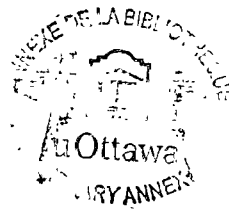
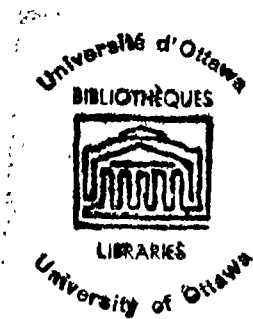


ATTITUDES OF HIGH SCHOOL STUDENTS IN MANITOBA
TOWARD THE USE OF ALCOHOLIC BEVERAGES

by Sister Edith Patricia McKittrick

Thesis presented to the Faculty of
Psychology and Education of the
University of Ottawa as partial
fulfillment of the requirements
for the degree of Doctor of
Philosophy



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CURRICULUM STUDIORUM

Sister Edith Patricia McKittrick was born January 19, 1914, in Los Angeles, California. She obtained her B.A. from the University of Manitoba in 1934, and her M.A. there in Classics in 1946. The title of her thesis was Contemporary Life in Catullus, Tibullus, and Propertius. Course work toward a M.A. in Education was completed at the University of Manitoba.

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INTRODUCTION

From time immemorial the use of alcoholic beverages has been a controversial question. The pleasure afforded by the exhilarating effect of these beverages has caused many to desire them; on the other hand, the consequences of their use or abuse has aroused strong opposition to their use. Society has tried to cope with the problems arising from the use of beverage alcohol both by legal control and by moral suasion.

Since the experiment with prohibition in the United States, the populace has been willing to accept only a minimum of legal control in this matter, and the alcohol education movement has developed. Considerable research on the use of alcoholic beverages has been carried out both in the physiological and in the psychological fields. Since man's conduct is largely the product of his attitudes, it is not surprising that a number of studies of attitudes towards the use of beverage alcohol should have been made. However, for the most part these studies have not used the techniques of attitude testing, which have developed in recent years. In addition to determining factors that are related to students' drinking practices several attempts have been made to determine the predominating influence on student drinking, and to develop a theory that would explain apparent contradictions.

The Department of Education of Manitoba, recognizing the need for alcohol education, has made it a part of the curriculum for grades six to twelve. In addition, the Department has encouraged the Alcohol Education Service to carry on a program of instruction involving yearly visits to each classroom by trained instructors. Just what is being accomplished by both forms of alcohol education is presently being questioned. It is a well known fact that knowledge will not affect behaviour unless it is accepted at the emotional as well as at the intellectual level. A definition of attitude, "An enduring organization of motivational, emotional, perceptual, and cognitive processes with respect to some aspect of the individual's world",¹ suggests that a valuable aid for teachers would be a means of ascertaining the range of attitudes among students and of judging student progress. Moreover, knowledge of the relation of various factors with the opinions of high school students in Manitoba would be useful in improving the alcohol education program in the province. An attempt to obtain and interpret such information may reveal a predominating influence on student drinking, and contribute in some small way toward clarifying psychological theory in this regard.

¹ D. Krech and R.S. Crutchfield, Theory and Problems of Social Psychology, New York, McGraw-Hill, 1948, p. 152.

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Before drawing up the hypotheses for the study the findings of a number of studies in the United States were considered, as well as the history of the topic in Canada and especially in Manitoba. It has been observed that Canada² never went through the same struggle over prohibition as did the United States, the advocates of prohibition were not as numerous, nor did prohibition remain in force for as many years. On the other hand government control continued in force in Canada for many years, and was stricter in Manitoba than in some of the provinces, allowing no beer parlours for women or for mixed drinking. This legislation, an indication of more general disapproval of the use of alcoholic beverages, may well have influenced the attitude of the high school students of today. However, the large percentage of the population of European origin or ancestry, whose communities have formed a mosaic of ethnic composition, possibly tends to create a more favourable attitude towards the use of alcoholic beverages.

The hypotheses for this study may be considered under two main headings: (i) those which concern the construction of the test of attitude, (ii) those which deal with the interpretation of the results of the test. For the

² The Manitoba Liquor Enquiry Commission, Report of Manitoba Liquor Enquiry Commission, Winnipeg, 1955, p. 101-102.

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construction of the test it was hypothesized that the attitudes of the high school students of Manitoba would range along a single continuum between strong approval and strong disapproval, and that the scores of the individuals on such a test would form a normal curve of distribution. It was further hypothesized that a sample, stratified for father's occupation, sex, grade, and chosen at random within school divisions, would be representative. A survey of the literature suggested many possible methods of analysis, and a number of hypotheses to be considered. It was decided that attitude score according to sex, grade, father's occupation, school division, and size of school would be compared by the difference of the means and "t" scores, that the percentage of students that drink would also be determined, and that relationship between drinking and attitude score would be studied by means of the chi-square technique. It was considered that a study of this relationship would to some extent measure the validity of the test as well as assist in interpreting the results of the test. A study of the respondents to certain questions will be made in an attempt to discover certain trends of thought on the topic.

The conclusion drawn from some studies is that the attitude of high school students is related to that of the parents and to their permissiveness in allowing their children to use alcoholic beverages. On the other hand one

author³ finds a certain ambivalence in the attitude of students who drink despite strong parental disapproval. Another current hypothesis is that drinking is a variable of adherence to adolescent sub-culture. In an attempt to throw light upon this aspect of the problem secondary hypotheses are drawn up in the form of questions: Is there a similarity in the attitudes of parents and children? Do all students who drink approve of their own drinking?

The historical background of the topic is sketched in Chapter I. Chapter II describes the construction of the test, and the choosing of the sample. In Chapter III results are presented and interpreted by a study of relationships, and in Chapter IV results of this study are compared with those of several similar studies. The final chapter gives the conclusions and the implications of the study.

³ Abraham Myerson, "Alcohol: A Study of Social Ambivalence", Quarterly Journal of Studies of Alcohol, Vol. 1, 1940, p. 13-20.

CHAPTER I

HISTORICAL BACKGROUND

Since attitudes are frequently transmitted from one generation to another, the historical background of the topic in Manitoba should be considered in selecting a representative sample, and in interpreting results. The attitude of the people of Manitoba towards the use of alcoholic beverages has been indicated from time to time by legislation that attempted to control or abolish the liquor trade. The returns of some of the plebiscites reflect attitudes common at the time in the rest of the country, but others can be explained better by reference to local history. That national origin and religious affiliation affect the attitude towards the use of alcoholic beverages has been attested by a number of studies. In this chapter an attempt will be made to sketch the manner in which Manitoba was settled, and to indicate the principal events that may have influenced its people in their attitudes towards the use of alcoholic beverages. A review of the literature pertinent to the topic will follow.

1. Settlement and Liquor Legislation.

Although the interests of the fur trade and of agriculture were diametrically opposed, both the Northwest Company and the Hudson Bay Company were indirectly responsible

for the beginnings of agriculture in the West.¹ On the long canoe route from Montreal the Nor'Westers required supplies and hence the Indians were encouraged to grow grain. In 1812 Lord Selkirk, who held many shares in the Hudson Bay Company, was allowed to bring out settlers. Most of these were highland Scotch farmers that had been evicted from their homes to make room for sheep runs. The Nor'westers, the free traders and their descendants of mixed blood saw the settlement as a threat to the fur trade, and did everything possible to drive the colonists away. However, the Scotch refused to be driven away, and later many of the Metis came to look upon the colony as a place of settlement for themselves and as a market for the products of the hunt. When in 1821 the competition between the two companies was ended by their union, it was forbidden to give liquor to the Indians upon whom it had a particularly bad effect.²

A characteristic of the colony from its beginnings was duality in language and in religion. Employees of the Hudson Bay Company were for the most part English speaking and Protestant, those of the Northwest Company French speaking

1 W.H. Morton, Manitoba, A History, Toronto, University of Toronto Press, 1957, p. 41-42, referring to Elliot Coues, (ed.), New Light on the Early History of the Greater Northwest, New York, 1897, p. 188-189, 280.

2 The Manitoba Liquor Enquiry Commission, Report, Winnipeg, 1955, p. 235.

and Catholic. Many of these men married native women and remained in the colony. Their descendants generally retained the language and religion of their fathers. The Selkirk settlers beside their native Gaelic knew or learned English and were Protestants. In 1816 the French Catholic population was increased by a group of settlers from Quebec. Shortly afterward two Catholic priests and an Anglican minister came to the colony. These clergymen endeavoured not only to Christianize the Indians but also to teach them the ways of civilization, especially the cultivation of the soil. A number of free traders, mostly from the States, came to the colony, thus increasing the English speaking population. The composition of the population in 1870, when Manitoba joined Confederation, was as follows: 558 Indians, 5,757 Metis, 4083 English half-breeds and 1,565 Whites. Catholics numbered 6,247 and Protestants 5,716.³

Not only did the population differ in language and in religion, but for the most part English and French settled in different areas. At first both French and English had their farms along the Red River, the French to the south of the Assiniboine River, the English to the north of it. In 1823 a large group of Metis from Pembina moved to St. Francois Xavier on the Assiniboine.⁴ Some while later, when the lots

³ Canada, Sessional Papers, V(20), 1871, p. 91.

⁴ Horton, op. cit., p. 62.

at St. Andrews were becoming congested, Reverend Cochrane led a group of settlers to Portage la Prairie about fifty miles west on the Assiniboine.⁵ Later English speaking settlers from Upper Canada joined this group. It was these Canadian farmers that broke away from the pattern of river-bank farming, and adopted that of the section.

In 1874 the first group of Mennonites came to Manitoba.⁶ The right of a minority to preserve its identity had been established by the Manitoba Act. Consequently this group of settlers, as were other national groups to come later, were assigned to a certain area, where they lived much as they had in the country of their origin. In 1875, the French element was increased by settlers from Massachusetts. Icelandic settlers came also in 1875 settling on the west shore of Lake Winnipeg. Between 1876 and 1881 some forty thousand immigrants came to Manitoba. The greater number of these came from Ontario and settled in the southwestern part of the province. Most of these settlers were adherents of the Presbyterian faith.

These settlers from Ontario were no doubt largely responsible for the large majority in favour of prohibition in the plebiscite of 1892.⁷ Temperance organizations had

⁵ Morton, op. cit., p. 88.

⁶ Ibid., p. 161.

⁷ Ibid., p. 251.

been formed in the eighteenth century in England to correct widespread abuses in the use of liquor in the newly industrialized society. The Protestant churches of Wesleyan, Calvinistic, and Baptist backgrounds were strong supporters of these movements. These churches advocated abstinence, and as a consequence the very name, "Temperance" came to mean abstinence rather than moderation. The Roman Catholic and Anglican churches were opposed to excessive use of liquor, but except for small groups within these churches, did not advocate abstinence. Early in the nineteenth century Temperance societies had been formed in Canada. In 1878 the Canada Temperance Act,⁸ popularly known as the Scott Act, was passed. This act provided for local prohibition at the wish of the electorate. In the pioneer society of Manitoba and particularly in Winnipeg, a stopping off place for carters, trappers, and traders, there was much excess of drinking. The rowdiness of the saloons was notorious.⁹ The respectable members of the community might well be concerned about the matter. However, the provincial government did not enforce the prohibition because of doubts about its legality. A plebiscite held by the Federal government in Manitoba in 1896 also resulted in a large majority for

⁸ Canada, Statutes, Chap. 16, May 1878, p. 81.

⁹ Norton, op. cit., p. 171.

prohibition, but was not implemented because of the difficulties of enforcement. The Temperance people annoyed with the slowness of the government had to a large extent ignored this plebiscite.¹⁰

In the nineties the immigration from Ontario fell off, but two new waves of immigrants came at this time, Americans and Ukrainians with a smaller number of Poles. The Americans were assimilated by the English speaking people of the province, but the Slavic immigrants settled in the rough bush lands between Lake Manitoba and Lake Winnipeg, forming national communities. The aggressive immigration policies of Clifford Sifton,¹¹ aided by the advertising of railway and steamship companies, by 1906 had brought the population up to 365,000, of which the new minority numbered 73,000. There seems to be a decided relationship between the areas where local option had been adopted and the predominance of settlers of Anglo-Saxon background. This is true of almost the whole southwestern section of the province and of the Swan River section in northwestern Manitoba.

When the Liberal party came into power in Manitoba in 1914, it did so as a reform party. There had been a number of political scandals, of which that of the construction

¹⁰ Merton, *op. cit.*, p. 282.

¹¹ *Ibid.*, p. 274.

of the legislative buildings was the most flagrant. Women's suffrage and the abolition of the liquor traffic were part of the party's platform. Morton¹² says Premier Norris saw to it that the women got the vote first, and then held a referendum on the legislation that he had had the Temperance organizations prepare. The result was a large majority for prohibiting the sale of liquor in the province. A referendum in 1920 decided against allowing the importing of liquor. During the war years nearly all the provinces chose prohibition, and in 1919 the United States passed the Eighteenth Amendment establishing prohibition throughout the whole country.

The difficulties of enforcing prohibition and the consequent evils led to the formation of the Moderation League. It proposed the sale of liquor by the government and the sale of beer and wine by licensed establishments. The sale of packaged liquor in government stores was passed by the plebiscite of 1923.¹³ In 1926 the sale of beer in beer parlors was legalized.¹⁴

This system of liquor control was still in force in 1954, when the Manitoba Liquor Enquiry Commission was set up

12 Morton, op. cit., p. 346.

13 Manitoba, Statutes, Cap. 1, July 1923.

14 Ibid., Cap. 31, 1926.

by an Order-in-Council to study the situation and advise the government on possible changes. Considerable dissatisfaction had been expressed with the existing system as being too restrictive, and at the same time not sufficiently well enforced.¹⁵ In other provinces of Canada as well as in the United States liquor control had been modified. In Manitoba the trend toward freer use of alcoholic beverages could be seen in the number of districts that had voted to remove restriction on the sale of liquor.¹⁶

The Commission recommended that restaurants be allowed to serve beer and wine, and that cocktail rooms be permitted in hotels connected with dining rooms.¹⁷ The rationale behind these recommendations was that, if food was available when liquor was served there would be less danger of excess in drinking. It was thought also that respectable places where men and women could be served together would be preferable to the atmosphere of the all-male beer parlor. These and other changes were made in 1956.¹⁸

The Commission was pleased with the alcohol education program that the Department of Education had prescribed for grades seven to twelve. In addition in 1954 the

¹⁵ Manitoba Liquor Enquiry Commission, Report, Winnipeg, 1955, p. 11-13.

¹⁶ Ibid., p. 261.

¹⁷ Ibid., p. 693.

¹⁸ Manitoba, Statutes, Cap. 40, 1956, 69 (1).

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Department of Education made a grant of \$20,000 to the Manitoba Temperance Alliance as an aid to the financing of their alcohol education program. This society has since changed its name to Alcohol Education Service, in order to facilitate its work. It accepts the theory of modern alcohol education, maintaining that the facts should be known, but that the right of the individual to choose to drink or to abstain should be respected. Trained workers from the Alcohol Education Service visit classes regularly, presenting some particular aspect of the topic and distributing literature. The accumulation of information regarding beverage alcohol is also part of their work, but, when the Service wished to make a survey in the Winnipeg schools, the School Board refused because it considered some of the questions too personal.

2. Review of the Literature.

The type of survey that the Alcohol Education Service wished to make was devised by the Hofstra Research Bureau, and administered in Nassau Country on Long Island in 1953.¹⁹ The method was that of the interview-questionnaire, in which the administrator explains the purpose of the survey, and answers questions regarding the meaning of any question that is not clear to the students. The questionnaire is

¹⁹ Hofstra Research Bureau, Hofstra College, Use of Alcoholic Beverages Among High School Students, New York, The Mrs. John Sheppard Foundation, 1953, 111-88 p.

then filled out in the presence of the administrator. Similar surveys were held in 1956 in Wisconsin²⁰ and in Kansas.²¹ These and other studies reveal a pattern of drinking behaviour that varies from area to area. Certain factors seem to be related to the use of alcoholic beverages and to attitude toward their use. Among such factors are: sex, age, religion, and ethnic origin. In these surveys carefully prepared samples were used, but the techniques of attitude testing were not employed in preparing the questionnaires. The Wisconsin study reports the significance of the results. In 1964 a study using an attitude scale constructed and validated by Dr. George E. Passey and Dr. Lempsey F. Pennington, Jr. was made in Michigan.²² This report gives group scores of hospital personnel, teachers and students for attitudes regarding beverage alcohol. The significance of the results is not reported.

20 John L. Miller and J. Richard Wahl, Attitudes of High School Students Toward Alcoholic Beverages, Madison, The University of Wisconsin, 1956, vii-99 p.

21 Bureau of Sociology and Anthropology, University of Kansas, Attitudes of High School Students Toward Alcoholic Beverages, New York, The Mrs. John S. Sheppard Foundation, 1956, xi-145 p.

22 Margaret L. Clay, A Sampling of the Attitudes and Knowledge of Macomb County High School Students about Alcohol and Its Uses, Michigan State Board of Alcoholism, 1964, 19 p.

In Canada a survey of drinking habits of high school students in Nova Scotia was made by Gilchrist.²³ This survey showed about one-third of the students using alcoholic beverages to some extent, the number increasing from grade to grade. In 1958 Maclean's Magazine²⁴ had an independent agency, which specialized in teenage research, survey drinking habits and attitudes of a representative cross section of high school youth in eight Canadian cities. About half of the students did some drinking. Most were moderate in their use of alcoholic beverages, but a small number, principally boys, admitted to having been "tight". A considerable number said that they drank without the consent of their parents.

In 1963²⁵ the first survey of the Hofstra type to be made in Canada was conducted by Robert Holloway of the Alcohol Education Service. His sample, consisting of eight thousand high school students drawn from various parts of rural Manitoba and Metropolitan Winnipeg (with the exception of Winnipeg proper), was stratified for ethnic origin,

23 D.R. Gilchrist, Survey of Drinking Habits of High School Students in Certain High Schools of Nova Scotia, mimeographed, no date.

24 Maclean's, 71, 12-13, June, 1958.

25 R. Holloway, Student Drinking. A Study of Manitoba High School Students' Behaviour, Attitudes and Knowledge with Respect to Beverage Alcohol, Winnipeg, Alcohol Education Service, 1964, 73 p.

religious affiliation, age, and sex. The items of the questionnaire were not analysed, nor was the significance of the results determined; however, the size and representativeness of the sample make this study a valuable source of information about the drinking habits of high school students in Manitoba. Seventy-five per cent admitted drinking to some extent, but only five per cent once a week or more. Despite the rather general approval of moderate drinking seventy-four per cent were opposed to lowering the drinking age; 19 per cent favoured banning the sale of alcohol, and 64 per cent expressed strong disapproval of male drunkenness. In general the findings conform to those of similar studies in the United States. Two exceptions were that more Catholic students than United Church students said that it was wrong to drink, and the family was considered to have a greater influence than friends on whether a teenager drinks or not.

Recently Holloway²⁶ has made a supplemental study of students' attitudes concerning the use of alcohol as related to features of home environment. He reviews two studies supporting opposing theses. He finds insufficient the evidence supporting the thesis of Maddox and McCall,²⁷

26 R. Holloway, Home Influences on Student Drinking, Winnipeg, Alcohol Education Service, 1965, 73 p.

27 George L. Maddox and Bevede C. McCall, Drinking Among Teen-Agers, New Haven, College and University Press, 1964, viii-127 p.

that what young people think about and do with alcohol reflects their perception of the behaviour and attitudes of adults. On the other hand the argument of Polk,²⁸ that adolescent drinking is a variable of adherence to or extent of involvement in the adolescent sub-culture, seems to him lacking in clarity and precision. Holloway²⁹ notes relationships between students' attitude toward drinking and: parents' frequency of church attendance; the availability of liquor within household; whether parents are abstainers or not; parental attitudes toward drinking as perceived by students; and parental drunkenness as perceived by students.

In this chapter an explanation of the ethnic pattern of settlement in Manitoba is presented, since it seems relevant to the topic. The results of plebiscites in Manitoba, indicating public opinion in regard to beverage alcohol are reported. A number of studies conducted in the United States or in Canada on students' use of and attitudes toward beverage alcohol have been reviewed. Of special interest are several recent attempts to determine the most important influence on student drinking and to explain conflicting evidence.

28 Kenneth Polk, Drinking and the Adolescent Culture, Eugene, Oregon, Lane Country Youth Project, 1964.

29 Holloway, Home Influences on Student Drinking, op. cit.

CHAPTER II

EXPERIMENTAL DESIGN

The main purpose of this study is to determine the extent to which the high school students of Manitoba favour the use of alcoholic beverages. For this purpose a test of attitude towards the use of alcoholic beverages was constructed. This test was administered to a selected sample of high school students in Manitoba. In order that the test might be validated and the relation of the attitude to various factors be studied, the students were asked for certain additional information. In this chapter will be described the construction of the test, the choosing of the sample and the results of some tests of it. The hypotheses tested will be formulated in the form of the null hypothesis: they will relate to general attitude and to various possible factors of this attitude.

1. The Instrument.

The attitude test was constructed by the Scale Discrimination Technique,¹ a combination of Thurstone scaling procedures and the item selection techniques in the

¹ A.L. Edwards and Franklin Kilpatrick, "A Technique for the Construction of Attitude Scales", Journal of Applied Psychology, Vol. 32, 1948, p. 374-383.

Likert method. One hundred and ten items were submitted to ninety judges (Teachers College Students), who were asked to rate the questions according to their degree of favouring the use of alcoholic beverages. The range of attitude was represented by the letters A to I, with A representing total abstinence and I unrestrained consumption. The letters were printed beside each statement, and the judges were asked to circle their choice. This method, used by Seashore and Hevner,² simplifies the sorting procedure of Thurstone. The letters were replaced by numbers 1 to 9 and the scale value of each item was obtained by the formula $S = 1 + \left(\frac{.50 - \sum pb}{pw} \right)$ where 1 is the lower limit of the interval in which the median falls, $\sum pb$ is the sum of the proportions below the interval and pw is the proportion within the interval. For each item the semi inter-quartile range, Q , was found. The average of the Q 's was found to be .9. Any item with a Q greater than .9 was rejected. This amounts to eliminating the half of the statements that show the greatest degree of spread in judgments on the psychological continuum. The remaining half of the items were drawn up into a Likert-type questionnaire with multiple-choice response categories on a agree-disagree continuum.

2 R.R. Seashore and Kate Hevner, "A Time Saving Device for the Construction of Attitude Scales", Journal of Social Psychology, Vol. 4, 1933, p. 366-372.

This questionnaire was then administered to one hundred high school students. The weights 0-5 were assigned to each response, the direction being determined by the scale value. Each item was then subjected to item analysis. The top and bottom twenty-seven per cent of the subjects in terms of total scores on the statements were selected. For each statement a distribution was obtained showing the frequency for each response category for the high and low groups. The response categories were then dichotomized by the following procedure. For each item a table such as the following was drawn up.

Response Categories	Weights	Low Group	High Group
Strongly disagree	5	1	1
Disagree	4	1	8
Mildly disagree	3	0	4
Mildly agree	2	0	9
Agree	1	4	9
Strongly agree	0	44	9

$$a = 6$$

$$c = 44$$

$$b = 41$$

$$d = 9$$

$$\phi = \frac{bc - ad}{\sqrt{(a + b)(b + d)(a + c)(c + d)}} = .701$$

A line was drawn between response categories, here between Agree and Strongly agree. This cutting point of each item was chosen so as to have the sum of the number of subjects in the low group above the line and of the number of subjects in the high group below the line the lowest number. By drawing the line between Agree and Strongly agree there are 6 in the low group above and 9 in the high group below or a total of 15. If the division were between Agree and Mildly agree, there would have been 2 of the low group above and 18 of the high group below or a total of 20.

No item with a phi-coefficient less than .57 was retained. Edwards and Kilpatrick made a phi-coefficient of .58 the criterion for retention of an item.

The nine-interval Thurstone continuum was divided into half-scale intervals, starting with the interval .75 - 1.25 and finishing with 8.25 - 8.75. There were no items in the five intervals between 3.75 and 6.25, nor in the intervals above 7.75. The most discriminating items, according to the size of the phi-coefficient, were selected to make two equivalent scales. The average phi-coefficient for A-items was .659 and for the B-items .652; the total scale score for the A-items was 56.7 and for the B-items was 56.5. These statistics show that the two forms were closely parallel both with regard to score value and discriminating power.

After the test had been given to the sample of four hundred students, reliability between the scales A and B, found by the Pearson Product-Moment, was .95. This reliability coefficient is computed on a test half as long as the actual test. Since lengthening a test raises the reliability, the Spearman Brown formula³ was used to estimate the reliability of the whole test. The correction of the Spearman Brown formula raised the reliability to .974.

2. The Sample.

In 1928 forty-nine of a total of 114 rural municipalities in Manitoba remained "dry" under "local option" when the Government Liquor Control Act was passed. In 1954, the date of the Manitoba Liquor Enquiry Commission, seventeen of these had voted for the sale of liquor. A map in Report⁴ of the Commission was used by this writer with a map of the forty-four school divisions in Manitoba to divide these divisions into "dry" areas, "wet" areas, and mixed "wet" and "dry" areas. Nine divisions, one from "dry", four from "wet", and four from "mixed", were picked at random. This

$$3 r_n = \frac{nr}{1 + (n-1)r}$$

⁴ Manitoba Liquor Enquiry Commission, Report of Manitoba Liquor Enquiry Commission, Winnipeg, 1955, p. 262.

proportion was roughly that of the number of people living in such areas.

Permission to circulate the test was obtained first from the Minister of Education and then from the local School Boards. Not one of the school boards approached refused permission. Because of the large population of Metropolitan Winnipeg and the consequent difficulty of adequate sampling, it had been decided to exclude the students in the Winnipeg area. From a list of schools within the large divisions schools were picked at random. Where it was possible one large and one small school was chosen from each division. The principals were then asked to administer the test. In the large schools the test was given to only one class of each of the grades ten, eleven and twelve. In small schools every pupil was offered the test. No names were required and the tests were sealed by the students. Of the one thousand tests distributed only five were returned unanswered. The sample was then stratified according to the father's occupation. This factor was considered to be relevant, because a number of investigations point to a larger percentage of drinkers at a higher socio-economic level. Moreover, socio-economic level is closely related to occupation. The answers were separated according to the divisions of the Male Labour Force in the Canada Census, Agriculture, Clerical, Commercial, Construction, Fishing, Financial,

Labourers, Professionals, Manufacturing, Mechanical, Mining, Electrical, Service(Protective and Personal), and Transportation. There were large numbers in some classes such as that of Agriculture, but only a few in others such as Clerical. Certain classes were larger than would be indicated in the Census, because only fathers of high school students were considered. For example, the great majority were owners of farms, as might be expected of men old enough to be fathers of high school students. When the numbers were larger than was necessary, selection was made at random. Some tests of students whose fathers were not living or were unemployed were included in the sample. The number of boys and girls was kept equal, and as much as possible the proportion of the students in grades ten, eleven, and twelve was kept to the actual proportion. Care was taken to have the various school divisions represented in each occupation in which there were returns.

Since it is likely that the attitude of high school students towards the use of alcoholic beverages varies normally, the conforming of the distribution of the sample to the normal distribution should give some indication that both the test and the sample are adequate. For this purpose the null hypothesis, that the distribution of the sample does not differ significantly from that of the normal curve, was tested by the chi-square technique. As shown in Table 1 the

Table 1.-

Data and Computation Used in Testing the Distribution of the Sample for "Goodness of Fit" to the Normal Curve.

Class Interval	z	y	f_t	f_o	f_t	$f_o - f_t$	$(f_o - f_t)^2$	$\frac{(f_o - f_t)^2}{f_t}$	
27 - 29	2.35	.0252	4.432	4	6.0 ^a	2.0	4.00	.67	
24 - 26	1.91	.0644	11.327	24	11.3	12.7	161.29	14.27	
21 - 23	1.47	.1354	23.812	22	23.8	.2	.04	.00	
18 - 20	1.03	.2347	41.286	35	41.3	- 6.3	39.69	.96	
15 - 17	.58	.3352	58.953	58	58.9	- .9	.81	.01	
12 - 14	.15	.3945	69.727	59	69.7	-10.7	114.49	1.64	
9 - 11	- .29	.3525	67.281	61	67.3	- 6.3	39.69	.59	
6 - 8	- .73	.3056	54.753	57	53.8	3.2	10.24	.19	
3 - 5	-1.17	.2036	35.810	46	35.8	12.2	148.84	4.16	
0 - 2	-1.61	.1092	19.503	32	31.0 ^a	1.0	1.00	.03	
			386.884	400	400.0			$\chi^2 = 22.52$	
Factor of multiplication $\frac{3 \times 400}{6.02} = 175.05$					7 degrees of freedom @ .001 level of confidence = 24.32.				

^a To make the sum 386.884 approach 400, 11.5 was added to class 0 - 2, 1.6 to class 27 - 29.

EXPERIMENTAL DESIGN

chi-square was found to be 22.52. Since this sum is derived from ten measures and there are three restrictions, that the sums, the means, and the standard deviations of the theoretical and of the observed frequencies should be the same, there are $10 - 3$ or 7 degrees of freedom. In order to be significant at the .001 level of confidence with 7 degrees of freedom the chi-square would have to be as large as 24.32. Therefore the null hypothesis, that the distribution of the sample does not differ from that of the normal distribution, may be accepted.

In this chapter the construction of the attitude test by the Scale Discrimination technique is described and the criteria used in the selection of items is given. The reliability coefficient, computed for the two halves by the Pearson Product-Moment technique and corrected by the Spearman Brown formula, is .974. The combination of stratification and random sampling used to obtain a representative sample is explained in detail. Finally the distribution of this sample was compared with that of the normal curve by means of the chi-square technique and found not to differ significantly.

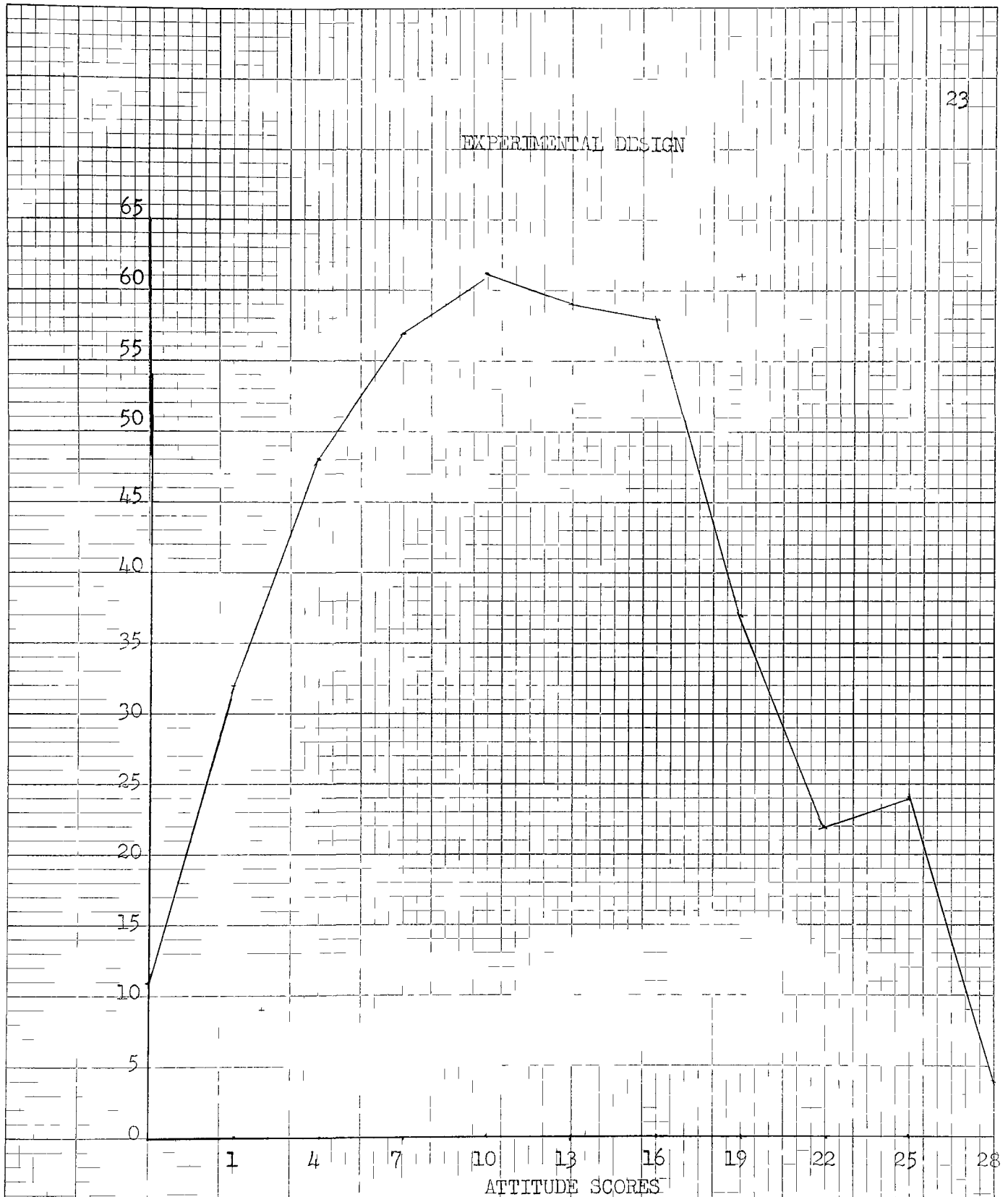


Figure 1. Graph showing total frequencies of attitude score for 400 students comprising the sample for this study

CHAPTER III

PRESENTATION OF TEST RESULTS

In the previous chapter the distribution of scores on the attitude test was studied as a check upon the test and upon the sample. Here the distribution will be analyzed for the information that it gives as to the general attitude of the high school students of Manitoba, and for possible differences in attitude held by various segments of that population. For the purpose of discovering such differences a number of null hypotheses will be set up and tested for significant differences. To afford an external check upon the test results the additional information, given by the answers to the questions following the test, will be compared with the test scores. Furthermore, the results of the attitude test and of the additional information given, will be searched for evidence supporting some of the current theories explaining adolescent thinking in regard to drinking.

1. Distribution of Attitude Scores.

As mentioned before and as may be seen in the graph of Figure 1, page 23, the curve of the distribution, based on the data given in Table II, does not differ significantly from that of the normal curve. However, it has a positive skewness of $.85^1$, indicating greater frequency for the lower

$$1 \text{ sk} = \frac{C_{90} + C_{10} - C_{50}}{2}$$

Table II.-
 Frequency Distribution of Attitude Scores, Plus the Mean and
 Standard Deviation.

Score Intervals	Frequency
27 - 29	4
24 - 26	24
21 - 23	22
18 - 20	35
15 - 17	58
12 - 14	59
9 - 11	61
6 - 8	57
3 - 5	48
0 - 2	32
	400
N	= 400
M	= 11.97
SD	= 6.82
σ_M	= .34

part of the scale. The critical ratio² of the skew is 1.74, which is not significant at the .05 level of confidence. Since kurtosis,³ .27, is higher than .2632, the curve has a tendency to be leptokurtic, indicating massing in the middle range. The critical ratio⁴ of kurtosis is 20.08 which is significant at the .001 level of confidence. Such a curve shows that the attitude of the majority of the students is a moderate one, and that the number who are somewhat opposed to the use of alcoholic beverages is greater than the number who tend to favour their use.

The answers to the questions regarding the students' use of alcoholic beverages as shown in Tables III and IV support these results of the attitude test. Approximately four per cent use alcoholic beverages often, sixty-one per cent occasionally, and thirty-five per cent never use them. The term "often", "occasionally", and "never" were not defined. Since this study is primarily concerned with attitude, the student's own estimate was sought. Had the question been expressed in a more objective manner, there might have been a

$$2 \text{ C.R.} = \frac{S_k}{\sigma_{S_k}} \quad \sigma_{S_k} = \frac{.5185 (C_{90} - C_{10})}{\sqrt{N}}$$

$$3 \text{ Kurtosis} = \frac{(C_{75} - C_{25})^2}{C_{90} - C_{10}}$$

$$4 \text{ C.R.} = \frac{K_u}{\sigma_{K_u}} \quad \sigma_{K_u} = \frac{.27779}{\sqrt{N}}$$

Table III.-

Frequency of Use of Alcoholic Beverages According to Sex and Attitude Score Level.

Frequency of Use	Attitude Score Level						Total	(\$)						
	High: Above Q_3		Medium: ($Q_3 - Q_1$)		Low: Below Q_1									
	Boys	Girls	Boys	Girls	Boys	Girls								
f	(%)	f	(%)	f	(%)	f	(%)							
Drink alcoholic beverages: Often	8	(16)	0	(0)	4	(4)	1	(1)	1	(2)	0	(0)	14	(3.5)
Drink alcoholic beverages: Occasionally	40	(80)	40	(80)	73	(73)	54	(54)	20	(40)	16	(32)	243	(60.7)
Drink alcoholic beverages: Never	2	(4)	10	(20)	23	(23)	45	(45)	29	(58)	34	(68)	143	(35.8)
N:	50		50		100		100		50		50		400	(100.0)

PRESENTATION OF TEST RESULTS

Table IV.-

Use of Various Kinds of Alcoholic Beverages in Relation to Sex
and Attitude Score Level.

Kinds of Alcoholic Beverages	Attitude Score Level						Total	%
	High: Above Q_3		Medium: ($Q_3 - Q_1$)		Low: Below Q_1			
	Boys f (%)	Girls f (%)	Boys f (%)	Girls f (%)	Boys f (%)	Girls f (%)		
Beer	43 (90)	31 (70)	59 (77)	34 (62)	14 (67)	14 (80)	195	(76)
Wine	31 (65)	23 (57)	43 (6)	35 (64)	12 (57)	11 (60)	155	(60)
Hard Liquor	36 (75)	17 (43)	34 (44)	19 (35)	6 (25)	5 (31)	117	(45)
N: those who drink 257	40	40	77	52	21	16	257	(100)

PRESUMPTION OF TIGHT RESULTS

larger number of frequent drinkers. However, the fact that so few considered themselves "frequent" drinkers further supports the trend of moderation. Moreover, there are more students that drink beer and win than there are those that drink hard liquor. Of those that drink, seventy-six per cent drink beer, sixty per cent wine, and forty-five per cent hard liquor.

2. Personal and Social Factors.

The first factor to be considered was that of sex. The null hypothesis, that there is no significant difference in the attitude of boys and girls toward the use of alcoholic beverages, was set up. With the data in Table V the critical ratio for the difference of the means was computed and found to be 6.15. This is significant at the .001 level of confidence, and the null hypothesis must therefore be rejected. The critical ratio for the difference of the standard deviations was 2.39. Since this is significant only at the .05 level of confidence, the null hypothesis may be rejected but with less assurance than that of the difference of the means.

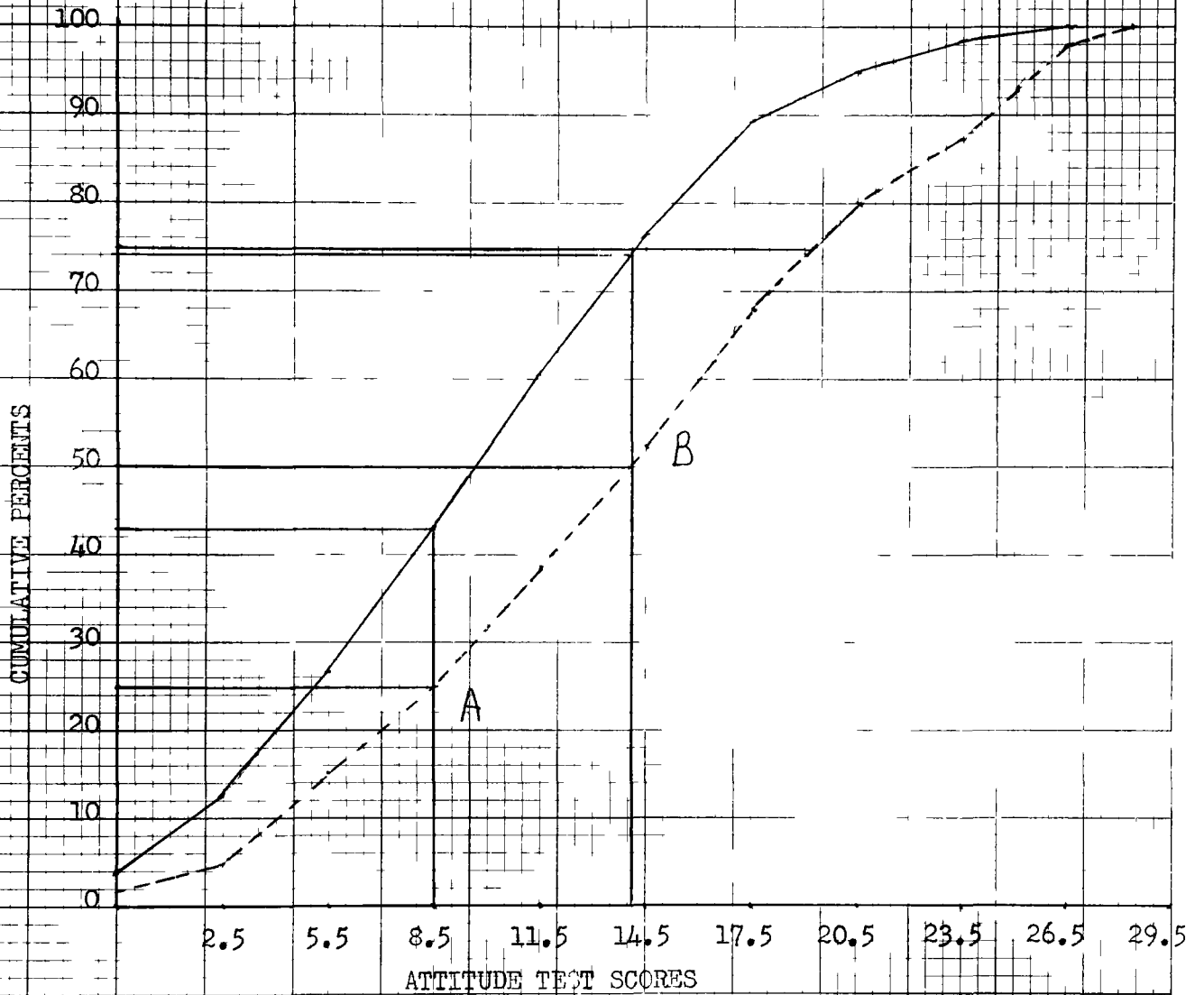
The graph in Figure 2, page 31, shows the extent of the difference in attitude of the boys and of the girls. The boys' ogive lies to the right of the girls' over the entire range, showing that the boys score consistently higher than the girls. The extent of difference varies, being about one and a half times as great at the median and at the third quartile, as

Table V.-

Comparison of Attitude Scores According to Sex.

Statistics	Boys	Girls	Differences	D	C.R.
Number	200	200			
Mean	13.97	9.97	4.00	.65	6.15
Standard Deviation	7.05	5.95	1.10	.46	2.39
Standard Error of the Mean	.496	.421			
Standard Error of the Standard Deviations	.352	.296			

PRESENTATION OF TEST RESULTS



Boys - - - - -
Girls - - - - -

Figure 2. Ogives representing scores made by 200 boys and 200 girls on the attitude test.

it is at the first quartile. The lines through A and B to the boys' curve show that approximately forty-three per cent of the girls' scores lie below the boys' first quartile and seventy-four per cent of the girls' scores below the boys' median.

In order to study the relationship of drinking frequency to score level, the scores were divided into high, medium and low. Since there was so great divergence in the score of the boys and of the girls, the division was made separately. The low or first fourth for the boys included scores between C and b, that of the girls between 0 and 5, the medium, interquartile range, for the boys was 9 - 16, for the girls 6 - 13, and the high, or top fourth, for the boys comprised scores from 19 - 26, for the girls from 14 - 26. Since the scores were based on round numbers and the centiles were not, there was some over-lapping between levels. This was adjusted by considering the extra high and low scores to be in the medium score range.

Table III shows that there is some correspondence between drinking and high score on the attitude test, and that drinking is more prevalent among boys than it is among girls. The chi-square comparing students that drink and those that do not, according to the level on the attitude test, based on the data in Table VI, was found to be 44.06. At the .001 level of confidence and with two degrees of

Table VI.-

Frequency of Students Who Drink or Do Not Drink
According to Attitude Score.

Score Level	Drink	Do Not Drink
High	80	12
Medium	132	60
Low	37	63

Table VII.-

Frequency of Students Who Drink or Do Not Drink According to Sex and Attitude Score Level.

Score Level	Drink		Do Not Drink	
	Boys	Girls	Boys	Girls
High	48	40	2	10
Medium	77	55	23	45
Low	21	16	29	34

freedom a chi-square of 13.82 is significant; therefore, this value shows a highly significant relationship between score level on the attitude test and drinking or not drinking. A chi-square of 12.98 comparing score level for those who drink hard liquor with that of those who drink beer or wine is significant at the .01 level of confidence. From the percentages in Table III it is evident that at each score level more boys than girls drink. Chi-squares were significant at the .05 level of confidence for the high and medium but not for the low score level. The percentages in Table IV show that at each score level more boys than girls drink hard liquor. Chi-squares for the high and medium score levels were significant at the .05 level of confidence. The girls show a preference for wine, which is more likely to be taken in a family gathering than is hard liquor or even beer.

Stratification according to school division and according to father's occupation was used to secure a representative sample. The mean, standard deviation, and standard error of the mean are shown for the Divisions in Table VIII and for occupations in Table IX. In order to determine whether attitude differed according to area, father's occupation was kept constant. For those checking Agriculture as their father's occupation, the mean, the standard deviation and the standard error of the difference between the mean of the total and the mean of the sample was obtained by

Table VIII.-

Attitude Scores in Various School Divisions^a of Those Whose
Father's Occupation is Agriculture.

Divisions	f	Mean	S.D.	σ_M
A ^b	25	13.36	7.66	1.56
B ^b	10	7.60	5.12	1.71
C ^c	11	8.36	4.91	1.53
D ^d	46	12.15	8.22	1.08
E ^c	46	13.33	7.19	1.07
F ^b	33	9.27	4.64	.82
G ^c	45	10.09	6.22	.94
H ^b	16	15.33	5.12	1.69
I ^c	24	13.62	6.98	1.42

a Permission to conduct the study was granted on condition that School Divisions would not be identified in report.

b Divisions are in "open districts".

c Divisions are in "mixed districts".

d Division is in a "closed district".

Table IX.-

Attitude Scores According to Classification of the Occupation
of the Fathers of the Students.

Classification	N:400	Mean	S.D.	M
Agriculture	184	11.73	7.07	.52
Clerical	10	9.80	6.57	2.19
Commercial	18	9.62	6.64	1.66
Construction	20	10.69	7.03	1.39
Fishing	4	13.75	3.90	1.95
Financial	8	10.86	7.47	2.83
Labourers	8	10.75	8.59	3.25
Professionals	20	12.40	7.20	1.86
Manuf. and Mech.	28	11.82	6.42	1.23
Mining	17	11.59	5.85	1.46
Service				
Protective	20	12.25	5.27	1.21
Personal	11	11.91	4.29	1.37
Transportation	35	13.43	6.92	1.17
Not Living or Unemployed	17	11.23	7.35	1.84

using formula 18.43 of Dayhaw.⁵ Division H had a critical ratio of 2.26, significant at the .05 level of confidence, but the other Divisions were below this level. However, the null hypothesis, that the attitude of the students does not differ according to school division must be rejected. Some of this difference may be due to the fact that some divisions were mapped out with regard to ethnic origin or religion of the inhabitants. No relation between "wet" and "dry" areas and high and low scores could be seen. The one division from a "dry" area had a high mean score, while the lowest mean score was from a "wet" area. However, the divisions cover large areas, and other factors, such as size of community, may have affected these results.

The means of the scores according to father's occupation showed less difference than those according to school division. With the data shown in Table IX differences were tested but not one was found to be significant at .05 level of confidence; therefore, the null hypothesis that there is no significant difference in the attitude towards the use of alcoholic beverages of the students according to their fathers' occupations may be accepted. However, the classification of occupations may not have been sufficiently well defined.

⁵ Lawrence T. Dayhaw, Manuel de Statistique, Ottawa, Editions de l'Universite d'Ottawa, 1956, p. 316.

In three divisions the scores of students in large schools were compared with those in small schools. Both boys and girls in large schools had higher mean scores than those in small schools; however, the difference was not significant, the critical ratio being 1.42. The null hypothesis, that there is no significant difference in the attitude towards the use of alcoholic beverages of the students of large and of small schools, may be accepted.

The possibility that the attitude of the students in the higher grades would be more favourable towards the use of alcoholic beverages than would that of the lower grades was tested. With the data in Table X a chi-square comparing low, medium, and high scores with grades ten, eleven and twelve yielded 6.82, which with four degrees of freedom is not significant at the .05 level of confidence. Therefore, the null hypothesis, that there is no relation between attitude score and grade level may be accepted.

The information at the end of the test shows that the number of students that drink increases with grade level. In Table XI the percentage of students drinking is shown. Grade ten with 62 per cent and grade eleven with 63 per cent are very close. Grade twelve with 70 per cent is considerably higher; however, the chi-square, based on the data in Table XI is not significant, and

Table X.-

Data for the Calculation of Chi-square Comparing Attitude Score Level with Grade Level.

Attitude Score Level	Grade Level						Total f_o
	Ten		Eleven		Twelve		
	f_o	f_e	f_o	f_e	f_o	f_e	
Low	40	43.2	37	33.8	23	23.2	100
Medium	96	86.5	66	67.5	38	46.5	200
High	37	43.3	32	33.8	31	23.2	100
	173		135		92		400
Chi-square = 6.82	4 df significant at .05 = 9.84						

PRESENTATION OF TEST RESULTS

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Table XI.-

**Frequency and Percentage According to Grade of
Students that Drink.**

Grade Level	Number	Students that Drink Frequency (Per Cent)	
Ten	173	108	(62)
Eleven	135	85	(63)
Twelve	92	64	(70)

the null hypothesis, that there is no relationship between grade level and the number that drink, may be accepted.

In Table XII student and parental disapproval of the use of alcoholic beverages are shown in relation to attitude score, the high score showing least disapproval. The parental disapproval follows a similar pattern. From the data in Table XII chi-squares were computed comparing parental and student approval and disapproval of students' drinking. The boys' chi-square was 29.83 and the girls' 54.69. Both are significant at the .001 level of confidence. The close relationship indicated here is an argument in favour of the theory that adolescents are influenced to a considerable extent by their parents in their attitude towards drinking. This is more evident when it is realized that only those that drink were considered, because of the wording of the question, "If you drink [...]" However, the fact that a considerable number drink contrary to their conscience suggests that another influence, possibly that of the peer group, is strong in regard to the practice of drinking.

3. Item Choice.

The frequency with which the different items were checked was considered next, in order to throw further light upon the attitude of the students. The statements expressing approval of the use of alcoholic beverages are listed in Table XIV and those expressing disapproval, in which the student scores in favour of the use of alcoholic beverages by rejecting, are listed in Table XV.

Table XII.-

Percentage of Students and of Parents who Disapprove of Student Drinking.

Attitude Score Level	N who Drink	Student Disapproval of Drinking Per Cent of Level	Parental Disapproval of Drinking Per Cent of Level
High	88	15	39
Medium	132	31	41
Low	37	41	49
Total	257		

Table XIII.-

Data for the Calculation of Chi-squares Comparing Parental and Student Approval and Disapproval of Students' Drinking for Boys and Girls.

	<u>Student Approves</u>		<u>Student Disapproves</u>		Total
	Boys	Girls	Boys	Girls	
Parents Approve	76	65	6	6	152
Parents Disapprove	36	9	29	31	105
	112	74	34	37	257

Boys : χ^2 29.83
 Girls: χ^2 54.69

χ^2 of 10.83 with 1df is significant at .001 level

Table XIV.-

Frequency of Students Checking Statements Expressing Approval
of the Use of Alcoholic Beverages.

Number of Item	Boys and Girls		Boys		Girls	
	Frequency	Rank ^a	Frequency	Rank	Frequency	Rank
5	102	25	63	25	39	24
7	212	7	111	10	101	4
9	159	18	94	18	65	18
11	194	9.5	109	12	85	7
14	231	3	124	6	107	3
16	175	16	97	16	76	11
17	147	20	91	20	56	20
19	144	9.5	109	12	85	7
25	270	1	143	1	127	2
26	156	13	113	8	73	13
27	167	12	111	10	76	11
28	176	15	109	12	67	16

^a Rank refers to order of highest frequency.

Table XV.-

Frequency of Students Rejecting Statements Expressing
Disapproval of the Use of Alcoholic Beverages.

Number of Item	Boys and Girls		Boys		Girls	
	Frequency	Rank ^a	Frequency	Rank	Frequency	Rank
1	90	27	59	27	31	26
2	265	2	130	3	135	1
3	112	23	63	25	49	22
4	95	26	64	24	31	26
6	170	17	97	17	73	13
8	122	22	78	22	44	23
10	143	21	81	21	62	19
12	192	11	124	6	68	15
13	178	14	112	9	66	17
15	217	5.5	126	5	91	5
18	199	6	109	12	90	7
20	217	5.5	127	4	90	7
21	222	4	131	2	91	5
22	65	28	45	28	20	28
23	111	24	77	23	34	25
24	148	19	93	19	55	21

^a Rank refers to order of highest frequency.

The most popular statement for the students as a whole was No. 25, "There is nothing wrong with drinking on certain occasions". This shows positive approval of moderate drinking. The students ranked statement No. 2, "It is wrong to accept a cocktail at a party", next in order of frequency. Students scored in favour of drinking by rejecting this statement. The frequency with which this statement was checked may be due to a dislike on the part of the students for associating morality with drinking. The third choice of the students was No. 14, "High school students should be given experience in the use of alcoholic beverages in the home". No. 19, "High school students should be allowed to drink at home", although very similar ranked only ninth. Possibly the word "experience" expresses a need for guidance, felt by the students in the matter of drinking.

Some interesting differences in the attitude of the boys and of the girls may be seen by studying Tables XIV and XV. The average frequency on the statements showing approval was for boys and girls respectively 106.3 and 79.75 and for statements showing disapproval 94.13 and 64.37. However, despite higher score on both, the boys rejected fifty-nine per cent of the statements expressing disapproval of the use of alcoholic beverages and accepted fifty-seven per cent of the statements expressing approval of their use. To some slight degree the boys' higher scores may be attributed to the boys' inclination to rebel against established norms of conduct.

Six statements show a difference of five or more places in rank of frequency for boys and girls. No. 7, "There is no harm in taking a small quantity of alcohol at a party to overcome shyness", ranks fourth with girls and tenth with boys. No. 16, "The use of alcoholic beverages for relaxation is all right" ranks eleventh with the girls and sixteenth with the boys. No. 26, "Drinks should be served at parties, because they help people to get along better", ranks thirteenth with the girls and eighth with the boys. The score value on the Thurstone scale of both No. 7 and No. 16 is 6.8, while that of No. 26 is 7.5. That more moderate statements rank higher with the girls is consistent with the attitude test results.

Of the disapproving items, No. 12, "Something should be done to prevent the use of hard liquors", ranked fifteenth with the girls and ninth with the boys, and No. 13, "Alcohol ought to be regarded as a poison", ranked seventeenth with the girls and ninth with the boys. The greater number of boys checking this item may point to a more independent spirit in boys. No. 18, "Liquor should not be served at parties, because some try to make others drink", ranked seventh with the girls and twelfth with the boys. The scores on the Thurstone scale for Nos. 12, 13, and 18 are 2.4, 1.1, and 3.2 respectively. Again the more extreme items, 12 and 13, are favoured by the boys, the more moderate item, No. 18,

by the girls. In the Thurstone scale, 1 - 9, the low numbers indicate strong disapproval and the higher numbers strong approval of the use of alcoholic beverages.

The findings may be summarized as follows: the curve of distribution, found in the previous chapter not to differ significantly from the normal curve, was subjected to further tests. The positive skew of 1.74, while not significant, shows that the number of students that approve is greater than the number that disapprove of the use of alcoholic beverages. The fact that the curve is leptokurtic supports the hypothesis, that the attitude of the students would be moderate. That there would be some strong opposition to drinking on the part of some students might have been deduced from the historical background of the subject.

When the students were divided according to score level on the attitude test, the greatest number of those that drink was in the high score group, and the fewest in the low score group. A chi-square of 44.06 showed that there was a significant relation between score level on the attitude test and drinking or abstaining. This correlation supports the validity of the attitude test.

Sex was found to be a most significant factor in attitude and in the number who drink. A critical ratio significant at the .001 level of confidence was found between the boys' and girls' means on the attitude test. The number

of boys that drink was significantly greater than the number of girls. The difference was found to be significant at the high and medium score levels but not at the low score level.

Because of this sex difference the significance of most of the other factors was tested separately for boys and for girls. Of those that drink a significantly greater number of boys than of girls drink hard liquor. The chi-squares comparing student and parental approval and disapproval of drinking were significant for both boys and girls but the chi-square of the girls was higher than that of the boys. This similarity in attitude of students and parents is the more striking, since only those that drink were considered. A considerable number of students admitted that they disapproved of their own drinking. In the argument as to who has the greatest influence with the students in regard to drinking, the parents seem to have the greater influence on the attitude of their children, but in practice the peer group may have the stronger influence. In the choice of test item there was a tendency on the part of the girls to favour the more moderate statements.

Greater differences in attitude in different sections of the province might have been evident, if the divisions could have been more narrowly defined. As it was the mean of the attitude test of one school division was significantly

higher than the mean of the combined school divisions, and no relation between attitude score and "wet", "mixed" or "dry" areas could be observed.

Lack of sufficient information to classify occupations according to social level may be the reason that the means on the attitude test did not show a significant difference.

The rather strong opposition to drinking on the part of a considerable number of students, the disapproval on the part of some students of their own drinking, and the decided difference of boys and girls in attitude and in practice may be a reflection of a rather general disapproval of drinking, apparent in the form of liquor control in force in Manitoba until 1955.

CHAPTER IV

SOME COMPARISONS

Because of differences in methods and scope, the results of this study are not strictly comparable to those of other studies of the attitudes of high school students towards beverage alcohol; however, certain aspects of the study are sufficiently similar to certain other studies to warrant consideration. That there are regional differences in the use of and in attitudes towards alcoholic beverages has been evidenced by a number of studies and by opinion polls.¹ Liberality in use of and in attitude towards alcoholic beverages was found in descending order in the eastern, western, midwestern and southern regions of the United States. Moreover, several studies showed that urban areas tended to be more liberal than rural areas in this respect. Because Manitoba is in the Canadian midwest, the studies chosen for comparison with this study are those of Wisconsin and Kansas in midwestern United States, along with Holloway's studies in Manitoba.

1. Canada.

Holloway's study² should be most comparable, since the populations studied and the period of testing are very

¹ George L. Maddox, "High School Student Drinking Behaviour, Incidental Information from Two National Surveys", Q.J.S.A., Vol. 25, No. 2, June 1964, p. 205-412.

² R. Holloway, Student Drinking, Alcohol Education Service, Winnipeg, 1964, p. 1-3.

similar; however, in scope and method there are differences. The Holloway study investigated three areas: (i) the attitudes, (ii) the extent of experience, and (iii) the knowledge of the students in reference to beverage alcohol. The present study is concerned specifically with attitudes but considers drinking practices to the extent to which they throw light on attitudes. Holloway personally administered his questionnaire to 7048 high school students in grades nine, ten, eleven, and twelve. The present study was administered by the teachers to one thousand students in grades ten, eleven, and twelve. Forty-one per cent of the sample in the Holloway study is from Metropolitan Winnipeg (exclusive of Winnipeg proper), the remainder from rural Manitoba; the sample of the present study was drawn from areas outside of Metropolitan Winnipeg. Holloway's sample, stratified for religion, age, and sex, is representative of the various sections of Manitoba, except of the far north. The questionnaire, of which seven of the forty-nine items deal specifically with attitude, was not submitted to item analysis. Although the significance of the results has not been determined, the size of the sample and the care taken to make it representative make the study a valuable source of information.

In the Holloway study³ 24.9 per cent of the students never drink; in the present study 35.7 per cent of the

3 Holloway, op. cit., p. 66.

students never drink. Since drinking has been found to be less common in rural than in urban areas, the small number of urban respondents in the present study may account for the greater percentage of abstainers. Similarly, the Holloway study shows a higher percentage of frequent drinkers, 5.4 to 3.5 in the present study.

In the Holloway study⁴ more boys than girls drink once a week or more. In the present study more boys than girls drink "often". In both studies a larger percentage of girls than boys are non-drinkers, in the Holloway study 31 per cent of the girls and 20 per cent of the boys, and in the present study 45 per cent of the girls and 27 per cent of the boys. Apparent differences in drinking practices may to some extent be accounted for by the fact that the present study includes no grade nine students and few urban students. According to trends shown the 24 per cent of grade nine students in the Holloway study would increase the percentage of abstainers, while the 41 per cent urban students would decrease the number of abstainers. However, a number of other factors may have influenced the results.

Holloway⁵ found the closest correlation between drinking frequency and age level. At fourteen years over 39

⁴ Holloway, op. cit., p. 40-41.

⁵ Ibid., p. 42.

per cent of the respondents considered themselves as non-drinkers; by nineteen this percentage has dropped to 10 per cent. In the present study age was not determined. However, the two studies may be compared according to grade. In grade ten the percentages of abstainers in the Holloway and in the present study were respectively 31.7 and 37.6, in grade eleven 27.7 and 37.5, and in grade twelve 25.7 and 30.4. The trend is the same for both studies, fewer abstainers as grade level increases.

Two questions on attitude are similar enough in the two studies to afford some measure of comparison. In the Holloway study⁶ some 24 per cent agreed with the statement that drinking is wrong, 62 per cent disagreed and 14 per cent were undecided. In the present study approximately 66 per cent disagreed with the statement that it is wrong to accept a cocktail at a party. It is to be noted that the item of the Holloway study is more general than that of the present study. In both studies more girls than boys considered drinking wrong. For the item, "There is nothing wrong in drinking on certain occasions", in the Holloway study 24 per cent of the girls and 21 per cent of the boys, and in the present study 37 per cent of the girls and 28.5 per cent of the boys disagreed.

⁶ Holloway, op. cit., p. 9.

There were notable differences in attitude according to area in both Manitoba studies. In some cases the ethnic and religious differences were probably partially responsible. In the Holloway study wide differences according to religion were noted, the Mennonites and Baptists being most opposed to drinking; however, there were also differences according to area among students of the same religion. The present study did not determine religion, but the differences in attitude according to area can in some cases be recognized as the effect of the religious conviction of the majority of the population in the area.

2. United States.

The method in the Wisconsin⁷ and in the Kansas⁸ studies is that of group interviewing. Both studies employed systematic sampling and computed the significance of the differences of the results. Racine County, Wisconsin, is a large metropolitan area, heavily industrialized. The Kansas study employed two samples, one from a metropolitan area and the other from a non-metropolitan area, comprising twenty-three counties. Since Metropolitan Winnipeg was excluded from the present study, the differences between metropolitan and

⁷ John L. Miller and J. Richard Wahl, Attitudes of High School Students Toward Alcoholic Beverages, Madison, The University of Wisconsin, 1956, p. 16-33.

⁸ Bureau of Sociology and Anthropology, University of Kansas, Attitudes of High School Students Toward Alcoholic Beverages, New York, The Mrs. John S. Sheppard Foundation, 1956, p. 1-11.

non-metropolitan areas in Kansas may have implications for interpreting results in the present study.

The 36 per cent abstainers in the Wisconsin study is close to 35.7 per cent of the present study. In the Kansas study 50 per cent are abstainers, and of those that drink many drink only 3.2 per cent beer, which is permitted by law at age eighteen, while twenty-one is the legal age for other alcoholic beverages.

In both the Wisconsin⁹ and the Kansas¹⁰ studies the percentage of male students drinking is significantly larger than that of the female students drinking. The same is true for the present study. In the Kansas study the difference in the percentage of boys and girls drinking is greater for the non-metropolitan area than for the metropolitan area.

The Wisconsin, the Kansas, and the present studies show that more students drink beer and wine than hard liquor. In Wisconsin for occasional drinking wine is used most frequently. In Kansas and in Manitoba beer is used by most students, although in Manitoba girls show a preference for wine.

Both the Wisconsin and Kansas studies show a higher percentage of drinkers according to age. The Kansas study

⁹ Miller and Wahl, op. cit., p. 79-87.

¹⁰ Bureau of Sociology and Anthropology, op. cit., p. 95-106.

shows that the percentage of drinkers increases with grade level, but for the non-metropolitan students the difference between grades was not significant. In the present study the percentage of drinkers increases by grade; however, the relationship is not significant.

Although both the Wisconsin and the Kansas studies are entitled, Attitudes toward Alcoholic Beverages, questions dealing specifically with attitude are few. Of these two will be used for comparison of the findings of these studies with those of the present study. To the question, "Do you think drinking alcoholic beverages at a party makes people get along better", the percentage of students disagreeing was for Wisconsin 52, for metropolitan Kansas 61, for non-metropolitan Kansas 75, and for Manitoba in the present study 54. To the statement, "There is nothing wrong in drinking on special occasions", the percentage of students disagreeing was for Wisconsin 8, for metropolitan Kansas 29, for non-metropolitan Kansas 42, and for Manitoba in the present study 33. Different methods of scoring may in part account for the differences; however, these results would seem to indicate that the students in Wisconsin have a more liberal attitude towards the use of alcoholic beverages than have the students of Manitoba. On the other hand, the students of Manitoba seem to be more liberal than those of non-metropolitan Kansas.

It should be remembered that the sample of the present study is drawn largely from rural areas.

It was noted in the supplement¹¹ to the Nassau study that the frequency of student drinking appears to be related to parental permissiveness, although students frequently drink more than their parents know about. The Kansas study¹² points out the smallness of the per cent of students who have permission to drink away from home, 13 for metropolitan and 9 for non-metropolitan, compared with 50 for Nassau County, New York. In Kansas 50 per cent and in Nassau County 88 per cent of the students said that they used alcoholic beverages. Other factors are likely responsible for some of this differences; however, there would appear to be some relation between parental permissiveness, which implies a favourable attitude towards the use of alcoholic beverages, and student drinking. The Kansas study investigates several aspects of home environment in relation to student drinking, but it does not differentiate between student drinking and student attitude. Holloway in his supplemental study¹³ found that

11 Hofstra Research Bureau, Hofstra College, Use of Alcoholic Beverages Among High School Students. A Supplemental Study as Related to Parental Permissiveness, New York, The Mrs. John S. Sheppard Foundation, 1954, p. 8-9.

12 Bureau of Sociology and Anthropology, op. cit., p. 52-54.

13 R. Holloway, Home Influences on Student Drinking, Winnipeg, Alcohol Education Service, 1965, p. 12.

where students perceive their parents to be against drinking 56 per cent agree it is wrong to drink; where they perceive parents to be neutral 21 per cent agree; where they perceive their parents to have a positive attitude 11 per cent agree that it is wrong to drink. A comparison of Tables I and II of this study indicates primacy of perceived parental attitudes over actual parental practices as influences on students' attitudes toward drinking. In the present study a significant relationship was found between parental and student approval and disapproval of the student's own drinking. This was more striking, since only those students that drink were considered. That parents influence their children's attitudes toward drinking more than they influence their children's practice in regard to drinking seems evident. Possibly the student's attitude may be more significant in the future than his present practice.

In this chapter the findings of the present study were compared with several studies for which there appeared to be some basis for comparison. The relationship between attitude and practice of drinking and various factors was found to be similar in the different studies. However, according to the present study the students of Manitoba seem to be less liberal in attitude than the students of Wisconsin but more liberal than those of non-metropolitan Kansas. Holloway's conclusion that student attitude is more

closely related to parental attitude than to parental practice in drinking distinguishes between attitude and practice on the part of the parents. The present study found for students that drink a highly significant relationship between parental and student attitude. It may therefore be concluded that parents influence their children's attitudes toward drinking more than they influence their children's practice in regard to drinking.

SUMMARY AND CONCLUSIONS

The principal aim of this study was to obtain a knowledge and understanding of the attitudes of the high school students of Manitoba toward the use of alcoholic beverages. For this purpose a representative sample, a suitable measuring instrument, and a means of interpreting results were required.

The pattern of "local option" areas and the restrictive form of liquor control in force until 1956 suggested that a review of the history of Manitoba would be of benefit in obtaining a representative sample and in interpreting results.

The sample was constructed by a combination of stratification and random sampling. By a random choice of school divisions from "wet", "dry", and "mixed" areas every part of the province, except Metropolitan Winnipeg, was represented. The factors of stratification were father's occupation, sex, and grade.

The Scale-Discrimination technique of attitude testing was employed in constructing the questionnaire. The standards of the authors of this method were met for the agreement of the judges in forming the scale, in the discriminating power of the items, and in the reliability of the test.

The hypotheses that the attitudes of the high school students of Manitoba would range along a single continuum between strong approval and strong disapproval, and that the scores of the individuals would form a normal curve of distribution were fulfilled.

The curve of distribution, while not differing significantly from the normal curve, is leptokurtic with a slight positive skew. Such a curve indicates a trend of moderation, that is few students have extreme views either in favouring or disavouring the use of alcoholic beverages, but that the number who favour is slightly less than the number who disfavour their use.

The critical ratio and the chi-square technique were used to test the significance of results. The use of alcoholic beverages was found to be significantly related to score level on the attitude test. The attitude of the boys was significantly more favourable toward the use of alcoholic beverages than was that of the girls. At the high and medium score levels a significantly greater number of boys than girls drink. There was considerable difference in attitude between the various school divisions; however, the difference with the total sample was significant for only one division. Other factors, father's occupation, grade, and size of school appeared to be related to attitude but not significantly so.

Despite differences in scope and method with related studies, some comparison was attempted. In general differences in tendencies were in degree rather than in direction. Differences between the two Manitoba studies to some extent may be accounted for by the exclusion of metropolitan Winnipeg from the sample of the present study. In attitude toward the use of alcoholic beverages the students of Manitoba appear to be less liberal than the students of Wisconsin but more liberal than those of Kansas, particularly non-metropolitan Kansas. The rather conservative attitude and the wide difference in attitude of boys and girls are not surprising in view of the historical background of the topic in Manitoba.

The items were ranked in order of frequency of choice. Approval of drinking on certain occasions, a dislike of associating drinking and morality, and a desire for experience in drinking in the home were the most popular opinions. Girls showed a preference for more moderate opinions, boys an inclination to rebel against restrictions.

In the realm of theory a number of studies have investigated the influence of parental attitude and practice on student drinking. In this study an attempt was made to examine the relationship between parental attitude and student attitude toward drinking. Students who said that they drank were asked whether by drinking they acted contrary

to what they think is right. A 2 x 2 chi-square showed a highly significant relationship between parental and student attitudes. However, the number who drink contrary to their conscience suggests that their present practice of drinking is a result of the adolescent's desire to conform to the standards of the peer group. Possibly personal attitude will be the more enduring influence as they become more mature. One implication of this relationship between student and parental attitude is that in order to be effective alcohol education should reach the parents as well as the students.

There are many questions concerning students' attitudes toward the use of alcoholic beverages not answered in this study. Because of the absence of respondents from Metropolitan Winnipeg the conclusions drawn do not necessarily apply to the whole of Manitoba, much less to other areas. Possibly the attitude test developed here may be of use for further study. Among suggestions for further study arising from the present study would be: the influence of friends, both adolescent and adult, on student attitudes toward the use of alcoholic beverages; changes in attitude of individuals after a specific alcohol education program, or in successive years.

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A scientific survey of the high school students of Wisconsin, concerning attitudes and behaviour of drinking in relation to a number of family and social factors. Since the results were tested for significance, this work was particularly useful for comparison.

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An introductory study of possible factors related to high school drinking. This study revealed certain trends, which have been further investigated by similar studies in other regions.

-----, Use of Alcoholic Beverages Among High School Students. A Supplemental Study as Related to Parental Permissiveness, New York, The Mrs. John S. Sheppard Foundation, 1954, 17 p.

Holloway, R., Student Drinking, Winnipeg, Alcohol Education Service, 1964, iii-73 p.

A study of attitudes and practices of drinking among high school students in Manitoba. Although different in scope and method, it was valuable for comparison with the present study.

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Maddox, George L. and Bevode C. McCall, Drinking Among Teen-agers, New Haven, College and University Press, 1964, xi-126 p.

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A carefully documented history of the province by an eminent Manitoban scholar. This history shows how liquor legislation reflected the pattern of settlement and political issues of the day.

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A description of the construction of an attitude test by the Scale-Discrimination technique. This test was not available or not known when the test of the present study was constructed.

Sower, Christopher, "Teen-age Drinking as Group Behaviour", Quarterly Journal of Studies on Alcohol, Vol. 20, No. 3, 1959, p. 655-660.

The author maintains that difficulties in regard to liquor are a consequence of the inconsistencies of attitude in our society.

APPENDIX 1

ATTITUDE TEST

A research work is being carried on in the field of alcohol education. You are asked to help by checking one of the responses for each item on the attitude scale. Do not write your name. All replies will be treated confidentially and used only for the purpose of research. When you have finished, seal the ends of your booklet together.

A man who drinks even in moderation is not fit to be a father.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

It is wrong to accept a cocktail at a party.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

The larger the number of drinkers the weaker the nation.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

A man who drinks even moderately would not make a worthy husband.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

Social drinking in moderation is a good means of relaxation.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

A woman who drinks even moderately would not make a worthy wife.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

There is no harm in taking a small quantity of alcohol at a party to overcome shyness.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

The great harm caused by alcoholic beverages is sufficient reason for abstaining.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

Beer and win are good because they
 give pleasure to many who work hard.
 Strongly agree() Agree() Mildly agree() Mildly Disagree() | Disagree() Strongly disagree()

For a girl to drink is foolish.
 Strongly agree() Agree() Mildly agree() | Mildly disagree() Disagree() Strongly disagree()

The use of alcoholic beverages for
 jollification is acceptable.
 Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

Something should be done to prevent
 the use of hard liquors.
 Strongly agree() Agree() | Mildly agree() Mildly disagree() Disagree() Strongly disagree()

Alcohol ought to be regarded as a
 poison.
 Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

High school students should be given
 experience in the use of alcoholic
 beverages at home.
 Strongly agree() Agree() Mildly agree() | Mildly disagree() Disagree() Strongly disagree()

Drinking is the worst thing a person
 can do.
 Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

The use of alcoholic beverages for
 relaxation is all right.
 Strongly agree() Agree() Mildly agree() | Mildly disagree() Disagree() Strongly disagree()

The moderate use of alcoholic beverages con-
 tributes to the art of successful living.
 Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

Liquor should not be served at parties
because some try to make others drink.

Strongly agree() Agree() Mildly agree() | Mildly disagree() Disagree() Strongly disagree()

High school students should be
allowed to drink at home.

Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

It is better for young people to
abstain from alcohol.

Strongly agree() | Agree() Mildly agree() Mildly disagree() Disagree() Strongly disagree()

A person who drinks even moderately
is not fit to hold public office.

Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

An alcoholic beverage is an evil
thing.

Strongly agree() Agree() Mildly agree() Mildly disagree() Disagree() | Strongly disagree()

The use of alcoholic beverages should
be discouraged by every means possible.

Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

Alcohol is a curse to mankind.

Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

There is nothing wrong with drinking
on certain occasions.

Strongly agree() Agree() | Mildly agree() Mildly disagree() Disagree() Strongly disagree()

Drinks should be served at parties because
they help people to get along better.

Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

High school students should be
allowed to drink away from home on
certain occasions.

Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

Alcohol is a good thing because it
releases tension.

Strongly agree() Agree() Mildly agree() Mildly disagree() | Disagree() Strongly disagree()

Some additional information is necessary for choosing a representative sample of Manitoba high school students. Please cooperate by answering the following questions.

In what grade are you? _____

Are you a boy _____ a girl _____?

Do you live in rural Manitoba? _____ On a farm? _____ Not on a farm? _____

Do you live in urban Manitoba? _____ Population 100,000 or more, _____ 10,000 or more _____, 1,000 or more _____

Is your father living? _____ What is his occupation? _____

If your father's occupation is farming, what is his position? Is he the owner? _____, employer _____, wage owner _____, worker on family farm _____

If your father is in business what is his position therein? Is he the owner? _____, employer _____, wage owner _____, worker in family business _____

Does your mother hold a full-time job outside the home? _____

Would you classify your scholastic record as high _____ medium _____ low _____?

What career do you intend to follow? _____

Do you speak a language in addition to English? _____ Which? _____

Do you hold any office in your school? _____

Do you take an active part in sports? _____

You have cooperated and the writer is grateful to you; however, in view of the fact that you are not asked to identify yourself in any way, perhaps you would not mind answering a few more questions?

Do you drink alcoholic beverages, often _____, occasionally _____, never _____?

Do you drink beer _____, wine _____, hard liquor _____?

By so doing do you go against what you think is right? _____

By so doing do you go against what your parents think is right? _____

APPENDIX 2

**RAW SCORES FOR EACH INDIVIDUAL BY GRADE, SEX AND
SCORE LEVEL**

APPENDIX 2

Scores (Sc) and score Levels (SL) for Individuals (Ind) by School Grades (Gr) and Sex

Ind	Gr	Sex	Sc	SL	Ind	Gr	Sex	Sc	SL
1	X	M	27	H	41	X	M	14	M
2	X	M	26	H	42	X	M	14	M
3	X	M	26	H	43	X	M	13	M
4	X	M	25	H	44	X	M	13	M
5	X	M	25	H	45	X	M	13	M
6	X	M	25	H	46	X	M	12	M
7	X	M	24	H	47	X	M	12	M
8	X	M	24	H	48	X	M	12	M
9	X	M	23	H	49	X	M	12	M
10	X	M	23	H	50	X	M	12	M
11	X	M	22	H	51	X	M	11	M
12	X	M	21	H	52	X	M	11	M
13	X	M	19	H	53	X	M	11	M
14	X	M	19	H	54	X	M	10	M
15	X	M	19	M	55	X	M	10	M
16	X	M	19	M	56	X	M	10	M
17	X	M	19	M	57	X	M	10	M
18	X	M	18	M	58	X	M	10	M
19	X	M	18	M	59	X	M	10	M
20	X	M	18	M	60	X	M	10	M
21	X	M	18	M	61	X	M	10	M
22	X	M	18	M	62	X	M	9	M
23	X	M	18	M	63	X	M	9	M
24	X	M	17	M	64	X	M	9	M
25	X	M	17	M	65	X	M	9	M
26	X	M	17	M	66	X	M	9	M
27	X	M	17	M	67	X	M	9	M
28	X	M	16	M	68	X	M	9	M
29	X	M	16	M	69	X	M	8	L
30	X	M	16	M	70	X	M	8	L
31	X	M	16	M	71	X	M	7	L
32	X	M	16	M	72	X	M	7	L
33	X	M	16	M	73	X	M	7	L
34	X	M	15	M	74	X	M	6	L
35	X	M	15	M	75	X	M	6	L
36	X	M	15	M	76	X	M	6	L
37	X	M	15	M	77	X	M	6	L
38	X	M	14	M	78	X	M	5	L
39	X	M	14	M	79	X	M	5	L
40	X	M	14	M	80	X	M	5	L

Scores (Sc) and Score Levels (SL) for Individuals (Ind) by School Grades (Gr) and Sex.

Ind	Gr	Sex	Sc	SL	Ind	Gr	Sex	Sc	SL
81	X	M	4	L	121	X	F	12	M
82	X	M	4	L	122	X	F	11	M
83	X	M	4	L	123	X	F	11	M
84	X	M	3	L	124	X	F	11	M
85	X	M	1	L	125	X	F	10	M
86	X	M	1	L	126	X	F	10	M
87	X	M	0	L	127	X	F	10	M
88	X	F	24	H	128	X	F	9	M
89	X	F	22	H	129	X	F	9	M
90	X	F	21	H	130	X	F	9	M
91	X	F	19	H	131	X	F	9	M
92	X	F	17	H	132	X	F	9	M
93	X	F	16	H	133	X	F	9	M
94	X	F	16	H	134	X	F	9	M
95	X	F	18	H	135	X	F	9	M
96	X	F	17	H	136	X	F	9	M
97	X	F	17	H	137	X	F	8	M
98	X	F	17	H	138	X	F	8	M
99	X	F	17	H	139	X	F	8	M
100	X	F	16	H	140	X	F	8	M
101	X	F	16	H	141	X	F	8	M
102	X	F	16	H	142	X	F	8	M
103	X	F	15	H	143	X	F	7	M
104	X	F	15	H	144	X	F	7	M
105	X	F	15	H	145	X	F	7	M
106	X	F	14	H	146	X	F	7	M
107	X	F	14	H	147	X	F	6	M
108	X	F	14	H	148	X	F	6	M
109	X	F	14	H	149	X	F	6	M
110	X	F	14	H	150	X	F	6	M
111	X	F	14	M	151	X	F	6	M
112	X	F	14	M	152	X	F	6	M
113	X	F	14	M	153	X	F	5	M
114	X	F	13	M	154	X	F	5	L
115	X	F	13	M	155	X	F	5	L
116	X	F	13	M	156	X	F	5	L
117	X	F	13	M	157	X	F	5	L
118	X	F	13	M	158	X	F	4	L
119	X	F	13	M	159	X	F	4	L
120	X	F	12	M	160	X	F	4	L

Scores (Sc) and Score Levels (SL) for Individuals (Ind) by
School Grade (Gr) and Sex.

Ind	Gr	Sex	Sc	SL	Ind	Gr	Sex	Sc	SL
161	X	F	4	L	201	XI	M	16	H
162	X	F	4	L	202	XI	M	15	H
163	X	F	3	L	203	XI	M	15	H
164	X	F	3	L	204	XI	M	14	H
165	X	F	2	L	205	XI	M	14	M
166	X	F	2	L	206	XI	M	14	M
167	X	F	2	L	207	XI	M	13	M
168	X	F	2	L	208	XI	M	13	M
169	X	F	2	L	209	XI	M	13	M
170	X	F	1	L	210	XI	M	13	M
171	X	F	1	L	211	XI	M	12	M
172	X	F	0	L	212	XI	M	12	M
173	X	F	0	L	213	XI	M	11	M
174	X	F	0	L	214	XI	M	10	M
175	XI	M	26	H	215	XI	M	10	M
176	XI	M	26	H	216	XI	M	9	H
177	XI	M	25	H	217	XI	M	9	M
178	XI	M	25	H	218	XI	M	9	M
179	XI	M	24	H	219	XI	M	8	M
180	XI	M	24	H	220	XI	M	8	L
181	XI	M	24	H	221	XI	M	8	L
182	XI	M	24	H	222	XI	M	8	L
183	XI	M	22	H	223	XI	M	7	L
184	XI	M	22	H	224	XI	M	7	L
185	XI	M	21	H	225	XI	M	6	L
186	XI	M	20	H	226	XI	M	6	L
187	XI	M	20	H	227	XI	M	5	L
188	XI	M	19	H	228	XI	M	4	L
189	XI	M	19	H	229	XI	M	4	L
190	XI	M	19	H	230	XI	M	3	L
191	XI	M	19	H	231	XI	M	3	L
192	XI	M	18	M	232	XI	M	3	L
193	XI	M	18	M	233	XI	M	2	L
194	XI	M	18	M	234	XI	M	2	L
195	XI	M	17	M	235	XI	M	1	L
196	XI	M	17	M	236	XI	M	0	L
197	XI	M	17	F	237	XI	M	0	L
198	XI	M	17	F	238	XI	F	26	H
199	XI	M	16	M	239	XI	F	24	H
200	XI	M	16	M	240	XI	F	23	H

Scores (Sc) and Score Levels (SL) for Individuals (Ind) by School Grade (Gr) and Sex.

Ind	Gr	Sex	Sc	SL	Ind	Gr	Sex	Sc	SL
241	XI	F	21	H	281	XI	F	7	M
242	XI	F	20	H	282	XI	F	6	M
243	XI	F	20	H	283	XI	F	6	M
244	XI	F	18	H	282	XI	F	6	M
245	XI	F	17	H	285	XI	F	6	M
246	XI	F	17	H	286	XI	F	6	M
247	XI	F	17	H	287	XI	F	6	M
248	XI	F	17	H	288	XI	F	6	M
249	XI	F	16	H	289	XI	F	6	M
250	XI	F	16	H	290	XI	F	5	M
251	XI	F	15	H	291	XI	F	5	L
252	XI	F	15	H	292	XI	F	5	L
253	XI	F	15	H	293	XI	F	5	L
254	XI	F	15	H	294	XI	F	5	L
255	XI	F	14	M	295	XI	F	5	L
256	XI	F	14	M	296	XI	F	4	L
257	XI	F	13	M	297	XI	F	4	L
258	XI	F	12	M	298	XI	F	3	L
259	XI	F	12	M	299	XI	F	3	L
260	XI	F	12	M	300	XI	F	2	L
261	XI	F	12	M	301	XI	F	2	L
262	XI	F	12	M	302	XI	F	2	L
263	XI	F	11	M	303	XI	F	1	L
264	XI	F	11	M	304	XI	F	1	L
265	XI	F	11	M	305	XI	F	1	L
266	XI	F	11	M	306	XI	F	1	L
267	XI	F	10	M	307	XI	F	0	L
268	XI	F	10	M	308	XI	F	0	L
269	XI	F	10	M	309	XII	M	20	H
270	XI	F	9	M	310	XII	M	27	H
271	XI	F	9	M	311	XII	M	26	H
272	XI	F	9	M	312	XII	M	26	H
273	XI	F	9	M	313	XII	M	25	H
274	XI	F	9	M	314	XII	M	25	H
275	XI	F	9	M	315	XII	M	24	H
276	XI	F	8	M	316	XII	M	24	H
277	XI	F	8	M	317	XII	M	24	H
278	XI	F	8	M	318	XII	M	23	H
279	XI	F	8	M	319	XII	M	23	H
280	XI	F	7	M	320	XII	M	23	H

Scores (Sc) and Score Levels (SL) for Individuals (Ind) by School Grade (Gr) and Sex.

Ind	Gr	Sex	Sc	SL	Ind	Gr	Sex	Sc	SL
321	XII	M	22	H	361	XII	F	21	H
322	XII	M	22	H	362	XII	F	20	H
323	XII	M	22	H	363	XII	F	19	H
324	XII	M	21	H	364	XII	F	18	H
325	XII	M	21	H	365	XII	F	17	H
326	XII	M	20	H	366	XII	F	16	H
327	XII	M	20	H	367	XII	F	16	H
328	XII	M	20	H	368	XII	F	16	H
329	XII	M	19	H	369	XII	F	15	H
330	XII	M	17	H	370	XII	F	15	H
331	XII	M	17	H	371	XII	F	15	H
332	XII	M	16	H	372	XII	F	13	H
333	XII	M	16	H	373	XII	F	13	H
334	XII	M	16	H	374	XII	F	12	H
335	XII	M	16	H	375	XII	F	12	H
336	XII	M	15	H	376	XII	F	12	H
337	XII	M	15	H	377	XII	F	12	H
338	XII	M	14	H	378	XII	F	12	H
339	XII	M	13	H	379	XII	F	11	H
340	XII	M	13	H	380	XII	F	11	H
341	XII	M	13	H	381	XII	F	10	H
342	XII	M	12	H	382	XII	F	9	H
343	XII	M	12	H	383	XII	F	9	H
344	XII	M	11	H	384	XII	F	8	H
345	XII	M	11	H	385	XII	F	7	H
346	XII	M	9	H	386	XII	F	7	H
347	XII	M	8	L	387	XII	F	6	H
348	XII	M	8	L	388	XII	F	6	H
349	XII	M	7	L	389	XII	F	5	L
350	XII	M	7	L	390	XII	F	5	L
351	XII	M	7	L	391	XII	F	5	L
352	XII	M	6	L	392	XII	F	4	L
353	XII	M	5	L	393	XII	F	4	L
354	XII	M	5	L	394	XII	F	4	L
355	XII	M	4	L	395	XII	F	3	L
356	XII	M	4	L	396	XII	F	3	L
357	XII	M	3	L	397	XII	F	1	L
358	XII	M	2	L	398	XII	F	0	L
359	XII	F	22	H	399	XII	F	0	L
360	XII	F	22	H	400	XII	F	0	L

APPENDIX 3

ABSTRACT OF

Attitudes of High School Students in Manitoba
Toward the Use of Alcoholic Beverages

APPENDIX 3

ABSTRACT OF

Attitudes of High School Students in Manitoba Toward the Use of Alcoholic Beverages¹

This study of the relationship of attitude to certain personal and social factors was made in an attempt to understand student thinking in regard to the use of alcoholic beverages.

The development of liquor control legislation was traced in its historical context.

Nine school divisions from various parts of the province were chosen with regard to "wet" and "dry" areas, according to "local option", and for principal occupation. Where possible one large and one small school were chosen from each of these divisions. With the cooperation of the principals of these schools, one thousand questionnaires were answered anonymously and returned. From these by stratification for father's occupation and grade a sample of two hundred boys and two hundred girls was obtained.

The questionnaire consisted of an attitude test, constructed by the Scale-Discrimination technique, and of a request for some additional information.

¹ Sister Edith Patricia McKittrick, doctoral thesis presented to the Faculty of Psychology and Education of the University of Ottawa, Ontario, May 1966, xii-82 p.

The distribution of scores of the sample of four hundred did not differ significantly from that of the normal curve; however, the number of scores in the middle range was above average and the number below was greater than the number above the mean. The critical ratio and the chi-square technique were used to test the significance of results. It was found that the score level on the attitude test was significantly related to the use of alcoholic beverages, and at the high and medium levels significantly more boys than girls drink. Moreover, the attitude of boys was significantly more favourable toward the use of alcoholic beverages than was that of the girls. There was considerable difference in attitude between the various school divisions; however, the difference with the total sample was significant for only one division. A highly significant relationship was found to exist between student and parental approval and disapproval of a student's drinking.

Approval of drinking on certain occasions, a dislike for associating drinking and morality, and a desire for experience in drinking in the home were the most popular opinions.

On similar items comparison was made with studies in Manitoba and in the United States. Differences in tendencies were in degree rather than in direction. In the Manitoba studies a lower percentage of drinkers and a less favourable

attitude toward drinking was remarked for the students of the non-metropolitan area. This trend was more evident in the Kansas study. In attitude toward the use of alcoholic beverages the students of Manitoba appear to be less liberal than those of Wisconsin but more so than those of Kansas.

The conservative attitude of the majority of the students and the divergence of attitude of boys and girls appear to be a reflection of traditional attitudes in Manitoba. Coupled with the relationship between student and parental attitude, this is an argument for the inclusion of parents in alcohol education programs.

Possibly the attitude test developed here may be of use for further study, among suggestions for which would be: the influence of friends, both adolescent and adult, on student attitudes toward the use of alcoholic beverages, changes in attitude of individuals after a specific alcohol education program, or in successive years.