) indicates that of all dental

students graduating in Canada in 1971-1972, 3.8% (N = 15) were women. This is an indication of limited amount of change in the sexual composition of dentistry. In light of this, a high percentage of males was expected in the sample.

While males are over-represented in most professions, when comparing this sample to recruits entering the medical school in 1971 (see Table 4.) it was found that medical recruits were comprised of a substantially higher percentage of females. The implication of this finding is that something particular to dentistry accounts for the unchanging nature of the recruit.

Several reasons have been suggested which may account for the low number of female dentists in Canada. The lack of information being provided to females while they are in high school precludes dentistry being considered as a viable option when making career decisions (c.f. Talbot, 1961). Unwillingness of parents to invest large sums of money on the education of a daughter as well as misinformation concerning the performance of duty are also cited by Talbot as reasons for low numbers of female recruits. Linn (1971) posits that the aura of masculinity pervading the occupational duties of dentists is a deterrent to women entering dentistry.

Whatever the reasons, changes in the numbers of female recruits in dental school have been of such a minor nature it appears that the image of dentistry will remain one of a male dominated profession for some time to come.

#### Age and Marital Status

As expected, the majority of dental recruits were in their early

Table 4. Sex of Incoming Canadian Dental Recruits as Compared with Canadian Medical Recruits and the Base Population

SEX	Year of Entry into Dental School					Medical Recruits 1970 <sup>2</sup>	Base <sup>3</sup> Pop.	
	1970 matched sample		1970 A.C.F.D. sample		1963 <sup>1</sup>			
	(n)	(%)	(n)	(%)	(%)	(%)	(n)	(%)
Male	259	94	395	93	96	79	10,795,370	50
Female	17	6	30	7	4	21	10,772,940	50
Total	276	100	425	100	100	100	21,568,310	100

1. source: B. McFarlane, 'Dental Manpower in Canada', Queen's Printer, 1965.
2. source: N. Collishaw and R. Granger, 'Canadian Medical Student Selection and some Characteristics of Applicants, 1970-1971', Journal of Medical Education, Vol. 47, pp. 254-266, 1972.
3. source: Advance Bulletin 1971 Census of Canada, Statistics Canada, 1972, p. 3.

twenties at time of entry (see Table 5.). The mean age was 21.31 years and therefore it was not surprising to find over three-quarters (77%) of them single (see Table 6.).

#### Size of Community

Only 9% of the students in this sample come from rural areas (as defined by the 1971 census) as compared to 26% of the base population (see Table 7.), signifying that dental students are disproportionately drawn from urban areas. Also of interest is that the number of recruits from communities of under 1,000 has increased from 4% in 1967 to 9% in 1970, while the rural population has decreased from approximately 30% in 1961 to 26% in 1971. It is not known however, whether these additional rural students reflect the added emphasis the dental schools have put on rural recruitment.

Both Hollinstead (1961) and MacFarlane (1965) indicate that communities over 100,000 in population supply the largest percentage of dental recruits. This sample reflects their findings.

#### Region of Country

While the percentage of recruits from the prairie region in this sample is lower (16%) than the A.C.F.D. sample (27%), it corresponds to the percentage of the total population of Canada made up by the prairies (see Table 8.). Also, when compared to the base population, an under-representation of recruits from B.C., Quebec and the Atlantic Provinces appears. In another light what the data indicate is that only one region in Canada is over-represented in the dental school, in proportion to its contribution to the total population, Ontario.

Table 5. Age of Recruits upon Entry to the Dental School

Age (years)	Matched Sample		A.C.F.D. Sample	
	(n)	(%)	(n)	(%)
-20	20	7	25	6
20 - 25	202	73	306	72
26 - 30	12	5	26	6
30+	12	4	13	3
N/A	30	11	55	13
Total	276	100	425	100

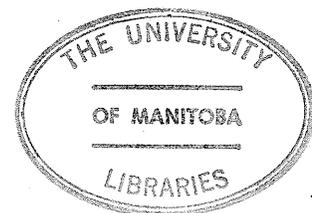


Table 6. Marital Status upon Entry to the Dental School

Marital Status	Matched Sample		A.C.F.D. Sample	
	(n)	(%)	(n)	(%)
married with children	17	6	34	8
married without children	44	16	64	15
single, engaged	25	9	38	9
single, 'going steady'	63	23	94	22
single, unattached	124	45	191	45
N/A	3	1	4	1
Total	276	100	425	100

Table 7. Size of the Home Community of Incoming Dental Students

Size of Community	1970 matched sample		1970 A.C.F.D. sample		1967 <sup>1</sup>		1963 <sup>2</sup>		1971 <sup>3</sup> Base Pop.	
	(n)	(%)	(n)	(%)	(n)	(%)	(%)	(n)	(%)	
under 1,000	25	9	34	8	9	4	27	5,157,525	24	
1,000 - 9,000	41	15	64	15	40	17		2,485,470	12	
10,000 - 99,000	77	28	110	26	53	23	21	3,679,145	17	
100,000 or over	133	48	217	51	130	56	52	10,246,165	47	
Total	276	100	425	100	232	100	100	21,568,310	100	

1. source: E.M. Cowan et al., "Studies in Dental Education in Canada", 1972.

2. source: B. McFarlane, 'Dental Manpower in Canada', Queen's Printer, 1965.

3. source: Advance Bulletin 1971 Census of Canada, Statistics Canada, 1972, p.2.

Table 8. Region of Country from which Entering Dental Students are Drawn

Region	Matched Sample		A.C.F.D. Sample		Base <sup>1</sup> Pop. (1971)
	(n)	(%)	(n)	(%)	
B.C.	14	5	26	6	10
Prairies	44	16	115	27	16
Ontario	105	38	157	37	36
Quebec	70	25	98	23	28
Atlantic Provinces	17	7	30	7	10
Other	5	2	-	-	-
N/A	21	7	-	-	-
Total	276	100	425	100	100

1. source: Advance Bulletin, 1971, Census of Canada, Statistics Canada, 1972, p.4.

### Mother Tongue

The concept of mother tongue refers to the first learned language. As expected, after viewing the results of the previous characteristics, recruits whose mother tongue was French were under-represented when compared to the base population (see Table 9.). This may have been due to the low response rates at the Universite de Montreal. With the admitting of the first class of dental students at Laval Universite in 1971, this situation may have been altered.

### Parent's Educational Background

While approximately 20% of recruits entering the dental school came from backgrounds where both parents have only elementary education, it should be noted that this percentage is lower than the base population (see Tables 10A and 10B.). Also, when compared to the base population, recruits with parents who have some post-secondary education are found to be over-represented in the dental school. This over-representation, however, is not limited to Canadian dental schools. In a recent study Sherlock and Morris indicate that California dental students are also drawn from a more educated section of the population. They suggested that approximately two out of three fathers had achieved a college education (Sherlock and Morris, 1972).

### Father's Occupation

Over one-third of the students entering the dental school have fathers who are managers and proprietors. This is supportive of findings reported by MacFarlane in a study on Canadian Dental Manpower (c.f. MacFarlane, 1964). When compared to MacFarlane's study a sharp drop-off

Table 9. Mother Tongue of Dental Students Entering  
in 1970

Mother Tongue	Matched Sample		A.C.F.D. Sample		Base Pop. <sup>1</sup> (1971)
	(n)	(%)	(n)	(%)	(%)
English	190	69	289	68	60
French	55	20	81	19	27
Other	31	11	55	13	13
Total	276	100	425	100	100

1. source: Advance Bulletin 1971 Census of Canada,  
Statistics Canada, 1972, p.2.

Table 10A. Fathers' Education for Recruits Entering in 1970<sup>1</sup>

Education	Matched Sample		A.C.F.D. Sample		Base Pop.
	(n)	(%)	(n)	(%)	(%)
Elementary or less	52	19	94	22	35
Secondary	135	49	204	48	52
Post secondary	85	31	123	29	13
No answer	4	1	-	-	-
Total	276	100	421	99	100 (n=7540465)

1. source: Advance Bulletin 1971 Census of Canada,  
Statistics Canada, 1972, p.2.

Table 10B. Mothers' Education for Recruits Entering in 1970

Education	Matched Sample		A.C.F.D. Sample		Base <sup>1</sup> Pop. (1971) (%)
	(n)	(%)	(n)	(%)	
Elementary or less	53	19	89	21	32
Secondary	168	61	268	63	59
Post secondary	51	19	68	16	9
No answer	-	1	-	-	-
Total	276	100	425	100	100 (n=7649035)

1. source: Advance Bulletin 1971 Census of Canada,  
Statistics Canada, 1972, p.2.

in the craftsmen category is seen to have been paralleled by a marked increase in the clerical, service category (see Table 11A.).

As expected, the data on father's occupational background indicate that the social class background of the dental recruit is much higher than the base population (see Table 11B.).

The above background characteristics attest to the homogeneity of social backgrounds from which the dental recruits are drawn. The Canadian dental school is dominated by male students, of high social status backgrounds, largely from urban centres. What will now be discussed is the educational process through which they all must pass for successful completion of their student career.

## B. Socialization: The Dental Student at Time of Exit

### (i) Dental Education

The professional school experience for the dental student does not represent a continuous, uniform process. Rather, it could be said that dental education is composed of two distinct stages, the pre-clinical and clinical stages.<sup>25</sup>

The theoretical nature of the pre-clinical stage represents a continuation of the type of education the recruit underwent in their pre-dental university classes. Comprehension and integration of diverse scientific principles, relevant not only to dentistry but to other health sciences, underlies the basic objective of this stage. During the first stage, time spent in developing basic manual skills primarily consists of cutting cavity preparations as well as other restorative techniques

<sup>25</sup> The appointment of dental faculty to either pre-clinical or clinical departments illustrates the differentiation of these two stages.

Table 11A. Fathers' Occupational Background

	Matched Sample (%)	A.C.F.D. Sample (%)	Recruits Entering 1963 <sup>1</sup> (%)
Managers and Proprietors	36	32	34
Professional and Technical	18	26	23
Dentists	4	3	5
Physicians	1	2	7
Clerical, service Transport	16	17	7
Farmers, loggers, miners	9	7	8
Craftsmen and Others	11	18	28
No answer	3	-	-
Total	100	100	100
n =	276	425	

1. source: B. McFarlane, 'Dental Manpower in Canada',  
Queen's Printer, 1964.

Table 11B. Social Class Background of Recruits

Blishen Index Scores	Matched Sample (%)	A.C.F.D. Sample (%)	Base <sup>1</sup> Pop. (%)
Low (25 - 39)	32	32	63
Medium (40 - 60)	33	32	29
High (61 - 76)	35	33	8
No answer	-	3	-
Total	100	100	100
n =	276	425	

1. source: A.E. Reid, 'Dental Education and the delivery of Dental Health Care - a preliminary report' A.C.F.D. 1971.

performed on mock-ups in pre-operative labs.

In the second stage (clinical), the emphasis moves from the theoretical, scientific teachings, which characterized the first stage, to the development of technical skills. Unlike the first stage, where the use of mock-ups is the norm, this stage is marked by the use of patients. The very nature of the clinic,<sup>26</sup> though, precludes the systematic presentation of dental problems to the student. Regardless, through their work with patients, the students are required to treat each of the dental diseases they may face in practice.

Within this environment the acquisition of professional attitudes is seen as occurring. Through these two stages not only a technically competent but also a 'professional' person, regardless of background differences, is produced. Keeping this in mind, the findings are now presented.

### C. Findings.

#### (i) Hypothesis I

"The higher the students' social class background the more likely he or she will display a service orientation at entry".

The relationship between service orientation and social class background although weak ( $r = .0023$ ) is in the hypothesized direction. To test this relationship further, the four<sup>27</sup> test variables were entered into multiple regression analysis.

<sup>26</sup> The patients frequenting the dental clinic do so on the basis of their dental problems. These range in severity and are in no particular order.

<sup>27</sup> The four test variables were: sex, marital status, size of community and mother tongue.

Analysis of the correlation coefficients (simple  $r$  Table 12) indicates that the strength of the relationships between service orientation and each of the test variables is negligible.

The  $R$  square (Table 12) denotes that the variance of service orientation accounted for by social class background and sex, mother tongue, size of community and marital status, in combination is approximately only six percent.

Analysis of the  $F$  ratio reveals that the regression of service orientation on social class background, sex, marital status and mother tongue is not statistically significant ( $p = .05$ , Table 12). This means that the relation between service orientation and a linear least squares combination of social class background and these test variables probably occurred by chance. This led to the decision not to accept hypothesis I.

The standardized regression coefficient (see Beta, Table 12) indicates that social class background explains only four percent of the total variance in service orientation when the other variables in the regression equation are held constant. This supported the decision not to accept hypothesis I.

Further analysis of the standardized regression coefficients reveals that the test variable mother tongue (English) would introduce the greatest amount of change in service orientation. Put in another light, a standardized regression coefficient of  $-.53$  indicates that mother tongue (English) is the single largest explanation of the total variance in service orientation in this sample.

After observing the lack of relationship between service orientation and social class background, it was decided to investigate

Table 12. Service Orientation of First Year Canadian Dental Students by Social Class Background looking at the Influence of the Test Variables

	Simple R.	Multiple R.	R. Square	B.	Beta	F.
Social Class Background (independent variable)	0.0023	0.0023	0.00001	0.1117	0.0425	0.456
Mother Tongue (English)	-0.1425	0.1426	0.0203	-4.8340	-0.5347	1.337
Size of Community	-0.1365	0.2117	0.0448	-0.4133	-0.1672	6.585*
Marital Status (single)	0.1072	0.2337	0.0546	2.2834	0.228	0.303
Marital Status (married)	-0.1032	0.2344	0.0550	1.2746	0.1236	0.093
Mother Tongue (French)	0.1221	0.2351	0.0553	-3.6473	-0.3464	0.753
Mother Tongue (other)	0.0388	0.2403	0.0577	-3.5006	-0.2632	0.674
Sex (male)	**	**	**	**	**	0.003
Sex (female)	**	**	**	**	**	0.003
(constant)				29.8282		

Degrees of Freedom = 1 + 260

\* significant at the .05 level

\*\* F level insufficient for inclusion

Table 13. Level and Amount of Change in Service Orientation  
at Entry and Exit for Overall Sample

Service Orientation	Mean	Standard Deviation	Mean Difference	T. Value
At Entry	26.1279	4.172		
			0.2444	0.94*
At Exit	26.3722	4.170		

(D.f. = 275)

\* not significant

the degree of overall change in the students' service orientation at time of entry to and exit from the professional school (Table 13). As noted in Chapter three, a high score on the service orientation scale was interpreted as indicating a higher service orientation.<sup>28</sup> Table 13 highlights the relative lack of change in the students' service orientation. Although the mean differences shown in Table 13 were not significant, the decrease in the standard deviation and the higher mean score of the students exiting the professional school were in the expected direction.

To explicate the relationship appearing in Table 13 further, it was decided to introduce social class background into the analysis allowing for the testing of hypothesis II and hypothesis III.

(ii) Hypothesis II

"The variations in service orientation among students of different social class background will be greater at entry than exit."

Table 14 indicates that a reduction takes place in the variation of service orientation for students from lower social class backgrounds. This is seen by viewing the smaller standard deviation of these students at time of exit from the dental school.

The variation in the service orientation of students from a higher social class background appears to have increased at time of exit. This is indicated by the increased standard deviation reported at their time of exit (Table 14). However, the changes for both groups of

<sup>28</sup> A score of twenty-four to thirty-seven was interpreted as indicating a high service orientation. The closer the students' scores approached thirty-seven, the higher the service orientation they were interpreted as having. Therefore, a mean score of 26.3722 was not regarded as indicating a very high service orientation.

Table 14. Level and Amount of Change in Service Orientation at Entry and Exit for Overall Sample by Social Class Background

Social Class Background	Service Orientation At entry		Service Orientation At exit		Mean Difference	T. Value
	Mean	Standard Deviation	Mean	Standard Deviation		
Lower	25.9896	4.455	26.6116	4.284	0.6220	1.54* (D.f. = 120)
Higher	26.2153	3.994	26.1615	4.129	-0.0538	-0.15* (D.f. = 146)

\* = not significant.

students (lower and higher) are not statistically significant ( $p = .05$ ), which signifies that a true difference between service orientation at entry and exit does not in fact exist. Reduction in the variation of students' service orientation at entry and exit has not taken place. It was therefore decided not to accept the second hypothesis.

It is interesting to note that at time of exit from the dental school, the students from a higher social class background still exhibited less variation than their peers from lower social class backgrounds (Table 14).

(iii) Hypothesis III

"Students of lower social class background are likely to develop a higher level service orientation during the process of professional socialization, while students of higher social class background will display a relatively high level of service orientation both upon entry and exit from the professional school."

When comparing the mean differences in Table 14, it appears that students from a lower social class background do develop a higher service orientation while students from a higher social class background show a slight decrease in their service orientation. Also, the students from a lower social class background display a lower service orientation at entry when compared to their peers from a higher social class background. At time of exit this has reversed with the students from a higher social class background displaying the lower service orientation. However, the degree of change is very minor and statistically not significant. To further investigate the relationship between service orientation and social class background, the type of school the student was attending

Table 15. Students' Service Orientation Mean Scores at Entry and Exit by Social Class Background and Type of School

Social Class Background and type of school	Service Orientation At entry		Service Orientation At exit		Mean Difference	T. Value	(n)
	Mean	Standard Deviation	Mean	Standard Deviation			
LOWER							
Small English	26.2169	3.899	26.5883	4.419	0.3715	0.82	68
Large English	24.8929	4.677	27.2857	4.090	2.3929	2.45*	28
Large French	26.6000	5.500	25.9200	4.173	-0.6800	-0.69	25
HIGHER							
Small English	26.2746	3.957	26.0646	4.243	-0.2101	-0.42	80
Large English	25.4672	4.506	26.2857	4.255	0.8185	1.24	40
Large French	27.1477	3.125	26.2646	3.713	-0.8831	-1.32	27

\* = significant at the .05 level.

was then controlled for.

Table 15 reveals that students from a lower social class background display a lower service orientation at entry than their peers from a higher social class background, regardless of the type of school they were attending.

In two of the three types of schools (small English, large English) there was an increase in the service orientation of students from a lower social class background, at time of exit. Indeed, the change in the service orientation of the students attending the large English school was found to be statistically significant ( $p = .05$ ).

Students from a higher social class background display a reduction in service orientation at time of exit, in two of the three types of schools (small English, large French). The students attending the third school (large English) display an increase in service orientation of a minor nature.

Also, it can be noted that the service orientation displayed by students from lower social class backgrounds at time of exit is higher than the service orientation displayed by their higher S.E.S. peers in all schools but one (large French). This as well as the fact that all the changes but one are not statistically significant resulted in a decision not to accept hypothesis III.

It is interesting to note that the students displaying the greatest variation in service orientation at entry are the students from a lower social class background attending the large French dental school (Table 15). The students displaying the least variation in service orientation at time of entry are students from a high social background attending the same large French school.

D. Discussion

The following discussion is speculative in nature, offering suggestions as to why the non-support of the three hypotheses may have occurred.

The apparent lack of association between service orientation and social class background might be a reflection of the pre-dental university experience recruits undergo. Prior to entering the dental school the dental recruit has undergone varying lengths of pre-dental education in university. While students from lower social class backgrounds may not originally hold norms deemed appropriate by the profession, the pre-dental experience may facilitate the internalization of them. The availability of role models, once missing, and the acquisition of the more professional values, now discerned by all, may result in the variation in students' orientation being reduced during the pre-dental phase. This would explain the relationships observed in Table 12.

Another speculative hypothesis concerning the weakness of association between social class background and service orientation concerns reference groups. Recruits from lower social class backgrounds may be 'deviant' in terms of the values they are pursuing for 'success'. Their families may have a higher social class reference group resulting in the adoption of different values and norms. These values and norms are communicated to the recruits, resulting in their 'being in' a lower social class milieu but not 'of it' (Bell and Stub, 1968). Also, as noted by Sherlock and Morris (1972), the dental recruit is usually drawn from a background where intergenerational rather than intragenerational mobility has preceded their achievement of professional

status.<sup>29</sup> It would follow that these recruits should not be expected to exhibit 'typical' lower social class values. This once again could be seen as accounting for the results in Tables 11.

---

<sup>29</sup> This is seen as applying when recruitment to the professions is not a case of occupational inheritance.

CHAPTER FIVESUMMARY AND CONCLUSIONSA. Concluding Comments on the Development of a Service Orientation

This thesis was an empirical examination of the extent to which social class background could be used to explain and predict variations in the service orientation of Canadian dental students. It was assumed that service orientation was an attribute essential to occupations claiming professional status. Furthermore, due to the monopoly granted professions in their exercise of occupationally related duties, it was argued that service orientation was also a mechanism of societal control.

It was posited that the anticipatory socialization process for students of high social class backgrounds, resulted in their being more likely to enter the school with a high service orientation. This perception stemmed from viewing these students as having available roles models as well as access to meaningful inside knowledge of the professions. Also, these students were seen as pursuing higher education primarily for intrinsic purposes.

On the other hand, students of lower social class backgrounds were viewed as lacking role models who had achieved socially approved success. In addition to this, the primary motivation of these students was seen as being mobility and monetary rewards which it was argued precluded the possession of a high service orientation upon entering the school. The impact social class backgrounds were seen as having on the internalization of norms, values and attitudes prior to entering the professional school led to the first hypothesis which stated "students

from a higher social class background would be more likely to enter the school with a high service orientation".

The focus of the thesis then turned to the professional socialization process and service orientation of students exiting from the school. It was argued that the variation in service orientation displayed at entry to the school would be reduced, at exit, due to the collective nature of the socialization process. Through this process the students were viewed as acquiring the values, norms and attitudes of the culture to which they aspired to become a member. It was here, it was felt, that variation in service orientation would be reduced regardless of the students' backgrounds. This resulted in the formation of a hypothesis which stated "the variation among students with respect to their service orientation will be greater at entry than at exit". This hypothesis was then qualified in terms of predicting the direction the change would occur. Status inconsistencies within the professional school were viewed as having profound effects on the students from lower social class backgrounds. It was argued that the lower social class student would accept their higher social class peers' definition of reality and in doing so, would change their attitudes correspondingly. The hypothesis stemming from this stated, "the lower the student's social class background, the more likely their service orientation will change, becoming higher at exit".

Results reported in Chapter Four indicate that the relationship between service orientation and social class background was not statistically significant ( $r = .0023$ ). With the introduction of the four control variables into the analysis, the relationship showed no substantial change. This is an indication that social class background can not confidently be used as a predictor of the service orientation possessed by the incoming dental recruit. It was on these grounds that the first hypothesis was not accepted.

Results of tests concerning the second hypothesis indicated that a reduction in variation did occur for students from a lower social class background. Furthermore, students from a higher social class background displayed increased variation in their service orientation when entering the dental school. However, the changes for both groups were seen to be minor in nature and not significant statistically. The data did not provide grounds which warranted the acceptance of the second hypothesis.

As predicted, students from a lower social class background displayed lower levels of service orientation, at time of entry to the dental school, than students from a higher social class background. However, at time of exit it was observed that both groups had undergone changes in their service orientation with the students from lower class backgrounds displaying the higher level of service orientation. Once again these changes were found to be very minor in nature and not statistically significant.

Further analysis revealed that in all types of schools but one, differences in the levels of service orientation at exit, when compared to the time of entry, were negligible regardless of social class background. The students from a lower social class background, attending

the large English dental school (University of Toronto) underwent a change in the direction of a higher service orientation at time of exit. This change was found to be statistically significant. However, the overall low levels of change resulted in the decision to reject the third hypothesis.

The three hypothesized relationships concerning social class backgrounds and service orientation were not supported by this data, which resulted in the non-acceptance of all the hypotheses.

#### B. Limitations of the Study

The nature of the theoretical framework in the original study resulted in a questionnaire designed for purposes other than the measurement of service orientation. Owing to a professional attitude being a composite of personal traits, the measure of service orientation in terms of the occupational literature and previous research, offered validity. However, other items might have been employed, allowing for the 'service orientation' dimension to have a wider scope.

As previously noted, the students in the first year classes were not surveyed until January of their first year. An assumption of the original study was that owing to the length of dental education and the relative short period of time they had been in school, responses to the questionnaire would reflect attitudes the recruits possessed upon entry. However, upon becoming familiarized with the dental education process and its two-staged nature (pre-clinical and clinical), it appears that this assumption was unwarranted.

As noted in Chapter Three, there was approximately a 30% drop in the 1974 response rate. While reasons accounting for this were put forth

it should be kept in mind that the findings may be somewhat skewed. This may have occurred if the 1974 students having a low service orientation did not go to class to take part in the study.

Finally, the very nature of the study may have affected its outcome. The students, having noticed the study was sanctioned by the A.C.F.D. and obviously the dental school (the in-class administration of the questionnaire would probably lead to this conclusion), may have responded the way they felt they were expected to.

### C. Policy Implications

An implication arising out of the non-acceptance of the hypotheses in this study concerns the divergence in Becker's and Merton's view of the professional socialization process. As noted earlier, Merton (1957) proposes that the values, norms and attitudes, "in short - the culture", are transmitted to the student during the professional school experience. Becker (1961), however, suggests this stage represents the acquisition of theoretical knowledge, skills and techniques and not until after finishing the school experience does the student internalize the attitudes of the profession. It would appear that these findings offer support for Becker's concept of the socialization process. The emphasis that has been placed by some occupational theorists on the school as the main agent of ideological conversion is not supported here.

If internalization of professional attitudes does take place after the school experience, what implications would this hold for dentistry in Canada? The professional socialization of medical students, with which Becker was dealing, is segmentalized in nature and can be divided into pre-clinical, clinical, internship, residence and practice

years. It has been suggested that because of this "the major part of professional socialization for the medical student occurs in contexts radically different from the medical school" (Olmstead and Paget, 1969: 667). The same cannot be said for dentistry. The internship, residency and practice years observed in medicine either do not exist, or are not applicable to the professional socialization experience in dentistry.

Unlike medicine, dentistry does not have a required apprenticeship programme and the nature of dental practice precludes daily access to professional peers. It would appear that for dentistry the major part of professional socialization must occur during the school experience including conveying to the student a service orientation.

Upon viewing the results of this study considerations might be given as to how the dental profession could go about strengthening the service orientation of its students. Measures such as the introduction of courses dealing with professional ethics, morals, responsibilities and behaviour as well as the introduction of a required internship period might effectively increase the service orientation of dental students during the professional school experience.

Increased enforcing of professional codes by the profession itself might result in fewer professional indiscretions. However, it appears that policing would be more effective as a means of regulating those who already possess a service orientation.

It has been suggested that one of the functions of the professional school is to inculcate students with a service orientation in order to ensure that the profession's values are consistent with society's needs. From a more general societal perspective the findings cast doubts as to whether this function is being served. However, more research is

warranted before drawing conclusions regarding service orientation and the dental profession.

D. Suggestions for Further Research

It would be beneficial in the analysis of the development of a service orientation if the sample was comprised of dental students as well as other professional students. The results would allow for comparisons across professions allowing for inferences to be made regarding the professions themselves and the professional models.

In a replication of this study attempts should be made to ensure that the students are surveyed within the first week of entry to the professional school. Resurveying should take place midway through school, at time of exit and after they are out and in practice. This would allow one to take a more in depth look at the development of values and attitudes during the school experience as well as the impact practice has on these attitudes. This would allow for a more intense look at the concept of 'situational adjustment' and how it applies to what is actually taking place in the school. Attempts would have to be made to qualify service orientation in terms of it being 'idealistic' at entry and 'enlightened' at exit. The survey occurring once the students were in practice would allow for inferences to be made concerning the relationship between attitudes and actual behaviour.

Also, it would aid when analyzing the professional socialization process if the students were viewed as moving through differentiated subsystems rather than being socialized to a common core of professional values and beliefs. Rather than perceiving professional socialization as a dichotomous process affecting all students, "the process might be

analyzed in more differentiated terms and seen as involving the concurrent existence of multiple but different paths through professional school" (Quantrelli, et al., 1964:43).

APPENDIX A.

THE QUESTIONNAIRE\*

\* Only sections applicable to this thesis are shown here.

For full questionnaire please contact A.C.F.D.

THE ASSOCIATION OF CANADIAN FACULTIES OF DENTISTRY

SURVEY OF DENTAL EDUCATION IN CANADA

YOUR NAME IS NEEDED TO CHECK THE COMPLETED QUESTIONNAIRES AGAINST CLASS LISTS AND TO CO-ORDINATE DIFFERENT QUESTIONNAIRES. ALL INDIVIDUAL REPLIES WILL BE HELD IN THE STRICTEST CONFIDENCE. NO QUESTIONNAIRES OR INDIVIDUAL REPLIES WILL EVER BE SEEN BY THE STAFF OF YOUR SCHOOL OR ANYBODY ELSE EXCEPT THE RESEARCH SOCIOLOGISTS ON THIS PROJECT.

NAME: \_\_\_\_\_

UNIVERSITY: \_\_\_\_\_

YEAR IN DENTISTRY (I,II,III,IV): \_\_\_\_\_

\_\_\_\_\_  
CHECK HERE IF YOU WOULD LIKE A REPORT OF  
THE RESULTS OF THIS SURVEY

THANK YOU FOR YOUR CO-OPERATION

1. What year are you in?  
First \_\_\_\_\_ Second \_\_\_\_\_ Third \_\_\_\_\_ Fourth \_\_\_\_\_ A9 \_\_\_\_\_

2. What is your marital status? A10 \_\_\_\_\_  
\_\_\_\_\_ Married with children  
\_\_\_\_\_ Married with no children  
\_\_\_\_\_ Single, engaged  
\_\_\_\_\_ Single, 'going steady'  
\_\_\_\_\_ Single, unattached  
\_\_\_\_\_ Other: \_\_\_\_\_

3. Sex: Male \_\_\_\_\_ Female \_\_\_\_\_ A11 \_\_\_\_\_

4. Your birthplace: Indicate Canadian province or foreign  
country. A12 \_\_\_\_\_  
\_\_\_\_\_ A13 \_\_\_\_\_

5. Your mother tongue: A14 \_\_\_\_\_  
English \_\_\_\_\_ French \_\_\_\_\_ Other (Specify) \_\_\_\_\_

6. What is your father's ethnic background (e.g. English,  
Polish, Jewish, etc.)? A15 \_\_\_\_\_  
\_\_\_\_\_

7. In what size community did you live during most of your  
high school years? A16 \_\_\_\_\_  
\_\_\_\_\_ Under 1,000  
\_\_\_\_\_ 1,000 - 4,999  
\_\_\_\_\_ 5,000 - 9,999  
\_\_\_\_\_ 10,000 - 29,000  
\_\_\_\_\_ 30,000 - 99,000  
\_\_\_\_\_ 100,000 or over

If in Canada, give name of community and province:  
Province \_\_\_\_\_ Town or City \_\_\_\_\_ A17 \_\_\_\_\_  
A18 \_\_\_\_\_  
A19 \_\_\_\_\_

8. What is your parents' education:  
FATHER: MOTHER: A20 \_\_\_\_\_  
\_\_\_\_\_ No formal education \_\_\_\_\_  
\_\_\_\_\_ Elementary, partial \_\_\_\_\_ A21 \_\_\_\_\_  
\_\_\_\_\_ Elementary, complete \_\_\_\_\_  
\_\_\_\_\_ High School, partial \_\_\_\_\_  
\_\_\_\_\_ High School, complete \_\_\_\_\_  
\_\_\_\_\_ University, partial \_\_\_\_\_  
\_\_\_\_\_ University, degree \_\_\_\_\_

8. (continued)

If either parent has a professional occupational standing, please specify: (Examples include nurse, accountant, lawyer, social worker, etc.)

Father: \_\_\_\_\_ Mother: \_\_\_\_\_

What was your father's or guardian's main occupation when you were in high school? (If father or guardian was deceased, please indicate his occupation when living.)

\_\_\_\_\_

A22 \_\_\_\_\_  
A23 \_\_\_\_\_  
A24 \_\_\_\_\_  
A25 \_\_\_\_\_  
A26 \_\_\_\_\_  
A27 \_\_\_\_\_  
  
A28 \_\_\_\_\_  
A29 \_\_\_\_\_  
A30 \_\_\_\_\_

Please indicate if your father or guardian was self-employed or worked for others:

Self-employed \_\_\_\_\_ Worked for salary or wages \_\_\_\_\_

A31 \_\_\_\_\_

9. Before entering dental school, what university training had you received?

- \_\_\_\_\_ Mostly basic science courses
- \_\_\_\_\_ Many basic science courses, and a few arts courses
- \_\_\_\_\_ Some basic science courses and some arts courses
- \_\_\_\_\_ Mostly arts courses and a few basic science courses
- \_\_\_\_\_ Mostly arts courses

A32 \_\_\_\_\_

10. What was your overall (cumulative) grade average in your pre-dental courses? If your university did not use letter grades, convert to what seems appropriate:

- \_\_\_\_\_ A
- \_\_\_\_\_ A-
- \_\_\_\_\_ B+
- \_\_\_\_\_ B
- \_\_\_\_\_ B-
- \_\_\_\_\_ C+
- \_\_\_\_\_ C
- \_\_\_\_\_ C-

A33 \_\_\_\_\_

11. In your pre-dental university classes, when there was discussion, were you usually:

- \_\_\_\_\_ Pretty quiet
- \_\_\_\_\_ Inclined to speak up only occasionally
- \_\_\_\_\_ An active participant fairly often
- \_\_\_\_\_ An extremely active participant

A34 \_\_\_\_\_

19. At the present stage of your training, how capable are you of training a dental assistant for work at the chair?

- Not at all capable.
- Fairly capable. F42
- Very capable. \_\_\_\_\_

20. How willing would you be to hire an inexperienced person to train as an assistant?

- Not at all willing.
- Slightly willing. F43
- Moderately willing. \_\_\_\_\_
- Very willing.

21. If you were not successful in dental school, how would you feel about it?

- It would not bother me too much.
- I would be somewhat disappointed.
- I would be quite disappointed. F44
- I would be terrifically disappointed. \_\_\_\_\_

22. After you leave school, how interested would you be in spending at least part of your time in the following activities?

	<u>Very</u> <u>Interested</u>	<u>Moderately</u> <u>Interested</u>	<u>Slightly</u> <u>Interested</u>	<u>Not At All</u> <u>Interested</u>	
Dental administration in a Health Department..	___	___	___	___	F45
Teaching in a dental school.....	___	___	___	___	F46
Dental research.....	___	___	___	___	F47
Voluntary clinical work for under-privileged people, through an institution or agency.....	___	___	___	___	F48

23. After you have been out in practice ten years or so, how much do you think any of the following activities would appeal to you?

	<u>Very</u> <u>Much</u>	<u>Moderately</u>	<u>Somewhat</u>	<u>Not At</u> <u>All</u>	
Serving as a part time staff member in a hospital.....	___	___	___	___	F49
Participating with local officials and health personnel on committees concerned with community health problems.....	___	___	___	___	F50
Part-time teaching in a dental school.....	___	___	___	___	F51

23. (continued)	<u>Very</u> <u>Much</u>	<u>Moderately</u>	<u>Somewhat</u>	<u>Not At</u> <u>All</u>
Giving talks on dentistry to men and women's service clubs, PTA's, etc.....	—	—	—	F52
Doing part-time clinical work for nominal fees in non-profit institutions or agencies.....	—	—	—	F53
Working with a research team engaged in laboratory testing of theoretical problems concerning different dental disorders.....	—	—	—	F54
Running for public office, either federally or provincially.....	—	—	—	F55
Taking refresher courses in dental school.....	—	—	—	F56
Conducting a statistical study of the possible relationship between mouth cancer rates and dental disorders.....	—	—	—	F57
Constructing a particularly difficult dental appliance.....	—	—	—	F58
Running for local public office..	—	—	—	F59

24. For the following, please indicate the extent to which you agree or disagree by circling ONE number on the scale provided:

1. A public dental program should operate as a closely integrated part of general health services.  
 Strongly Agree 1 2 3 4 5 Strongly Disagree G10
2. It is important that dental schools teach students about the oral health habits of families and communities.  
 Strongly Agree 1 2 3 4 5 Strongly Disagree G11
3. Dentists should not be too involved with what their patients feel about dental care and how they feel about coming for treatment; they should mainly be concerned with fixing teeth.  
 Strongly Agree 1 2 3 4 5 Strongly Disagree G12
4. Dentistry is a suitable profession for a woman.  
 Strongly Agree 1 2 3 4 5 Strongly Disagree G13

(continued)

5. If the government pays the dental bills for the patient it takes away the responsibility of the patient for his own oral health.
- Strongly Agree 1 2 3 4 5 Strongly Disagree G14\_\_\_
6. There is not much need for dentists to know what health services are provided by other health professions and agencies for the public.
- Strongly Agree 1 2 3 4 5 Strongly Disagree G15\_\_\_
7. Services provided by dentists and their staffs to individual patients should receive the most concern in a public dental program.
- Strongly Agree 1 2 3 4 5 Strongly Disagree G16\_\_\_
8. Most of the money and energy of a public dental program should be directed toward the encouragement of actions people themselves can take for good dental health (e.g. oral hygiene, good eating habits).
- Strongly Agree 1 2 3 4 5 Strongly Disagree G17\_\_\_
9. All health services, including dentistry, should be provided as a right and not as a privilege of every person.
- Strongly Agree 1 2 3 4 5 Strongly Disagree G18\_\_\_
10. It is an individual's responsibility to arrange and pay for his own health services.
- Strongly Agree 1 2 3 4 5 Strongly Disagree G19\_\_\_
11. Every dentist should employ at least one dental hygienist.
- Strongly Agree 1 2 3 4 5 Strongly Disagree G20\_\_\_
12. Dentists should accept opportunities to speak to parent-teacher groups about fluoridation.
- Strongly Agree 1 2 3 4 5 Strongly Disagree G21\_\_\_
13. A dentist is autonomous and has no responsibility to the other health professions.
- Strongly Agree 1 2 3 4 5 Strongly Disagree G22\_\_\_

24. (continued)

14. It is a dentist's responsibility to offer to serve on public health organizations such as the Board of Health.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G23\_\_\_
15. Dentists should take an active part in community health and welfare organizations which are not specifically concerned with dental health, as part of their community responsibility.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G24\_\_\_
16. Community activities and programs which are not specifically connected with dentistry or with the health professions are not the concern of the dentist.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G25\_\_\_
17. The permanent duties of the dental hygienist should be broadened to include a wider range of intra-oral operations.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G26\_\_\_
18. It is part of the dentist's responsibility to his profession to write articles for its professional journals.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G27\_\_\_
19. Dental mechanics should be permitted to deal directly with the public.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G28\_\_\_
20. Dental treatment should be provided at the public expense for all children in our society.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G29\_\_\_
21. People do not seek dental treatment because they are afraid of dentists.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G30\_\_\_
22. Most people do not get adequate dental care because they cannot afford to pay the dentist.  
Strongly Agree 1 2 3 4 5 Strongly Disagree G31\_\_\_

24. (continued)

23. More time should be spent in dental school learning about the social origins of the profession, its code of ethics, and its relationship to society.

Strongly Agree 1 2 3 4 5 Strongly Disagree G32     

24. Courses in social or community dentistry are boring and not helpful.

Strongly Agree 1 2 3 4 5 Strongly Disagree G33

APPENDIX B.

Factor loadings of the items used to create scales for measuring student's service orientation at entry and exit.

	LOADINGS ENTRY 1971	LOADINGS ENTRY 1974
After you have been in practice for ten years, would you be interested in the following following:		
work on committees concerned with community	.51	.57
give talks on dentistry to men and women's service clubs, PTA'S etc.	.63	.43
doing part-time clinical work for nominal fees in non-profit institutions or agencies	.51	.32
Dentists should accept opportunities to speak to parent-teacher groups about fluordation	.42	.52
It is a dentist's responsibility to offer to serve on public health organizations such as the board of health	.54	.64
Dentists should take an active part in community health and welfare organizations which are not specifically concerned with dental health, as part of their community responsibility	.61	.67
Community activities and programs which are not specifically connected with dentistry or with the health professions are not the concern of the dentist	.43	.44
It is part of the dentist's responsibility to his profession to write articles for its journals	.56	.42

## BIBLIOGRAPHY

- Abrahamson, Mark. The professional in the organization. Rand McNally and Company, Chicago, 1967.
- Adams, Stuart. Trends in occupational origins of physicians. American Sociological Review, 18, 404-409, 1953.
- Anderson, Charles H. (ed.) Sociological essays and research: introductory readings. The Dorsey Press, 1974.
- Association of Canadian Faculties of Dentistry. Presidential Address and Scientific Papers. 1968.
- Babbie, Earl R. Survey research methods. Wadsworth Publishing Company, 1973.
- Barber, Bernard. Some problems in the sociology of the professions. in Kenneth S. Lynn (ed.), The professions in America. The Riverside Press, 1965.
- Becker, Howard, S., Geer, Blanche, Hughes, Everette, C., Strauss, Al L. Boys in white. The University of Chicago Press, 1961.
- Becker, Howard S. Sociological work method and substance. Aldine Publishing Company, 1970.
- Becker, Howard S. and Geer, Blanche. The fate of idealism in medical school. American Sociological Review, 23, 50-56, 341-347, 1958.
- Becker, Howard S. and Strauss, Anslem. Careers, personality and adult socialization. American Journal of Sociology, 3, 253-263, 1962.
- Becker, Howard S. and Carper, James. The elements of identification with an occupation. American Sociological Review, 21, 341-347, 1965.
- Becker, Howard S. Personal change in adult life. Sociometry, 27, 40-53, 1964.
- Bell, Robert R. and Stub, Hoger R. (eds.) The sociology of education: a sourcebook. The Dorsey Press, 1968.
- Blishen, Bernard R. and McRoberts, Hugh, A. A revised socioeconomic index for occupations in Canada. The Canadian Review of Sociology and Anthropology, 13 (1), 71-79, 1976.
- Blishen, Bernard, et al.(eds.) A socio-economic index for occupations in Canada. Canadian Society, MacMillan and Company, 1961.

- Blishen, Bernard R. et al. Canadian society sociological perspectives. Macmillan of Canada, 1972.
- Bloom, Samuel. The sociology of medical education: some comments on the state of the field. The Milbank Memorial Fund Quarterly, 43, 143-184, 1965.
- Bohrnstedt, George W. A quick method for determining the reliability and validity of multiple-item scales. American Sociological Review, 34, (August), 542-548, 1969.
- Borland, Loren R. and Hardyck, Curtis D. Psychology in the dental curriculum - a study of its effectiveness in modifying attitudes and values. Journal of Dental Education, 24, 71-77, 1960.
- Breton, Raymond. Social and academic factors in the career decisions of Canadian youth. Department of Manpower and Immigration, Ottawa, 1972.
- Brim, Orville G. Jr. and Wheeler, Stanton. Socialization alter childhood: Two essays. John Wiley and Sons, Inc. 1966.
- Campbell, Donald T. and Stanley, Julian C. Experimental and quasi-experimental designs for research. Rand McNally Publishing Company, Chicago, 1963.
- Canadian Dental Association. Dental education register 1969-1970. Council on Education.
- Caplow, Theodore. The sociology of work. McGraw Hill Book Company, 1964.
- Causea, David (ed.) Socialization and society. Little, Brown and Company, 1968.
- Chebib, F. Dental manpower in Canada in 1972. University of Manitoba.
- Clausen, John A. Socialization and society. Little, Brown and Company, 1968.
- Cogan, Morris. Toward a definition of profession. Harvard Educational Review, (23), 33-50, 1953.
- Collishaw, N. and Granger, R.M. Canadian medical student selection and some characteristics of applicants, 1970-1971. Journal of Medical Education, 47, 254-266, 1972.
- Cowan, E.M. et al. Studies in dental education in Canada. 1972.

- Coxon, A.D.M. and Jones, C.L. (eds.) Social mobility: selected readings. Richard Clay (The Chaucer Press) Ltd., 1975.
- Cussler, Margaret and Gordon, Evelyn W. Dentists, patients and auxiliaries. University of Pittsburg Press, 1968.
- Davis, James A. Elementary survey analysis. Prentice-Hall, 1971.
- Deutscher, Irwin. What we say/what we do sentiments and acts. Scott, Foresman and Co., 1973.
- Elliot, Philip. The sociology of the professions. New York: Herder and Herder, 1972.
- Fein, Rashi and Weber, Gerald I. Financing medical education: an analysis of alternative policies and mechanisms.
- Fish, D.G. and Brown, Isabel B. A comparison of applicants and applications to Canadian medical and dental schools, 1965-1966. The Canadian Medical Association Journal, 95, (July), 68-71, 1966.
- Flint, Robert T. Professionalism and the health occupations. The Journal of American Dental Hygienists. Fourth Quarter, 190-198, 1967.
- Freeman, Linton C. Elementary applied statistics for students in behavioural sciences. John Wiley and Sons, Inc. 1965.
- Friedson, Elliot. Profession of medicine: a study of the sociology of applied knowledge. Dodd, Mead and Company, New York, 1971.
- Freidson, Elliot. Professional dominance: the social structure of medical care. Atherton Press Inc., New York, 1970.
- Freidson, Elliot. (ed.) The professions and their prospects. Sage Publications. 1971.
- Freund, John E. Modern elementary statistics. Prentice-Hall Inc., 1973.
- Giddon, Donald B. Conceptual basis of behavioural science in dentistry. Journal of the American College of Dentists, 276-280, 1970.
- Glass, Gene V. and Stanley, Julian C. Statistical methods in education and psychology. Prentice-Hall Inc., 1970.
- Goode, William, J. Encroachment, charlatanism and the emerging profession: psychology, sociology and medicine. American Sociological Review, 902-914, 1961.

- Goode, William. Community within a community: the professions, in R.M. Pavalko (ed.) *Sociological Perspectives on occupations*. F.E. Peacock Publishers, Inc., 1972.
- Goslin, David A. (ed.) *Handbook of socialization theory and research*. Rand McNally and Company, Chicago, 1969.
- Gouldner, Alvin. *Anti-monitaur: the myth of value-free society*. *Social Problems*, 9, (Winter), 207-218, 1963.
- Greenwood, Ernest. Attributes of a profession. in Ronald M. Pavalko (ed.) *Sociological Perspectives on Occupations*. F.E. Peacock Publishers, Inc., 1972.
- Grame, Soloman and Thompson, Kenneth (eds.) *People and organizations*. The Open University Press, 1973.
- Habenstein, Robert. Critique of 'profession' as a sociological category. *Sociological Quarterly*, 4, 291-300, 1963.
- Hall, Oswald. The stages of a medical career. *The American Journal of Sociology*, 53, (March), No. 5., 1948.
- Hall, Richard H. *Occupations and the social structure*. Prentice-Hall Inc., 1975.
- Hansen, Donald A. and Gerstc, Joel E. On education - sociological perspectives. John Wiley and Sons Inc., 1967.
- Hind, Robert R. and Wirth, Timothy E. The effect of university experience on occupational choice among undergraduates. *Sociology of Education*, (winter), 50-71, 1969.
- Hollinghead, Byron S. *The survey of dentistry. The final report*. The American Council on Education, 1961.
- Hughes, Everett C. *The sociological eye. Selected papers on work, self and the study of society*. Aldine and Atherton, 1971.
- Hughes, Everett C. Professions. in Kenneth S. Lynn (ed.) *The professions in America*. The Riverside Press, 1965.
- Hughes, Everett C. The professions in society. *Canadian Journal of Economics and Poltical Science*, May, 54-61, 1959.
- Hughes, Everett C. Stress and strain in professional education. *Harvard Educational Review*, (Fall), 29, no.4, 1959.
- Hughes, Everett C. Professions in transition, in *Man and their work*. The Free Press, Glencoe, 131-138, 1958.

- Hughes, Everett C. The making of a physician. Human Organization, 14, 21-25, 1955.
- Hunter, A.A. On the validity of measures of association: the nominal-nominal, two by two case. The American Journal of Sociology, 79, (July, no.1), 99-109, 1973.
- Hunter, A.A. and Latif, A.H. Stability and change in the ecological structure of Winnipeg: a multi-method approach. The Canadian Review of Sociology and Anthropology, 10, no.4, 308-333, 1973.
- Huntsberger, David V. and Billingsley, Patrick. Elements of statistical inference. Allyn and Bacon, Inc., 1973.
- Hutton, Jack G. Attitudes of dental students toward dental education and the profession. J. Dent. Educ., 32, no.3, 296-305.
- Hyman, Herbert H. and Singer, Eleanor (eds.) Readings in reference group theory and research. The Free Press, 1968.
- Information Canada. Ad hoc Committee on Dental Auxiliaries, 1970.
- Jackson, J.A. (ed.) Professions and professionalization. Cambridge University Press, 1970.
- Johnson, Terence J. Professions and power. The MacMillan Press, Ltd., 1972.
- Kaplan, Abraham. The conduct of inquiry. Methodology for behavioural sciences. Chandler Publishing Co., 1964.
- Kaufert, Joseph et al. A preliminary study of Mexican-American medical students. Journal of medical education, 50, (September), 856-866, 1975.
- Kerlinger, Fred N. and Pedhazur, Elazor J. Multiple regression in behavioural research. Holt, Rinehart and Winston Inc., 1973.
- Kolstoe, Ralph H. Introduction for statistics for the behavioural sciences. The Dorsey Press, 1969.
- Krause, Elliott A. The sociology of occupations. Little, Brown and Company, 1971.
- Lauman, Edward O., Siegel, Paul M., Hodge, Robert W. (eds.) The logic of social hierarchies. J.B. Lippincott Company, 1968.
- Levinson, Daniel J. Medical education and the theory of adult socialization. Journal of Health and Social Behaviour, 8, 207-213, 1967.
- Lin, Nan. Foundations of social research. McGraw-Hill, 1976.

- Loether, Herman J. and McTavish, Donald G. Descriptive and inferential statistics. An introduction. Allyn and Bacon, 1976.
- Lynn, Kenneth S. The professions in America. The Riverside Press, 1965.
- Marshall, T.H. The recent history of professionalism in relation to social structure and social policy. The Canadian Journal of Health and Human Behaviour, 2, 325-340, 1939.
- Martin, Harry W. and Katz, Fred E. The professional school as a moulder of motivations. Journal of Health and Human Behaviour, 106-112, 1960.
- McFarlane, B. Dental Manpower in Canada. Queen's Printer, 1965.
- McFarlane, Bruce A. and Reid, Angus E. The dentist, dental practice and the community health centre. Published by the Canadian Public Health Association.
- Merton, Robert K., Reader, George G., Kendall, Patricia L. (eds.) The student physician. Cambridge, Massachusetts; Harvard University Press. 1957.
- Moore, Wibert E. The Professions: roles and rules. Russell Sage Foundation. 1970.
- Mueller, John H. Statistics reasoning in sociology. Houghton Mifflin Co., 1970.
- Muller, Walter, and Mayer, Karl Ulrich. Social stratification and career mobility. Mouton and ecole Pratique des hautes etudes. 1973.
- Nie, Norman H. et al. Statistical package for the social sciences. McGraw-Hill Inc., 1975.
- Nosow, Sigmund and Form, William H. (eds.) Man, work and society. Basic Books Inc., 1962.
- Olmstead, Ann G. and Paget, Marianne A. Some theoretical issues in professional socialization. Journal of Medical Education, 44, (August), 663-669, 1969.
- Oppenheim, A.N. Questionnaire design and attitude measurement. Basic Books Inc., 1966.
- Ostry, Sylvia (ed.) Canadian Higher Education in the Seventies. Economic Council of Canada, 1972.
- Parnes, Herbert S. The national longitudinal surveys: new vistas for labour market research. The American Economic Review, 65, (May no.2), 244-249, 1975.

- Parsons, Talcott. The social system. Collier-McMillan Canada, 1951.
- Pavalko, Ronald M. Sociology of occupations and professions. F.E. Peacock Publishers, Inc., 1971.
- Pavalko, Ronald M. (ed.) Sociological perspectives on occupations. F.E. Peacock Publishers Inc., 1972.
- Perrucci, Robert. Education, stratification and mobility. in Donld A. Hansen and Joel E. Gerstl (eds.) On Education - Sociological perspectives. John Wiley and Sons Inc., 1967.
- Phillips, Bernard S. Social research strategy and tactics. McMillan Co., 1971.
- Pike, Robert M. and Zureik, Elia (eds.) Socialization and values in Canadian society. Volume II. McClelland and Rteewart Ltd., 1975.
- Porter, John. The vertical mosaic. University of Toronto Press, 1965.
- Quarantelli, Enrico L., Helefrich, Margaret, and Yutsy, Daniel. Faculty and student perceptions in a professional school. Sociology and Social Research, 49, 31-45, 1964.
- Quarantelli, Enrico. The career choice of dental students. Journal of Health and Human Behaviour, 10, (March), 124-131, 1969.
- Randolph, Kenneth V. The dental school in a changing profession. D.D.S. News, Official Publication of the Dallas County Dental Society, Volume XIV, No. 2. (October) 1968.
- Reader, W.J. Professional men: the rise of the professional classes in nineteenth century England. Weidenfeld and Nicolson, 1966.
- Reid, A.E. Dental education and the delivery of dental health care - a preliminary report. A.C.F.D., 1971.
- Reid, A.E. Recruitment into dentistry: The results of a recent national study of dental education in Canada. Journal of Dental Education, 40, (no.3.), 158-165, 1976.
- Reid, A.E. et al. Studies in dental education in Canada. Association of Canadian Faculties of Dentistry Project. (November), 1972.

- Ritzer, George. Man and his work: Conflict and change. Meredith Corporation, 1972.
- Rogoff, Natalie. The decision to study medicine. in Robert K. Merton, et al.(eds.) The student-physician. Harvard University Press, 1957.
- Rosen, Bernard C. and Bates, Alan P. The structure of socialization in graduate school. Sociological Inquiry, 37, (Winter), 71-84, 1967.
- Rosow, Irving. Forms and functions of adult socialization. Social Forces, 35-44, 1963.
- Rueschmeyer, Deitrich. Doctors and lawyers: a comment on the theory of the professions. Canadian Review of Sociology and Anthropology, (February), 17-30, 1964.
- Rummel, R.J. Applied factor analysis. North Western University Press, 1970.
- Salaman, Graeme and Thompson, Kenneth. People and organizations. The Open University, 1973.
- Seeman, Melvin and Evans, John W. Apprenticeship and attitude change. The American Journal of Sociology, LXVII, (January), 365-378, 1962.
- Sherlock, Basil J. and Morris, Richard T. Becoming a dentist. Charles C. Thomas. 1972.
- Sherlock, Basil J. and Morris, Richard T. The evolution of the professional: A paradigm. Sociological Inquiry, 37, (Winter); 27-46, 1967.
- Silverman, David. The theory of organizations. London, Heineman Educational Books Ltd., 1970.
- Simmons, Leo W. and Wolff, Harold, G. Social science in medicine. Russell Sage Foundation, 1954.
- Simpson, Michael A. Medical Education: a critical approach. Butterworth and Company Ltd., 1972.
- Spiegel, Murray R. Theory and problems of statistics. McGraw-Hill Co. Ltd., 1966.
- Statistics Canada. Advance bulletin 1971 Census of Canada, 1972.
- Stub, Holger R. Status communities in modern society: alternatives to class analysis. The Dryden Press, 1972.
- Susser, M.W. and Watson, W. Sociology in medicine. Oxford University Press, London. 1971.

- Thielens, Wagner. Some comparisons of entrants to medical and law school. in Robert K. Merton et al. (eds.) the student-physician. Harvard University Press, 1957.
- Tuckett, David (ed.) An introduction to medical sociology. Tavistock publications Limited., 1976.
- Tumin, Melvin M. Readings on social stratification. Englewood Cliffs, New York, Prentice-Hall Inc., 1970.
- Vickers, J. Women in the universities. in Women in the Canadian mosaic. Matheson (ed.) Peter Martin Ass. Ltd., 1967.
- Vollmer, Howard and Mills, Donald. Professionalization. Prentice-Hall Inc., 1968.
- Webb, Eugene J. et al. Unobtrusive measures: nonreactive research in the social sciences. Rand McNally and Co., 1970.
- Western, J.S. and Anderson, D.S. Education and Professional socialization. The Australian and New Zealand Journal of Sociology, Vol.4 (no.2.), October, 91-106, 1968.
- Wilensky, Harold L. The professionalization of everyone? The American Journal of Sociology, LXXX, no. 2, 1964.