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Perception of Alcohol and Alcoholism among Alaskan Communities

W. Jack Peterson, Bernard Segal, and Robert B. Heasley

University of Alaska, Anchorage

Perception of Alcohol and Alcoholism among Alaskan Communities[1]

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University of Alaska, Anchorage

Abstract

This study was conducted to learn something about how Alaskans perceive alcohol and alcoholism. The findings indicate that differences in attitudes toward and knowledge of alcohol are related to both urban/rural and native/non-native differences in our sample. The implications of our findings are discussed with respect to alcohol education programs.

Introduction

Alcohol abuse and alcoholism is the primary health and social problem in Alaska. The cost in social and economic terms is only beginning to be recognized (Kelso, 1977), together with an awareness that the problem needs to be confronted on a statewide basis. The extensive use of alcohol in Alaska has propelled Alaska to be the leading state with respect to per capita alcohol consumption. The national rate of alcohol use, about 2.90 gallons per person per year, is far exceeded in Alaska with its rate of 4.54 gallons per person. Alcohol has apparently been incorporated as a normative or customary function for a great many Alaskans, becoming well integrated into some of its peoples' social life.

Despite the widespread use of alcohol, little information is available regarding how alcohol and alcoholism is perceived. It would be interesting, for example, to determine if conflicting or uniform attitudes are held regarding an understanding of alcoholism, and how these perceptions may differ from region to region in Alaska. This study, part of an ongoing series of investigations exploring alcoholism in Alaska, focuses on providing some information about how a sample of adult Alaskans view alcohol and alcoholism.

Learning how the public views alcohol and alcoholism is particularly important in that public opinion on the etiology of alcoholism can influence how the problem is treated, especially from a legislative viewpoint. If, for example, public opinion perceives alcohol addiction as related to the availability of alcohol, the emphasis will be directed toward regulation of beverage alcohol. If, on the other hand, social conditions are believed to be a contributing cause, then a solution to the problem shifts from a legalistic and punitive approach to a human services orientation. The public attitude, however, is not generally consistent (Kinder, 1975), ranging from a demand for prohibition to the lowering of the drinking age in some states. Thus, it is important to not only assess prevailing attitudes toward alcohol and alcoholism in order to determine its implications for education,

prevention, and treatment, but to also evaluate how public opinion is likely to affect public policies. Additionally, knowledge of how alcoholism and alcohol abuse is perceived can aid in the development and implementation of educational campaigns focusing on alcohol education. Specifically, knowledge of how people view alcohol can contribute to the development of a strategy to maximize the effects of alcohol education campaigns. Since the state of Alaska has been exposed to an extensive media campaign on alcoholism, it would also be of interest to learn what impact this campaign might have had.

Method

Sampling

An area probability sample of 512 households was conducted in nine different communities representing the diversity of Alaska's peoples. The sample sites represented the geographic and climactic differences, social and economic differences, and included representation of Alaskan ethnic groups, Eskimos, Indians, Aleut, and non-native. The communities of Barrow (n = 29) and Aniak (n = 18) were selected so as to have representatives of both Northern and Southern Eskimo. Fort Yukon (n = 29) and Beaver (n = 12) were included to represent the interior Athabascan Indian. Old Harbor (n = 20), Angoon (n = 25), and Hydaburg (n = 26) were

chosen to represent the Aleut, Tlingit and Haida respectively. Anchorage (n = 300) was selected since it is the largest city in the state, containing nearly half of the state's population. And finally, Valdez (n = 53) was included in our sample because it was one of the communities along the trans-Alaska pipeline corridor and went through a process of great change during the construction period. Drinking also takes place in all of these settings, although it is not always socially or legally sanctioned.

The person interviewed was an adult member of the household present at the time of the interview. Of the 512 respondents, 54% were women; 46% were men. The ethnic composition is as follows: 68% non-native, 8% Eskimo, 9% Tlingit-Haida; 3% Aleut, 7% Athabascan, 3% black and 2% classified as "other." Ages ranged from the late teens to above sixty, with a median age of 34.5 years. The median education level was 12.2 years. The selection of households in each community was done randomly.

Questionnaire

Each interviewee was asked to respond to a 47-item questionnaire containing a series of questions pertaining to alcohol and alcoholism, together with demographic data. EAch question was asked by the interviewer and the answer recorded verbatim or by checking an appropriate category on the survey.

In some communities a translator was required, and in these cases special care was taken to ensure the reliability of responses by asking the respondent if what was recorded or scored represented the intended answer.

Results

One section of the survey dealt with attitudes toward and knowledge of alcoholism. One of the items was whether the respondent approved or disapproved of drinking. Of 505 total answers, 68% (344) voiced approval, while 32% (161) did not. There is, however, significant variation in attitudes with the larger non-native communities (Anchorage and Valdez) accounting for 75% (260) of the total number of people (344) who expressed approval of drinking. Opinion among the remaining several communities was less supportive, with 54% (84) approving and 46% (73) disapproving.

A second question was "How would you define alcoholism?" The definitions which were obtained ranged from the very sophisticated, "a physical dependence on alcohol," to a functionally descriptive definition, "It's when you start drinking the after-shave lotion." Other responses were: "a person isn't capable of helping himself; " "a disease;" "a method of escaping existing reality;" "it's bad;" "a sickness;" and "not able to handle alcohol."

Each of the responses was categorized into one of four

classes of definitions derived by Peterson (1975). The classification and statistics for each category are: (a) Alcoholism related to excessive drinking--19% (102; (b) Alcoholism as a form or dependency--47% (244); (c) Alcoholism as a mental or physical illness--24% (126); and (d) Alcoholism defined as affecting a person's life style--10% (53).

The response to the question, "Do you think alcoholism is a disease?" resulted in 79% (406) saying "yes" with opinions equally divided between rural (80%) and urban (79%) areas. Respondents were also asked why they thought alcoholism was a disease. The most frequent answer was "because it cannot be controlled by the individual," given by half of the sample (50%, n = 237). Twenty-eight percent (146) answered that alcoholism is a disease "because it has physical repercussions." Other responses were quite varied, and too vague for categorization.

Several questions were also presented exploring personal attitudes and knowledge about drinking and about alcohol and alcoholism. Of these, the question, "What kinds of people become alcoholics?" obtained one predominate answer, "all kinds" (56%, n = 283), with "those lacking in will power" (22%, n = 114) second, followed by "those people being under pressure" (6%, n = 32), ranking third. Eighty-five percent (n = 407) of the respondents thought that alcohol is a drug,

and 83% (426) thought that there is a statewide drinking rpoblem in Alaska, with 50% (256) thinking that people in Alaska drink more than people outside of Alaska, but 46% (232) of the sample thought that alcoholism is worse in Alaska than "Outside" (in the lower forty-eight states). Only 38% (195) thought that there would be fewer alcoholics if alcohol were harder to get, while 59% (303) thought not. Rural respondents agreed (52%, n = 83) with the above statement to a greater extent than did urban ones (32%, n = 112).

Discussion

Our findings indicate that although there is a general awareness about alcohol and alcoholism in Alaska, there is also much variation with respect to knowledge and attitudes toward alcohol and alcoholism. The recent extensive alcohol education campaign apparently contributed to inform about alcohol (e.g., alcoholism is a disease) but did not seemingly have a uniform effect. Some of the variation in the responses we obtained is related to rural-urban differences. For example, although alcohol is consumed all over the state, it is predominately the larger, urban, primarily non-native cities (Anchorage and Valdez) that express a greater approval of drinking than rural areas. While drinking does occur in the rural areas, it is not met with the same level of approval as indicated in Anchorage and Valdez. This differences seems to

suggest that alcohol may not be as well integrated into the rural, predominately native, communities as it is in the larger urban centers. Native communities may be expressing greater concern about drinking because alcohol is not handled well and thus is perceived with a great deal of ambivalence.

There is general agreement among respondents that alcoholism is a disease, but there seems to be little agreement and/or understanding as to why it is constituted as such. Yet, a large percentage of those interviewed believed that alcoholism is a problem in Alaska. Interestingly, those in the rural areas believed to a greater extent than those in Anchorage and Valdez that restrictions on the availability of alcohol would reduce the problem.

These results have an interesting implication for Alaska and for alcohol education campaigns. On the basis of this survey, in which we believe a representative sample of rural native communities was obtained, it appears that educational efforts, particularly directed at the native level, may have to change emphasis. There is ample recognition that alcohol is a problem, and that its reduction will curtail the problem, a view currently held by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and expressed by its director, Ernest Noble, Ph.D., M.D. Thus efforts might need to be directed toward furthering an understanding of <u>how</u> to deal

with the problem in terms of developing community awareness, and not focusing on individual drinking. Efforts to further an understanding of the nature of alcoholism may also be undertaken. In contrast, educational campaigns for larger centers, such as Anchorage and Valdez, might need emphasis on changing overall consumption patterns, that is, educating the general public that there is a relationship between availability of alcohol and incidence of alcoholism. Thus, it appears that in addition to any general alcohol education program, more specialized or tailored ones are needed which are directed toward specific target groups.

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Footnote

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the
CENTER for ALCOHOL and ADDICTION STUDIES

- **EDUCATION**
- **RESEARCH**
- **TRAINING**

University of Alaska, Anchorage
2651 Providence Avenue
Anchorage, Alaska 99504
272-5522, ext. 131

Carol Molinari, Director

THE CENTER

Alaska's major problems -- alcoholism and substance abuse. They demand unique approaches, for vast distances and different cultures here preclude the traditional solutions.

To work for the abuser in Alaska is to rise to a challenge like few other areas ever face, in combating alcohol and substance abuse, in changing attitudes. The abusers are in cities, which are growing rapidly and changing each day; in rural areas, where native traditions are disappearing overnight; and in the bush, where few facilities exist for education or recreation and winters are very, very long.

The Center IS meeting these needs:

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with trained counselors
with education

Research needs in the state are extensive, for little research has been accomplished to date. The questions are so vital; the statistics so important.

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Drug-related criminal offenses

Drunken driving

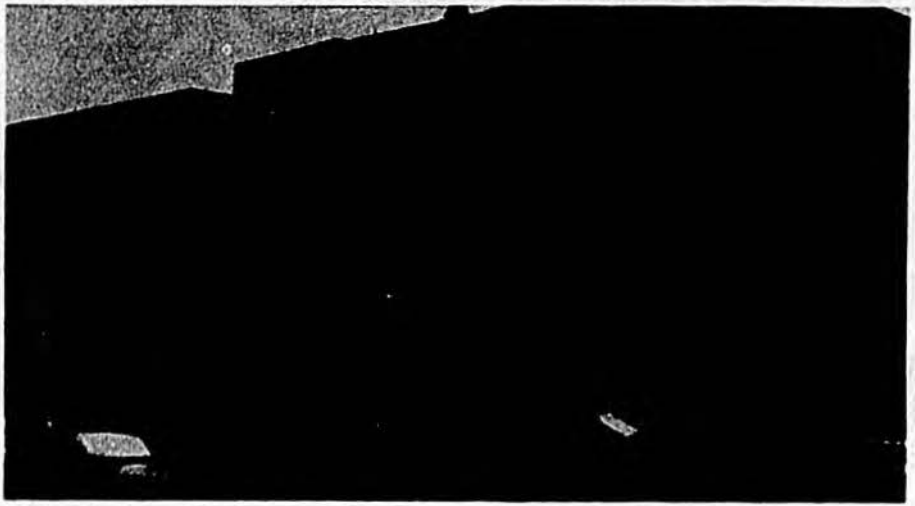
Client recidivism in treatment

The Center has conducted some of its research with other alcohol and drug agencies. The Center surveyed attitudes towards alcohol in Alaska, studied controlled drinking, developed a pilot client intake form, and through a donation from the Atlantic Richfield Company has provided student stipends for small research projects. The Center actively seeks funds for major research programs.

The Center serves students needing research findings or information through its excellent resources. Its Library contains books, articles, periodicals and the information retrieval capabilities of the Classified Abstract Archive of Alcohol Literature system.

RESEARCH

Training in any field is the lifeblood of that body of knowledge. Training makes possible the circulation of news and events, the replacement of old information with current findings and methods, and most important, the recovery of abusers.



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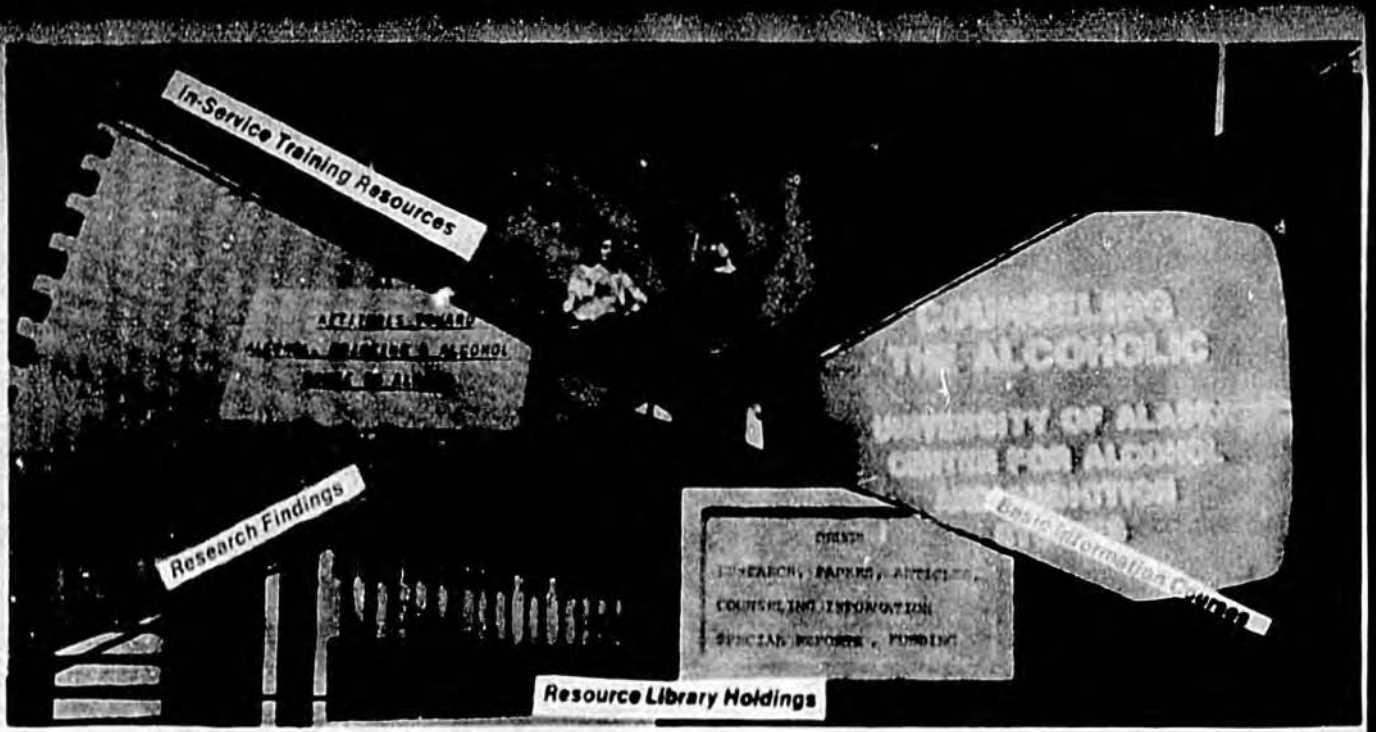
The Center is actively engaged in training counselors for the alcohol and substance abuser, utilizing both personal and technological means to reach the widest number of interested students.

The Center:

- is providing, through academic disciplines, the basic information and counseling technique courses at the community colleges, and core courses in substance abuse at the upper division and graduate levels for those in related human services fields.
- is developing video-taped basic information and counseling technique courses for community colleges and extension centers.
- is developing exportable video packages for use by counselors living in rural and bush communities.
- holds in-service training for professionals and paraprofessionals.
- conducts workshops and seminars for delivery service personnel and others in related human services fields.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Research Findings
Resource Library Holdings

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It is through education that youth and old alike are given the information to avoid creating a problem, or to control one that exists.

The Center extends its educational facilities to all areas of the community through:

- basic information courses
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- youth prevention programs
- teacher training projects
- workshops and seminars with local and national experts
- the Resource Library, containing over 125 video cassettes and 300 books (and constantly expanding), available for public use
- the Classified Abstract Archive of the Alcohol Literature system, a collection of more than 20,000 abstracts of the scientific literature available on alcoholism, indexed according to a detailed topical classification
- the availability of handout materials, pamphlets, and brochures

EDUCATION

Center for Alcohol and Addiction Studies
University of Alaska, Anchorage
2651 Providence Avenue
Anchorage, Alaska 99504

The Center was founded in 1971 at the request of the Governor's Advisory Board on Alcoholism, which asked for a center to direct and coordinate persons and services providing alcoholism and addictions research, training, and consultation through the state-wide University.

The Center is housed within the Anchorage Higher Education Consortium Library and receives its administrative support from the University of Alaska, Anchorage although its function is statewide. The Center makes frequent use of the resources of the Consortium Library, of the UAA Media Services and of the faculties from all the University of Alaska education centers to augment its programs and services. The Center coordinates these programs and services with, and provides them to, alcohol, drug and community health and native agencies on the state, local and national levels.

PLEASE NOTE: THE FOLLOWING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT.

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CENTER FOR ALCOHOL
AND ADDICTION STUDIES

DATE October 21, 1977

TO Marcy
Special Committee on Alcoholism & Alcohol-RELated Legislation

Bernard Segal of this office asked that this information be forwarded to you.

Please let us know if we can be of further assistance.

Mary Parker

- Changes in Alcoholic Beverage Sales after Reductions in the Legal Drinking Age - Reginald Smart
- Halfway Houses for Skid Row Alcoholics. Are they rehabilitative? - Ogborne & Smart
- Drinking and Problems from Drinking after a reduction in the Minimum Drinking Age - Smart & Schmidt

in journal file

- The U.S. Journal of Drug and Alcohol Dependence - Miami
  Vol. 1. Nos. 2, 3, 4, 5, 7,
- The Journal, Ontario Addiction Research Foundation -
  Vol 6 Nos. 4, 6, 7

AM. J. DRUG ALCOHOL ABUSE, 4(1), pp. 101-108 (1977)

Changes in Alcoholic Beverage Sales after Reductions in the Legal Drinking Age

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ABSTRACT

This study reports changes in the sales of beer, wine, and spirits in 25 states which lowered legal drinking ages and adjacent states which did not. Most of the states which changed drinking ages had an increase in beer sales whereas the unchanged ones did not. The increase for beer in the changed over the not changed states was 5.7%. The differences for wine and spirits are not statistically significant. The variations in changes from one state to another are considerable. Analyses of the effects of new age laws on traffic accidents should take account of changes in sales and other preventive efforts occurring simultaneously. Whether the increases will be permanent is uncertain.

Numerous jurisdictions in North America have reduced legal drinking ages in the past 5 years. Not much information has been gathered about how these changes have affected alcohol sales and consumption. Smart and Schmidt [1] reported that sales in Ontario increased after a change in the drinking age at a rate higher than expected on the basis of adding the new young drinkers to the drinking population. However, there was no comparison area for this study which did not have an age change. Smart and Finley [2] compared provinces which changed with a control province which did not and found no overall difference for beer. However, the control province was often one which had changed earlier. The present study reports a comparison of alcohol sales changes in 25 states which reduced their drinking ages with adjacent states which did not change.

It was expected that there should be overall changes in sales, but with considerable variation from one state to another. Smart and Finley [2] found that some five provinces had increased beer sales after the new law and five had decreased although to a lesser extent. It was also expected that the largest increases as a result of the new age law would be in beer sales, since young persons are known to drink mainly beer.

Alcohol-related accidents have shown an increase after age reductions in some states, e.g., Michigan and Wisconsin, but not in others, e.g., Vermont and Maine [3, 4]. The possibility exists that in the states where accident increases did not occur, the effect of the new law on alcohol sales was small. The purposes of this study are to examine, (1) the increases in sales of beer, wine, and spirits in changed compared to unchanged states; (2) the relative increases in beer, wine, and spirits; and (3) the states in which the increases were greatest.

RESULTS AND DISCUSSION

Data were obtained on sales of beer, wine, and spirits for the years 1969-1974 from the *Brewer's Almanac* [5]. These data are for sales rather than consumption, but one is assumed to reflect the other. Although 26 states have changed their age laws, only 25 were used here (see Table 1). Maryland was dropped because it was one of the last to change the age law and postchange data would not be available until at least 1977. For each changed state an adjacent state was selected which did not have an age change. Comparable data for the changed and unchanged states were used.

Table 2, 3, and 4 show the changed and unchanged states and the percent increases in sales for beer (gallons), wine (gallons), and spirits (wine gallons) for, (1) the year before the change over to the year of the change, (2) the year after the change over to the year of the change, and (3) the year after the change over to the year before the change.

It can be seen that for all types of beverage the variation among the states is considerable. Mann-Whitney U Tests were done comparing the percent changes for beer, wine, and spirits in the changed and unchanged states. The differences for beer were significant ($z = 2.51$, $p < .006$; $z = 2.15$, $p < .02$; $z = 2.32$, $p < .01$, respectively). Beer sales increased in the changed states more than in the unchanged states for the year of the change and the year after. There were no differences for wine. Spirits showed an increase when the year before was compared to the year of the change ($z = 1.66$, $p < .05$) and to the year

Table 1. Changes in Drinking Age by State

From 21 to 18	
Connecticut	
Florida	
Georgia	
Iowa	
Louisiana	
Maryland	
Massachusetts	
Michigan	
Minnesota	
New Hampshire	
New Jersey	
Rhode Island	
Tennessee	
Texas	
Vermont	
West Virginia	
Wisconsin	
From 21 to 19	
Arizona	
Idaho	
Wyoming	
From 21 to 20	
Delaware	
From 20 to 18	
Hawaii	
Maine	
From 20 to 19	
Alaska	
Nebraska	
From 19 to 18	
Montana	
No change	
Alabama	North Carolina
Arkansas	North Dakota
California	Ohio
Colorado	Oklahoma
Illinois	Oregon
Indiana	Pennsylvania
Kansas	South Carolina
Kentucky	South Dakota
Mississippi	Utah
Missouri	Virginia
Nevada	Washington
New Mexico	District of Columbia
New York	

after ($z = 1.68, p < .05$). However, the year after compared to the year of the change shows no difference. Beer sales increased about 5.7% more (on the average) in the states that changed than in those that did not when the year after is compared with the year before the change. Liquor increased about 4% more in the states which changed than in those which did not.

When the changed and unchanged states are compared for those which increased and those which did not, the data for beer consistently show more changed states than not changed increased ($p < .05$). In each case (year before vs year of change, year before vs year after, year of vs year after) 18 or 19 changed states increased beer sales compared to only 6 or 7 in the unchanged states. For wine and spirits the numbers which increased in the changed and unchanged states are more equal and no significant differences exists.

A Kruskal-Wallis analysis of variance was performed on the percentage changes in beer, wine and spirits separately for the changed and unchanged

Table 2. Changes in Beer Consumption in States Where Drinking Age Was Changed Compared to States Where Drinking Age Remained Unchanged

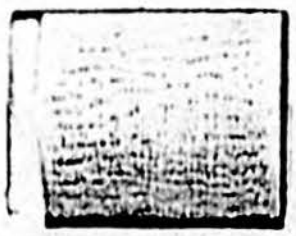
Changed state compared to unchanged state	% increased from year before to year of change	% increased from year of to year after change	% increased from year before to year after change	Changed state compared to unchanged state	% increased from year before to year of change	% increased from year of to year after change	% increased from year before to year after change
Connecticut	−2.2	7.9	5.6	Vermont	11.9	4.2	16.6
New York	−1.0	1.4	0.4	New York	0.0	−1.0	−1.0
Florida	12.4	8.4	21.9	W. Virginia	1.2	4.1	5.3
Alabama	8.2	7.7	16.5	Kentucky	3.8	3.4	7.3
Georgia	7.5	5.7	13.6	Wisconsin	2.0	3.9	6.0
S. Carolina	9.8	10.7	21.6	Illinois	0.0	1.6	1.6
Iowa	5.7	8.7	14.8	Arizona	14.6	11.3	27.6
Missouri	2.9	3.7	6.7	Nevada	9.6	10.2	20.7
Louisiana	4.3	4.3	8.8	Idaho	10.6	5.9	17.1
Arkansas	9.1	10.6	20.7	Oregon	5.1	1.2	6.4
Massachusetts	9.1	5.4	15.0	Wyoming	13.4	14.4	29.7
New York	1.4	1.5	3.0	Colorado	9.7	8.7	19.3
Michigan	3.0	4.1	7.4	Delaware	3.6	2.0	5.7
Ohio	−0.4	4.3	3.8	Pennsylvania	0.7	2.6	3.3
Minnesota	10.1	7.2	18.0	Hawaii	8.4	8.7	17.9
N. Dakota	2.2	5.2	7.4	California	5.7	3.9	9.7
N. Hampshire	10.3	6.6	17.6	Maine	5.4	4.9	10.6
New York	1.4	1.5	3.0	New York	−1.0	1.4	0.4
New Jersey	4.4	1.1	5.5	Alaska	14.2	17.9	34.6
New York	1.4	1.5	3.0	California	5.5	4.6	10.4
Rhode Island	7.2	−1.3	5.8	Nebraska	−4.1	8.8	4.3
New York	−1.0	1.4	0.4	Kansas	6.0	6.1	12.4
Tennessee	10.6	5.3	16.4	Montana	11.1	8.3	20.4
N. Carolina	11.5	5.3	17.3	N. Dakota	2.2	5.2	7.4
Texas	5.8	8.1	14.4				
Oklahoma	7.3	8.0	15.9				

Table 3. Changes in Wine Consumption in States Where Drinking Age Was Changed Compared to States Where Drinking Age Remained Unchanged

Changed state compared to	% increased from year	% increased from year	% increased

Table 3. Changes in Wine Consumption in States Where Drinking Age Was Changed Compared to States Where Drinking Age Remained Unchanged

Changed state compared to unchanged state	% increased from year before to year of change	% increased from year of to year after change	% increased from year before to year after change	Changed state compared to unchanged state	% increased from year before to year of change	% increased from year of to year after change	% increased from year before to year after change
Connecticut	4.9	1.7	6.6	Vermont	26.7	6.0	34.3
New York	9.0	3.1	12.4	New York	13.3	9.0	23.6
Florida	10.1	0.2	9.9	W. Virginia	7.8	-7.3	0.0
Alabama	16.3	57.7	83.5	Kentucky	10.3	2.4	12.9
Georgia	42.6	5.7	50.6	Wisconsin	19.6	-0.2	19.3
S. Carolina	25.7	-4.7	19.8	Illinois	10.0	2.6	12.9
Iowa	9.3	1.9	11.4	Arizona	13.3	5.4	19.4
Missouri	4.8	-5.8	1.3	Nevada	17.8	11.5	31.4
Louisiana	-30.4	-0.3	-30.6	Idaho	20.9	-3.2	17.0
Arkansas	-0.4	-0.3	-0.7	Oregon	17.1	7.3	25.6
Massachusetts	4.7	-0.9	3.8	Wyoming	6.2	8.1	14.8
New York	3.1	-2.7	0.3	Colorado	10.0	3.3	13.7
Michigan	10.2	3.5	14.0	Delaware	24.8	5.4	31.6
Ohio	3.8	-0.1	3.7	Pennsylvania	10.4	-0.2	10.2
Minnesota	0.7	1.1	1.8	Hawaii	-17.2	24.8	3.4
N. Dakota	-6.8	-2.7	-9.3	California	9.7	4.6	14.7
N. Hampshire	7.6	7.0	15.1	Maine	-32.9	-1.4	33.9
New York	3.1	-2.7	0.3	New York	9.0	3.1	12.4
New Jersey	-0.6	1.7	1.1	Alaska	25.7	23.8	55.6
New York	3.1	-2.7	0.3	California	12.2	9.5	22.8
Rhode Island	4.6	0.5	5.1	Nebraska	8.7	-6.5	1.6
New York	9.0	3.1	12.4	Kansas	23.6	-5.4	16.9
Tennessee	66.6	21.2	101.9	Montana	8.2	1.9	10.2
N. Carolina	26.7	22.4	55.0	N. Dakota	-6.8	-2.7	9.3
Texas	2.3	0.3	2.6				
Oklahoma	15.7	-18.2	-5.4				



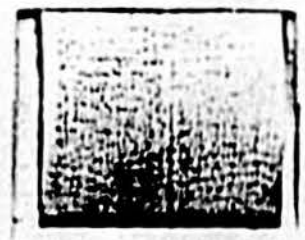


Table 4. Changes in Liquor Consumption in States Where Drinking Age Was Changed Compared to States Where Drinking Age Remained Unchanged

Changed state compared to unchanged state	% increased from year before to year of change	% increased from year of to year after change	% increased from year before to year after change	Changed state compared to unchanged state	% increased from year before to year of change	% increased from year of to year after change	% increased from year before to year after change
Connecticut	0.8	−0.3	0.5	Vermont	7.1	10.2	18.0
New York	−7.2	6.6	−1.0	New York	−0.07	−7.2	−7.2
Florida	2.9	6.7	9.8	W. Virginia	4.6	3.6	8.3
Alabama	3.4	3.9	7.5	Kentucky	3.8	2.4	6.3
Georgia	10.9	−7.1	3.0	Wisconsin	7.7	3.6	11.5
N. Carolina	9.0	2.7	11.9	Illinois	1.9	1.6	3.5
Iowa	6.9	4.5	11.7	Arizona	10.2	7.4	18.2
Missouri	−6.0	7.9	1.4	Nevada	16.5	11.3	29.7
Louisiana	2.2	4.0	1.7	Idaho	6.6	1.3	8.0
Arkansas	8.9	8.2	17.8	Oregon	5.3	6.7	12.4
Massachusetts	5.1	2.9	8.1	Wyoming	8.8	9.4	19.0
New York	6.6	−1.4	5.1	Colorado	8.2	6.7	15.5
Michigan	5.1	0.3	5.8	Delawate	−7.6	3.0	−4.8
Ohio	1.6	2.6	4.2	Pennsylvania	1.3	2.0	3.3
Minnesota	5.9	4.3	10.5	Hawaii	23.4	22.2	50.8
N. Dakota	3.8	5.0	9.0	California	2.7	2.3	5.1
N. Hampshire	3.0	−0.8	2.2	Maine	6.3	3.8	10.4
New York	6.6	−1.4	5.1	New York	−7.2	6.6	−1.0
New Jersey	−2.2	−1.0	3.1	Alaska	17.5	3.9	22.1
New York	6.6	−1.4	5.1	California	2.4	3.5	6.0
Rhode Island	4.8	3.6	8.6	Nebraska	6.1	−1.3	4.7
New York	−7.2	6.6	−1.0	Kansas	2.4	3.3	5.8
Tennessee	5.3	11.8	17.8	Montana	4.7	4.3	9.2
N. Carolina	1.7	2.4	4.1	N. Dakota	3.8	5.0	9.0
Texas	4.3	7.5	12.1				
Oklahoma	10.0	−1.6	8.2				

states. There was no difference in the percentage changes among beverages for the year of the change over the year before ($H = 2.78, p > .3$). However, for the unchanged states the increase was greatest for wine ($H = 13.90, p < .01$). It appears that the changed states went against the national trend for an increase in wine sales by showing their largest increases in beer sales.

The states which showed the largest increases (10% or more) in beer sales in the year of the change over the year before were Florida, Minnesota, New Hampshire, Tennessee, Vermont, Arizona, Idaho, Wyoming, Alaska, and Montana. There is some tendency for them to be the more rural states and to have generally low per capita consumption. However, these states include some which changed the legal age of drinking from 21 to 19 years, and from 20 to 19 years as well as from 21 to 18 years. The type of age change does not seem to be the main factor in the degree of increase in sales.

It is difficult to explain the lack of an age law effect on alcohol-related accidents for Vermont but not for Maine [4]. Maine experienced postchange increases in beer and liquor sales no greater than average and a reduction in wine sales. However, Vermont had much larger increases in beer (11.9%), wine (26.7%), and liquor sales (18.0%) than average. Perhaps the lack of an increase in alcohol-related accidents in Vermont was due to an Alcohol Safety Action Project held during 1971-1972, as suggested by Douglass and Filkins. Another explanation offered is that Vermont is close to New York, a long-time 18-year state (since 1934), and that this relationship held down the effects of the new law. However, this theory would have to argue for a separate effect on sales and alcohol-related accidents. Perhaps prior to the change in law Vermont young residents purchased some of their alcoholic beverages in New York State and after the new law made those purchases in Vermont. It would be of interest to know whether counties close to the New York border showed lower increases in alcohol-related accidents than those which are further away from the border.

CONCLUSIONS

On the average, the introduction of reduced drinking age laws increased sales of beer and to a lesser extent liquor but had overall no effect on wine. Most of the states which changed their drinking ages experienced an increase in beer sales while most of the unchanged ones did not. The differences in numbers for wine and spirits are not significantly different. Among states that reduced drinking ages, percentage sales increases were similar in beer, wine, and spirits; among those which did not change, wine sales increased.

The variations in changes from one state to another are considerable. These variations suggest that an analysis of the effects of new age laws on traffic accidents should take into account changes in sales but also other preventive efforts which occurred at the same time. Apparently, reducing the drinking age had a considerable effect on per capita consumption of alcohol in those areas studied here. Whether the increase will be permanent should be the subject of further investigations.

ACKNOWLEDGMENTS

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HALFWAY HOUSES FOR SKID ROW ALCOHOLICS: ARE THEY REHABILITATIVE?

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Abstract—A critical review of research reports on halfway house programs for alcoholics indicated that most of these reports have serious shortcomings regarding their clarity and in the quality and quantity of reported data. Such data as were presented do not lend support to the notion that halfway houses make a substantial contribution to the rehabilitation of skid row alcoholics.

Halfway houses and detoxification centers for skid row alcoholics are part of a new package of services aimed at "decriminalizing" chronic drunkenness. Many states and cities are now constructing detoxification centres and halfway houses, intending to rehabilitate skid row alcoholics both physically and socially. The detox-halfway house system provides the first concrete evidence that skid row drunkenness is no longer seen as a sin or a crime. Until recently, skid row alcoholics were "treated" by series of arrests, imprisonments, handouts, and exhortations to save their "mortal souls". Halfway houses are not new but there is a new recognition that they have a rehabilitative potential rather than being merely containment centers or way-stations on the skid row circuit.

Ideally, halfway houses could provide informal treatment, a haven from skid row, chances for employment, and contact with sober, former skid row persons. The authors recently completed a lengthy review of the empirical support for the rehabilitative success of halfway houses (Ogborne & Smart, 1974).* This paper presents the main results and conclusions of the review.

REFERRAL AND SELECTION OF CLIENTS

Halfway houses for alcoholics show considerable variability in ideology and practice. In general, however, they share the following features: small size, informality, open door policy, and encouragement of residents to work. These features usually define a halfway house (Rubington, 1973).

Details of selection processes used by the houses are sparse in most cases. For example, admission to Rathcoole (Cook, Morgan & Pollack, 1968) was determined on the basis of an interview with the warden who excluded the mentally ill. Barrett House (Markham, 1962), however, admitted all volunteers meeting the requirements of sex and social isolation. Both Compass Club (Hoff *et al.*, 1960) and Bon Accord (Collier & Somfay, 1974) selected from skid row alcoholics in that they took those who had at least three arrests for common drunkenness in a given year. In general, halfway houses tend to admit those who show a desire to stop drinking and to change their lifestyle.

CHARACTERISTICS OF CLIENTS TAKING UP RESIDENCE

Accounts of client characteristics show extreme variability in the information reported and the ways in which characteristics are summarized. Some reports give little more than the mean age of their samples; others give impressionistic accounts of the general tendencies; while still others report distributions for a wide range of demographic and psychological variables. In general, residents of halfway houses tend to be middle-aged

*This longer version is available from the authors.

and single. If they had ever married they were rarely in contact with their wives at the time of admission. Details of education or work histories show that while upwards of a third of members of these samples had had few years of schooling and possessed few work skills, each sample included a proportion of men (even a third) who were educationally privileged and who had at some time held prestigious jobs.

LENGTH OF STAY, MODES OF DISCHARGE, AND FOLLOW-UP RESULTS

Ideally, one would like to have studies of large samples which were followed-up after a consistent and considerable period of time (e.g., 6 months or 1 yr). These samples should involve all those admitted to the halfway house, not only those who stayed a long time, did particularly well, or who were easily found. A further desideratum is that some reliable and valid follow-up instrument should be used or that an independent check be made on the alcoholic's statement (e.g., through records or other observers). Regrettably, the available halfway house research does not match these expectations at all well, for most studies used biased samples, variable follow-up periods, or unreliable methods of assessing change. In addition, only a few controlled or comparative studies have been made. The sorry state of our present knowledge of the achievements of halfway houses is evident from the data presented in Table 1.

COMPARATIVE STUDIES

Two comparative studies have been found but they are as inconclusive as many of the uncontrolled studies and present no convincing data about the relative value of halfway houses. A study by Nash (1962) compared outcome of alcoholics treated at an outpatient clinic with citrated calcium carbimide with those treated at a halfway house. Follow-up intervals varied widely with an average of over 6 months. Nash's data do not distinguish between those who were found to be drinking at follow-up and those lost to follow-up. Positive outcomes were more frequent for the calcium carbimide treated outpatients, but the two samples were entirely different. The outpatients were males and females living with their families while the halfway house samples consisted of homeless males.

A rather telegraphic and confusing study is reported by Blumberg, Shipley & Shandler (1973). No information is given on the number of men in the halfway house sample, the average length of stay, their mode of discharge, or length of the follow-up period. There is reference to a sample of 209 men, but it is not clear how this sample was drawn. Results for the halfway house sample were less impressive than those for men involved in intensive counselling. Blumberg *et al.* argue that the intensive counselling service was more appropriate for skid row men than was the halfway house. Such a conclusion is not obvious from the data since the manner of reporting is such as to considerably confuse the reader.

In general, halfway house research is disappointing in relation to what it informs us about outcomes. Most studies have considerable data loss problems in that frequently half or less of those eligible for follow-up are actually contacted. The "grapevine" method rather than standardized interviews or objective records is more often used, and outcomes are rarely related to mode of discharge or length of stay. The follow-up periods were rather short—under a year in many cases. Sampling biases are obvious in several studies in that short stay cases are excluded, thus probably inflating recovery rates. The Myerson and Mayer (1966) study is the best in all methodological senses, and a very low recovery rate is reported—only 22% after 10 yr. Reported success after one year varies from 10 to 30%.

No study adequately shows halfway house treatment to be better than any other treatment or superior to no treatment at all. Recoveries may be more spontaneous than related to any effects of the halfway house. The study by Blumberg *et al.* (1973) suggests that halfway houses may be less appropriate than counselling, but this study has so many limitations that no firm conclusions can be drawn.

Table 1. Length of stay, modes of discharge and other outcomes

Name of House and Principal Author	Sample size	Length of stay	Modes of discharge	Types of follow-up	Follow-up period	Outcomes
Rathcoole. (Cook, Morgan & Pollak, 1969)	34 but only 31 considered	1 month 35%, 1-3 months 26%, 3-12 months 26%, 12+ months 13%	Not stated	Follow-up information only reported for those staying over three months and then only grouped data for an unspecified period is reported (e.g., the 12 men had worked for a mean of 4.5 months since admission)		
No Name (Blumberg, Shipley, & Shandler, 1973)	Not stated	Not stated	Not stated	Interviews conducted by Researchers	At least 1 year after admission. Some would thus be still in residence or shortly out.	Data given for only 57% of an unspecified No. 12% continuous sobriety 18% sober at least one half time 68% no sobriety for more than 2 months
Recovery House. (Anon, 1973)	26	Not stated	Not stated	Personal Interviews, contacts with families and friends. Conducted by project staff.	1, 2, 3 months after discharge	21 employed at some time during follow-up period. At 2 months: 10 sober 5 drinking Over 2 months: 9 sober 2 drinking
Compass Club. (Hoff, Rafferty, Saari, Shay, & Smith, 1960)	90	Not stated	10% left with staff approval. 20% prematurely announcing their intentions. 21% AWOL. 47% discharged for disciplinary reasons	Personal interviews with 25 of 90. Conducted by social worker	Not stated but some "had not been out for long".	8 of 28 "abstinent" 75% "improved"
Turning Point. (Morgan & Robertson, 1974)	40	43 days on average	Not stated	Interview with 14 of 40 discharged by researchers	Not stated	14 case histories given. Mainly "doing well".
Bon Accord. (Collier & Sunday, 1974)	80	Not stated in this report but personal communication with the authors shows this to average 52 days	80 men had 108 terminations. 67%, self-initiated. 27%, discharged. 6 men (7%) graduated	Interview follow-up by researcher who completed questionnaire on 74 (92%) of former residents. 2 of the others died. 2 graduates and 2 others could not be traced	Approximately one year since leaving	Reported for whole group with comparisons with year prior to admission (as indicated in admission questionnaire). Less skid row affiliation, more non-row affiliations. More visits to relatives. More relationships with women. More use of skid-row institutions. More employment, more controlled drinking.
No Name. (Orford, Hawker, & Nicholls, 1974)	59	0-3 weeks 30.5%, 4-7 weeks 18.6%, 8-11 weeks 13.5%, over 12 weeks 37.4%	Known to be drinking 40.6%, AWOL apparently sober 8.7%, premature but apparently sober 23.4%, Completed program 28.7%	None	Not applicable	Not applicable
Bowery, Long Island (Myerson & Mayer, 1966)	101	Not stated	Not stated	Not detailed but a variety of methods implied (e.g., personal follow-up records, etc.)	10 Yr	"Success"—mainly sober, working and meaningful family relations 22%. "Partial Success"—improvements in drinking and work but "continuing dependency on community resources" (hospitals) 24%. "Failures"—no change in drinking or lifestyle 54%. Ratings made on basis of lifestyle over the 10 yr period or to time death

Table 1—*continued*

Name of House and Principal Author	Sample size	Length of stay	Modes of discharge	Types of follow-up	Follow-up period	Outcomes
Barrett (Markham, 1962)	16	Not stated	Not stated	Not stated	13 months	5 abstinent 8 improved 2 lost contact 1 social drinker
Brisk (Nash, 1962)	79	Not stated	Not stated	Not stated	Variable from admission	Sober and employed 6 months 22% [illegible] months sobriety [illegible]% At least 2 months sobriety, 8% Drinking or lost to follow-up, 62%
Salvation Army, (Katz, 1966)	100 of an original sample of 293	Not stated	Not stated	Interview and self administered questionnaire. Interviews conducted by researchers.	At least 6 months after discharge	25% totally abstinent. 42% abstinent at least [illegible] time, 32% no change. 33% no work, 15% worked the entire period. 1/2 reported increased earnings. 1/3 reported decreased time in institutions. See text for other data.
Belmont, (Deering & Holmes, 1966)	182	Mean 5.7* months Mean for those with 2 admissions 13.15 mos.	45% sober & working 20% drinking. 21% AWOL 16% other	Pooling of information from the grapevine.	Not stated	15% sober & working 22% improved 36% relapsed 27% not known

*In view of the figures from other houses, this figure seems unlikely and it is possible that the time period refers to weeks and not months as stated in the Belmont Report.

CHARACTERISTICS ASSOCIATED WITH IMPROVEMENT

Unfortunately, characteristics associated with various outcomes have not been systematically investigated. Several studies do not consider this question while others only consider length of stay in association with improvement. Orford, Hawker & Nicholls (1975) paid special attention to predictors of modes of discharge from a halfway house and found premature discharge was significantly more common among younger men with little previous social stability who reported stealing to get drink, involvements in fights after drinking, and convictions for offenses other than drunkenness.

In general, available data suggest that, as individual characteristics are related to improvement, those who have been "socially advantaged" tend to do somewhat better than those who have achieved very little. That is, those who have achieved some interpersonal stability as indicated by marriage and those who have had more education and better jobs tend to do slightly better. Such results are in tune with those of follow-up studies of other populations of alcoholics (Gillies, 1972) and with results of other treatments of skid row populations (Wattenberg & Moir, 1954).

CONCLUSIONS

In general, the studies reviewed do not furnish substantial empirical support for the assumption that halfway houses are effective in the rehabilitation of the skid row inebriate. Such a lack of support for the promise of halfway houses is due as much to the shortcomings of present studies as to the results which they present. Similar shortcomings have been identified in studies of halfway houses for drug addicts (Smart, 1974).

The main drawbacks of the present studies are as follows:

(a) Lack of clarity as to the selection of clients for houses. Not all reports stated referral sources, admission procedures, or admission criteria, nor do reports always suggest how those admitted to houses compare with those who apply for admission yet are refused entry.

(b) Paucity of information as to the characteristics of clients. This is a serious problem in some cases although other reports give a good account of client characteristics. In no case, however, is there any indication of the motivations or ambitions of halfway house residents, nor are resident evaluations of the halfway house experience considered.

(c) Lack of information on length of stay and modes of discharge. Only two reports give information relevant to both of these issues.

(d) Serious data loss at follow-up. Sampling biases usually in favor of successful clients. Lack of clarity as to follow-up procedures and follow-up periods. Little evidence as to the validity of reports of the follow-up status of former residents.

(e) No serious comparison or control studies showing that halfway houses are better than other forms of treatment (e.g., outpatient care, A.A.) or nothing at all.

It is clear, then, that we cannot draw any firm conclusions as to the role of halfway houses for alcoholics until there has been a substantial upgrading of research efforts. Within the limits of these methodological shortcomings, the results of halfway house research does not give rise to great optimism that halfway houses are fulfilling their rehabilitative promise. Available data show that only a minority of clients complete the course and leave with approval, and the limited data on length of stay shows this to average under 3 months (Belmont excepted) which seems very short in view of the many years of heavy drinking and social isolation of the skid row population.

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formed. At that time, drink was widely appreciated as constituting a grave menace, and the necessity for urgent measures accepted by everyone. The measures taken at that time, combined with socio-economic improvements in subsequent years, helped to cut down the British drink problem to size—with the result, however that for several decades, the State, the medical profession, and the general public alike, became completely oblivious to the presence of a drink problem. Unfortunately, however, at the present time the problems of alcohol misuse, including alcoholism, once more constitute a grave and ever-increasing menace. Among the few organisations interested and active throughout these 60 years, the Temperance Council of the Christian Churches has always played a leading role. The recognition of the importance of its work was reflected by the attendance at the Jubilee celebrations of the Lord Archbishop of Canterbury and the Cardinal Archbishop of Westminster,* both of whom addressed the Meeting, and by the attendance of leading representatives of such Organisations as the Medical Council on Alcoholism, and the National Council on Alcoholism.

Surely in the co-operation of all these Agencies more hope might lie for the reduction of the drink problem than in trying to set up modern tranquillizers as a competitor to alcohol.

*P.S: It was with profound regret that members of the audience who listened to Cardinal Heenan's address on that occasion, and we are sure all Members of this Society, learned of his death a fortnight later. Not only his speech on this occasion, but many of his activities in the past, indicated a great understanding and knowledge of the problem of alcoholism and a deep compassion for the plight of alcoholics.

NOTICE TO MEMBERS AND SUBSCRIBERS

For a long time the Council of the S.S.A. and the Publishers have tried hard to keep the Membership and Subscription fees for the Journal to an absolute minimum. It is, however, regretted that due to the greatly risen expenditure all round, such as the cost of paper, printing, postage, etc., the fees, unfortunately will now have to be increased. As from the 1st April 1976 the Membership fee (which of course includes the receipt of the Journal) will be £5 per annum, and the Subscription to the Journal alone will be £12 per annum. The Membership fee has been kept down to an absolute minimum, but with rising inflationary costs, the Council regrets that this fee may have to be increased again in the future.

We apologise for the fact that this issue is of fewer pages than normal. This is due to the necessity to ensure a balanced volume following the increase in pages over the last two issues.

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Drinking and Problems from Drinking after a Reduction in the Minimum Drinking Age*

Reginald G. Smart and Wolfgang Schmidt

Surprisingly little information exists on how changes in minimal age laws affect drinking and drug use by young people. It has often been argued that the age for buying and consuming alcohol beverages be 18 years, not 21 and that drinking with parental consent be allowed for those less than 18 (e.g. Wilkinson, 1970). As Wilkinson pointed out, many underage young people drink frequently and much of their drinking is done in teenage parties free of adult supervision. Changing the law may not only legalize the drinking status quo but bring it more under the watchful eyes of parents. On the other hand underage people usually do not drink as much or as often as do adults and legalizing drinking for 18 year olds (where formerly it was 21 years) may just decrease the age at which young people drink or begin to have problems with alcohol. The present paper reports several studies of the effects of a new age law on the extent and types of drinking.

There appears to be no study showing the effects of lowering the legal drinking age on drinking or problems from drinking. Further, there is no information on what changes in patterns or location of drinking might be created by a change in law. Wilkinson (1970) suggested that young persons should learn to drink when they are young (18 or less) so that they could learn in family situations which would presumably create prescriptions for careful drinking and proscriptions against very heavy use. It would be of interest to know whether a decrease in legal drinking age tends to increase young people's drinking in families or in the less supervised situations of bars and pubs.

A further desirable change might be that legal drinking for 18 year olds increases the use of illicit drugs such as marihuana and LSD. It has often been argued that marihuana is more accessible than alcohol to underage drinkers and a change in law may reverse this situation. This paper reports an effort to study how lowering the drinking age relates to drinking and marihuana use. It is notoriously difficult to study a new law and to unambiguously attribute changes to the law and not to other concomitant social or legal changes. Even with before and after studies and control data obtained from other areas ambiguities in interpretation can still arise.

In Ontario, laws relating to the purchase and consumption of alcohol were changed in July of 1971 from a 21 year to an 18 year minimum. This paper reports data from four studies in Ontario:

(i) consumption data (monthly shipments of alcoholic beverages to stores and licenced establishments) for 1970 and 1971 were analyzed for changes;

(ii) vice-principals of high schools in the Toronto area were asked to report their attitudes toward the new law and to indicate whether they observed any

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increase or decrease in drinking or drinking problems among students. This study was done in February, 1972, about seven months after the law was changed;

(iii) a comparison was made of reported alcohol use among high school students in Toronto in 1970 and 1972. These data were collected as part of a survey of alcohol and drug use in 1970 and repeated in 1972 in the same school districts;

(iv) college and university students were asked to report their attitudes toward the new law, any changes in their purchasing to consuming alcoholic beverages and in the locations of their drinking. Students were also asked if there were changes in their use of marihuana. This study, too, was done seven months after the law was changed.

Studies (i), (ii) and (iii) are concerned primarily with young persons who would be around the age of 18 whereas study (iv) includes only students 18 to 21 years of age.

1. Consumption Data (Shipments of Alcohol Beverages)

Method and Results

Data were collected from the Ontario Liquor Control Board for alcohol, i.e. the monthly proportions of shipments for the years 1970 and 1971. These data are shown in Table 1. Although the 1971 percentages for the post-change period—August-December—are generally somewhat higher than the percentages of the preceding year, the differences are relatively small and inconsistent.

Table 1. *Shipments of Alcoholic Beverages to On and Off-Premise Outlets, by Month Ontario 1970 and 1971*

	Per Cent of Annual Shipments											
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	4·8	6·2	7·2	4·3	8·1	8·9	9·6	8·8	8·0	9·1	11·8	10·3
1971	4·7	6·0	7·2	7·9	7·4	9·0	9·1	8·9	8·2	8·8	12·4	10·5

As the data represent shipments to stores they are therefore not necessarily an accurate reflection of retail sales. To minimize the possible error introduced by changes in the retailers' stock, the monthly periods were combined in subsequent tabulations into (a) January to July (period 1) and (b) August to December (period 2). Furthermore, an expectancy was calculated to provide an estimate of the magnitude of change in these proportions that would have occurred if the sales to 18 to 21 year olds had equalled the sales to those over 21. The formula used to arrive at this expectancy is:

$$x_2 = \left(x_1 + \frac{8{\cdot}1 \times_1}{100}\right) \cdot \left(\frac{1}{100 + \frac{8{\cdot}1 \times_1}{100}}\right) 100$$

where x_2 = the expected proportion in period 2, 1971,
x_1 = the observed proportion in period 2, 1970,
and 8·1 per cent constitutes the addition to the population as a result of lowering the drinking age.

Table 2. *Period 1 and 2 Shipments of Alcoholic Beverages in Per Cent, 1970 and 1971*

	fo 1970	fo 1971	fe 1971
Period 1	52·1 per cent	51·2 per cent	50·2 per cent
Period 2	47·9 per cent	48·8 per cent	49·8 per cent

The calculation of f_e is based on the assumption that, in the absence of change in the legal drinking age, the period 1 and 2 proportions in 1970 would also have applied to 1971.* These data are given in Table 2. The increase in the 1971, period 2 proportion over the 1970, period 2 proportion is only about one half the expectancy but is distinctly higher than the fluctuation in such proportions in other periods (see footnote *). It seems possible, therefore, that this increase reflects the expenditure of 18 to 21 year olds subsequent to the lowering of the drinking age. However, additional evidence in support of the assumption of constancy in these proportions would be required before a more definite conclusion can be drawn. In Table 3, the data are further broken down into off and on-premise shipments. The increase in the period 2 proportions in 1971 exceeds the expectancies in the case of on-premise sales and is considerably lower than the expectancies for off-premise sales. This is of interest since the trend in the proportions of on-off premise-sales over the preceding years—including 1970 and 1971 is in the opposite direction, namely the proportion of on-premise consumption decreased while off-premise sales increased. This apparent reversal after July, 1971, is probably attributed to the lowering of the drinking age. If it is assumed that the whole increase in these proportions is attributable to this age group, it can be estimated that 18 to 21 year olds spent, on the average, 42 per cent more for on-premise consumption than persons over 21. The shipments were also tabulated separately for on and off-premise and for types of beverage. The period 2 proportions in 1971 for on-premise sales exceed expectations for all three types of beverage alcohol, while the off-premise proportions in 1971 are much lower than the expectancies in the case of beer and somewhat lower in the case of wine and spirits.

Table 3. *Shipments of Alcoholic Beverages to On and Off-Premise Outlets Ontario 1970 and 1971*

	On-Premise			Off-Premise		
	1970	1971	fe1971	1970	1971	fe1971
Period 1	57·0	54·3	55·1	51·2	50·7	49·3
Period 2	43·0	45·7	44·9	28·8	29·3	50·7

*Such data as are available provide some support for this assumption. For example, the pre-change periods—January to March and April to July, 1970 and 1971—were very similar:

	1970	1971
January–March	34·86	34·93
April—July	65·14	65·07

2. Vice-Principals' Study

Method

All high school and junior school vice-principals in Metropolitan Toronto and an adjacent county were sent a short questionnaire, concerned with:

(i) their attitude toward the new law;
(ii) changes which they believed occurred in drinking of their students;
(iii) changes in "problem behaviour" involving drinking, e.g. social events, absenteeism and disciplinary problems related to drinking.

In all, 214 questionnaires were mailed and 183 were returned for a response rate of 86 per cent.* Thirteen were excluded because they were incomplete, or the respondent indicated that his school did not include any students of legal drinking age.

Results

Attitudes Toward New Law

The vice-principals were asked to indicate how they, personally, felt about lowering the drinking age, on a 5 point scale (highly favourable to highly unfavourable). Slightly more of the respondents reported unfavourable than favourable attitudes toward the change in the law. While a total of 41 per cent were favourably disposed and 47 per cent unfavourably disposed toward the change, almost three times as many respondents reported *highly* unfavourable as reported a *highly* favourable one. Twelve per cent indicated they were neutral.

It is important to note that *the attitudes of the vice-principals toward lowering the drinking age were closely related to how they answered the other questions.* Those who are highly favourable toward the change tend to report little negative change in student behaviour. The reverse is true for those with a highly unfavourable attitude. It is impossible to determine whether the vice-principals' attitudes toward the law have affected their perceptions of student behaviour, or whether actual student behaviour has produced the attitudes toward the change.

Changes in Drinking

The vice-principals were asked whether they thought the new law had made any difference in "how young people drink". Two thirds felt that young people drank more, 28 per cent claimed no change, and 4 per cent did not reply. None of the vice-principals believed that young people drink less than before the law was changed. While there is consensus that the amount of drinking has not decreased, there is little consensus as to whether it has increased. About 70 per cent of those who are highly favourable believe that no change has occurred in amounts drunk by young people. However, 93 per cent of those unfavourable to the new law claim that no change has occurred in the amount drunk by young people.

Only 1 per cent believe fewer drink, 29 per cent that no change has occurred, 64 per cent that more students drink, and 6 per cent did not answer the question. Those who favour the change in the law tend to report no change in the number drinking, while those who do not favour the law tend to report an increase.

*An additional 10 questionnaires were returned after the date set for the beginning of the analysis, giving a return of 90·1 per cent.

Perceived Changes in Student Behaviour

Twelve questions related to the impact of the new law on student behaviour and drinking-related problems. Respondents were asked to indicate "yes", "no", or "uncertain" to each question. Table 4 shows these results. Again, respondents favourably disposed toward the new law reported very different changes than those unfavourably disposed.

Table 4. *Changes in Student Behaviour Perceived by Vice-Principals*

Since the new law was passed, have you noticed any of the following:	RESPONSES: *Yes* per cent	*No* per cent	*Uncertain* per cent	*No Reply* per cent
1. More drinking of alcohol on school property	31	52	16	1
2. More drinking by students during lunch hours	40	40	19	1
3. More disciplinary problems involving drinking by students	34	60	6	0
4. More absenteeism which you suspect may be related to students drinking	22	60	17	1
5. Any more signs of hangovers among students	23	57	19	1
6. More discussion of drinking among students	43	29	26	2
7. More students arriving at school functions, e.g. dances, football games, etc. with alcohol on their breath	56	28	14	2
8. More drinking at school functions, e.g. dances, football games, etc.	58	30	10	2
9. More students appearing "high" at school dances, e.g. too high to drive a car safely	43	39	16	2
10. Less smoking of cigarettes	1	70	28	1
11. Less smoking of marihuana	11	37	51	1
12. Less use of drugs such as LSD, speed, etc.	19	26	52	3

Total number of respondents: 170

About 50 per cent of the vice-principals reported no increase in drinking on school property, one-third said there had been an increase and the remainder did not reply. The more favourable the respondents were to the new law, the more likely they were to report no increase and vice versa. Eighty per cent of those who are highly favourable to the new law reported no increase, compared to 31 per cent of those who are highly unfavourable.

Those who are favourable to the law report little drinking at noon, and few disciplinary problems, while those who are unfavourable to the new law do report problems. Overall, 40 per cent report more drinking at noon, 40 per cent report no increase, and 20 per cent are uncertain or don't reply. Thirty-four per cent reported more alcohol-related disciplinary problems, 60 per cent report no increase and 6 per cent are uncertain. The vice-principals were more willing to take a

position on this last question than any other. Only 6 per cent were uncertain and all 170 replied.

About one-fifth of the respondents reported more absenteeism which they suspect may be related to student drinking. Sixty per cent claimed no increase and 18 per cent were uncertain or did not reply. The ten persons who are most favourable to the new law were unanimous in reporting, no increase in absenteeism related to drinking. In contrast, 31 per cent of those who were highly unfavourable to the new law reported an increase, 45 per cent claimed no increase, and 24 per cent were uncertain.

The results concerning signs of hangovers among students were almost identical to those for absenteeism. Twenty-three per cent reported more signs of hangovers, 57 per cent reported no increase and 20 per cent were uncertain or did not reply.

While one-quarter of the vice-principals were uncertain as to whether there was more discussion of drinking among students, 43 per cent reported more and 29 per cent no increase. Two-thirds of those highly favourably disposed to the new law reported an increase in discussion, compared to only one-fifth of those highly unfavourable. People who differ strongly in their attitudes towards the new law disagree on an issue as apparently "value free" as whether students are talking about something or not.

Three related questions were asked regarding changes in student drinking at high school functions. The questions asking whether more students have arrived at school functions such as dances, football games, etc., with alcohol on their breath, and that dealing with drinking at school functions were answered almost identically. Over 50 per cent of the respondents believe that more students now drink before and during school functions. Between one-quarter and one-third report no increase in the number of students arriving at school functions with alcohol on their breath or drinking at school functions. Approximately the same proportion of respondents report that more students appear "high" at school dances as report no change. Forty-three per cent noticed more "high" students, 39 per cent did not notice more and 18 per cent were undecided or did not reply. "High" was defined in the questionnaire as "too high to drive a car safely".

For all three questions on alcohol use in relation to school social functions, those favourably disposed to the new law reported considerably less drinking than those who are unfavourably disposed. The differences are consistent except for the 20 respondents who claim to be neutral toward the new law. They tend, if they do make a choice, to report relatively low levels of change in student behaviour. The rate of uncertainty and no reply tended to be higher among the neutrals than the others.

Three questions were asked about drug use, to determine whether vice-principals saw less smoking of cigarettes, marihuana, and less frequent use of drugs such as LSD, speed, etc. A high proportion of the vice-principals (28 per cent for cigarettes, 51 per cent for marihuana, and 52 per cent for other drugs) reported they are uncertain about any change.

Half of the respondents were unable or unwilling to make a judgement on changes in the use of tobacco and illicit drugs. Only 1 per cent reported less cigarette smoking, 11 per cent less marihuana smoking, and 19 per cent less use of LSD, speed,

etc. There is an unusual degree of consensus among all the respondents that drug use has not decreased.

In summary, more vice-principals agree than disagree that there are more students discussing alcohol, arriving at school functions after drinking and appearing "high" at school functions. For drinking during lunch hours the proportion agreeing and disagreeing are about equal and for all other behaviours those who disagree outnumber those who agree.

3. Study of University and Community College Students

A total of 448 first year students between the ages of 17 and 21 years completed a questionnaire during February, 1972. First year students were selected because they were most often between 18 and 21 years of age. Students at a variety of community colleges (60 per cent) and at a university in Toronto (40 per cent) participated in the study. Intact classes were used and no student refused to complete a questionnaire. The questionnaire asked students to indicate

(i) the quantity and frequency of their drinking;

(ii) how their consumption and purchase of alcoholic beverages changed since the new law;

(iii) how the location of their alcohol consumption changed since the new law, i.e. bars, taverns, with parents and family, etc.

Results

Changes in Drinking

When asked how much they usually drink on each occasion from the time they start until they stop, almost half reported 2 drinks or less, 31 per cent 3 or 4 drinks, 11 per cent 5 or 6 drinks and 8 per cent 7 or more drinks. For purposes of this study a bottle of beer, a glass of wine and a shot (1½ oz.) of whiskey were considered equivalent. Males reported considerably higher consumption levels than the females. While 73 per cent of the females usually consume 3 drinks or less per session, only 47 per cent of the males consume this amount. About 23 per cent of the males report having 6 or more drinks per session compared to 7 per cent of the females. Five per cent claim to be abstainers.

When asked whether the new law has made a difference in how often they drink, the majority (57 per cent), claim they drank the same before and after the new law. Exactly the same percentage of males and females made this reply. The females were twice as likely as males, 10 per cent compared to 5 per cent, to report no change because they didn't drink before the new law and still don't afterward. Slightly more of the males than females, 25 per cent compared to 21 per cent, report an increase in drinking. More males also claim they have decreased since the new law, 7 per cent to 5 per cent for females, but the reverse is true of starting drinking. As age increases, so does (a) the percentage of students reporting no change in their drinking behaviour, and (b) the percentage reporting they use less now.

Regular drinkers appear to have increased their drinking more than casual drinkers. About 25 per cent of the regular drinkers, those drinking 4 or more times

a week, and 32 per cent of those who drink once or twice a week, now drink oftener than before the change. Only 5 per cent of those who drink only once a month or less frequently report they now drink oftener.

The students claim that the new laws have had very little effect on the amount they usually drink on each occasion. Slightly more students (6 per cent) claimed that they now drink less on each occasion than reported drinking more (5 per cent). Eighty-nine per cent report no change.

Drinking at Bars, Taverns and Pubs

Three related questions were asked about visits to bars, taverns and pubs. The students were asked how often they visited them before the new law, how often they visit them now and whether the new law made any difference. The last question was asked first. About 55 per cent of students report that they now attend bars, taverns and pubs more frequently than before the laws were changed. Only 4 per cent attend less frequently and 41 per cent claim their attendance has not changed. It appears that 58 per cent of the men go out oftener and 6 per cent go out less often to bars and pubs. The comparable figures for women are 52 per cent and 3 per cent respectively. The increase in attendance at licensed outlets is strongly associated with age. Three quarters of the 18 year olds report an increase compared to only 29 per cent of the 21 year olds. The students who have increased their visits to bars, taverns and pubs the most are those who now drink from 1 to 4 times per week. No less than 70 per cent of these people increased their attendance at licensed outlets. Only about one quarter of the students who drink daily or less than once a month report an increase in visits to bars and pubs.

The students when asked how often they attended bars, tavens and pubs before and after the new law provided results entirely consistent with the previous question on change in attendance. The percentage of students who attend 3 or more times per week doubled from 3 per cent to 6 per cent; those going once or twice a week doubled from 12 per cent to 24 per cent; those going 2 or 3 times a month increased by half from 16 per cent to 24 per cent and the percentage never going to these establishments decreased from 29 per cent to 10 per cent.

Drinking with Parents

The students were asked whether there had been a change in how frequently they drink at home with their parents' consent and how often they drank at home before and after the new laws. The new laws appear to have had less impact on drinking at home than drinking at licensed outlets. While 54 per cent of the students reported an increase in attendance at bars, taverns and pubs, only 19 per cent report more frequent drinking with their parents. Slightly more females then males indicate an increase in drinking at home.

Frequency of drinking is related to changes in drinking at home with parental permission. Of the students who drink daily, only 7 per cent report an increase compared to 27 per cent of those who drink from 1 to 6 times per week, 18 per cent of those who drink 2 or 3 times per month, 10 per cent of those who drink once a month or less and 8 per cent of the abstainers. The only students reporting a reduction in drinking at home were those who drink once or twice a month, 1 per cent,

and those who drink 2 or 3 times a month, 3 per cent. While 19 per cent of the students reported an increase in the frequency of drinking at home with parental approval, the actual changes are relatively small. Before the new laws, 8 per cent were drinking at home 3 or more times a week, 13 per cent once or twice a week, 18 per cent 2 or 3 times per month, 43 per cent once a month or less and 17 per cent never. The comparable figures after the change are 9 per cent, 14 per cent, 20 per cent, 40 per cent and 14 per cent. There has been a slight increase in frequency of drinking at home and a slight decrease in the percentage never drinking at home.

The new law has led to more frequent purchases by 43 per cent of the male and 35 per cent of the female students. Three per cent of the males report fewer purchases and 2 per cent of the females gave this answer. While the students were not asked to indicate the frequency of purchases since the change in the laws, it can be readily concluded from the data that few females make frequent purchases from stores.

Age had a strong relation to purchasing alcohol from stores before the laws were changed. Approximately 40 per cent of the students under 21 years of age report they have increased frequency of purchases since the changes in the liquor laws. This compared to 25 per cent of those 21 years old. The percentage of students reporting that they never made purchases at stores before the new laws is directly related to age. Eighty-one per cent of those 18, 64 per cent of those 19, 61 per cent of those 20 and 45 per cent of those students 21 years of age previously never made purchases.

Effects of the New Laws

The students were asked whether the new laws changed how often they get too affected by drinking to drive safely. Half the respondents claim they never get too high from drinking to drive safely. One third claim no change, 4 per cent more often, 3 per cent less often, 6 per cent don't drive and 5 per cent did not reply. Almost equal numbers of males reported an increase as reported a decrease in the frequency with which they drink too much to drive safely. Seven per cent report more often and 6 per cent less often. The increase is much higher than for the females, 2 per cent of whom report an increase.

The new laws may have had a limited impact on the smoking of marihuana. Nine per cent of the students report they smoke less than before the drinking age was lowered, 34 per cent smoke with the same frequency, 1 per cent have increased, 1 per cent have started in the past 9 months and 54 per cent have remained non-smokers.

4. High School Students in Toronto in 1970 and 1972

As part of a larger study of drug use among Toronto high school students, questions were asked about the frequency of alcohol use and in 1972 students were asked whether their drinking increased, decreased or stayed the same after the new law. The sample in 1970 included some 6,882 students in grades 7 to 13 and in 1972 some 6,627 students. The details of the sampling employed are described in the original report (Smart, Fejer, and White, 1970). Briefly, the sample included one fifth of the high school districts in Metropolitan Toronto. From each district 120

students were selected at random from each of grades 7, 9, 11 and 13. The same sampling system was used in 1970 and 1972 in that the same school and grades were used. However, the same students were not used, i.e. this is a cross sectional study at two points in time not a longitudinal one.

Results

The frequency of use of alcohol in 1970 and 1972 is shown in Table 5 for students in grades 7, 9, 11 and 13. It can be seen that the proportion of users is somewhat greater in 1972 then in 1970 ($x^2 = 375{\cdot}89$, $p < 0{\cdot}001$). The largest increases are in the most frequent use categories, i.e., 3 or more times per month. The less frequent use categories have decreased or increased only slightly.

Table 5. *Frequency of Alcohol Use by Students in Grades 7, 9, 11 and 13 in Toronto High Schools in 1970 and 1972*

	1970		1972	
	per cent	f	per cent	f
None	39·8	2,742	29·4	1,949
Once per month	28·7	1,977	24·5	1,622
Twice per month	11·8	813	13·1	872
Three times per month	6·9	475	9·7	640
Four or more times per month	12·7	875	23·3	1,544
Totals		6,882		6,627

$x^2 = 375{\cdot}89$, $p < 0{\cdot}001$, 4d.f.

When students were asked about changes in drinking since the new law the results were as follows: 40·5 per cent no change; 26·7 per cent no drinking; 20·1 per cent more drinking; 3·7 per cent less drinking; and 9·0 per cent who started after the new law. There was a close association between changes in drinking and frequency of consumption with the most frequent drinkers more often reporting increases in drinking and less often reporting decreases in drinking ($x^2 = 643{\cdot}6$, $p < 0{\cdot}001$). This question was only given to students in grades 9, 11 and 13; grade 7 students did not answer it.

Discussion

Both official and self report data indicates that reducing the minimum age law increases the frequency of drinking for students under 21 years of age although there may be compensatory changes in related behaviours.

Average expenditures of 18 to 21 year olds for on-promise consumption exceed the expenditures of those over 21 in the case of beer, wine and spirits. The changes in off-premise proportions are comparatively small. On the basis of the data available, it is not possible to attribute the latter changes to the young drinkers. But the more substantial changes in on-premise expenditures are probably the result of lowering the drinking age. These estimates represent consumption in addition to the level of alcohol use that prevailed prior to the lowering of the legal drinking age. According to an Ontario survey of 1968, 68 per cent in this age group used alcoholic beverages and their reported average consumption was slightly less than one half

of the average for Ontario drinkers as a whole. Our estimates of the sales to 18 to 21 year olds subsequent to the change in drinking age indicate that this earlier consumption level increased considerably after the new age laws was introduced. Apparently, lowering the drinking age not only legalized the status quo, but it also resulted in a considerable increase in consumption among those affected.

Similar percentages of both high school (20·1 per cent) and post high school students (22 per cent) report increases in drinking frequency, even though most high school students are below the age of 18. The largest increases would appear to be among the heavier users and among males. There is no reported increase in the amounts usually drunk on each occasion nor in numbers of "high" drinking occasions, with small nearly equal, proportions indicating increases and decreases. More than half of post secondary students attend bars and taverns more frequently, and such increases are most common among frequent drinkers and 18 year olds as opposed to 21 year olds. Drinking at home with parents also increased but for far fewer students (only 19 per cent). Purchases from package stores also increased but less than purchases in bars and taverns. There are signs of a limited impact on marihuana smoking with 9 per cent of students reporting a decrease in frequency of smoking and only 1 per cent an increase.

Observations of principals indicate that more agree than disagree that there are more students discussing alcohol, arriving at school functions after drinking; and appearing "high" at school functions. For drinking during lunch hours the proportions are about equal and for all other behaviours those who disagree outnumber those who agree. A minority of vice-principals find disciplinary problems, absenteeism, hangovers due to drinking, and drinking on school property to have increased. A minority also reported less frequent use of marihuana and other drugs although most were uncertain about these effects.

Clear interpretations of behavioural data related to legal changes are never easily made. Most of the data for this study were gathered retrospectively and the vice-principals reports could be more coloured by their attitudes toward the law than by their reliable observations. Control studies of students of the same age but not experiencing a legal change should probably be made. However, this would not erase all possibility of mis-interpretation either. The age groups studied here are probably modifying their drinking and drug use behaviour partly as a function of merely growing older. They are subject to a variety of influences other than merely legal ones and changes such as found for marihuana use may reflect far more basic social changes than those in the availability of alcohol. It should be noted, too, that the data collected relate to the period of time directly after the change of law. Any harm or benefit seen here could be a short term effect which would not be found some years afterward. In general, the results should be seen as difficult to interpret and the conclusions as tentative.

Suppose for a moment, that all problems related to interpretation are set aside and the data are accepted as indicating changes related to the change in law. What the data indicate is that some harmful and some beneficial effects are likely and that classification of that change as a "harm" or "benefit" may be difficult. Deciding whether the legal drinking age should be 18 or 21 depends on a variety of considerations. On the negative side it is clear that substantial numbers of students purchase and consume alcoholic beverages more often specially in on-premise drinking

situations. The increases appear in those technically not given the drinking franchise. Some younger high school students are probably mis-using alcohol, appearing more frequently at school functions after drinking and after being high. Absenteeism and disciplinary problems related to alcohol are probably more frequent in some areas than others. The new law has probably encouraged some young people to drink at earlier ages and to have problems with alcohol as well.

On the positive side there is no reported increase in the amount drunk on any occasion. The increase in attendances at bars and taverns may mean that drinking is more public and hence under greater legal and social control. There is also some increase in drinking with parents and writers such as Wilkinson (1970) would see an opportunity in this for establishment of family controls. There would appear to be a small reduction in marihuana use and many would see this as an overwhelming benefit. However, merely turning young people from pot to drink may have more long-term difficulties than benefits considering the physical sequelae of heavy drinking and the lack of established serious sequelae for marihuana (see LeDain, 1972, for a review).

It would be of interest to extend this study for a longer period and to investigate changes in impaired driving convictions and accidents. Some studies of the effects of the lowered drinking age are underway for accident involvement.

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Urinary D-glucaric Acid Excretion and Serum Gamma-glutamyl Transpeptidase Activity in Alcoholism

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Summary

1. *Urinary D-glucaric acid and serum gamma-glutamyl transpeptidase activity (G.G.T.P.) have been measured in alcoholics before commencement of alcohol withdrawal. Over half the patients were found to have increased excretion of glucaric acid in the absence of evidence of the use of known inducing agents other than alcohol.*
2. *Seventy-five per cent of the patients had raised levels of serum G.G.T.P., but no significant correlation was found between this enzyme and the glucaric acid excretion.*

Introduction

It is now well established that levels of serum gamma-glutamyl transpeptidase (EC 2.3.2.2.) are elevated, often to a considerable degree, in the majority of patients with alcoholism and in other heavy drinkers (Rosalki, Rau, Lehmann and Prentice, 1970; Rollason, Pincherle and Robinson, 1972). This serum enzyme is derived from the liver where it is located on the endoplasmic reticulum. Drugs which are known to be powerful inducers of microsomal enzymes such as barbiturates, increase serum gamma-glutamyl transpeptidase activity when taken habitually by man (Rosalki, Tarlow and Rau, 1971). Likewise, alcohol as well as these other drugs, has been shown to induce this and other enzymes in rats' liver (Ideo, de Franchis, Del Ninno and Dioguardi, 1971). Rises in serum G.G.T.P. are found in alcoholism even when the taking of such drugs has been excluded, and may represent induction by alcohol (Spencer-Peet, Wood and Glatt, 1972).

Induction of the microsomal enzyme systems in liver by barbiturates and similar drugs, is followed by the increased excretion of D-glucaric acid in the urine. Measurement of this substance has been used as an indicator of microsomal enzyme induction in man (Hunter, Carrella, Maxwell, Stewart and Williams, 1971).

We have investigated the excretion of D-glucaric acid in alcoholic patients and attempted to correlate the results with the levels of serum G.G.T.P., as part of a study of the cause and significance of the elevation of this enzyme in these patients.

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The Prevention of Drinking Problems

Joseph R. Gusfield

The progress of medical science has been one of the glories of the modern world. Discovery of the bacterial basis of many diseases has made it possible to use sanitation, vaccines, and antisepsis in the prevention of epidemics. Through medical knowledge, sicknesses that in the past laid waste to large segments of the population have been brought under control. The problems of diphtheria, typhoid, smallpox, malaria, and poliomyelitis have been "solved" as their epidemic outbreak has been prevented. Problems associated with human behavior and not readily perceived as chiefly biological in origin have proven less amenable to resolution. Despite much research, much organized effort, the expenditure of large sums of money, and even much political agitation, problems of poverty, crime, mental abnormality, suicide, family conflict, drug addiction, and harm-causing drinking are far from disappearing. This volume is testimony to the attention that modern industrialized societies have given to the troublesome aspects of alcohol use in a variety of life areas. Work, family, crime, automobile driving, and health are just a few of the arenas in which some users of alcohol find that "excess" has produced painful consequences for the self, the family, the operation of major institutions.

The history of progress in health has had a profound effect on many fields where solutions to human ills are sought through the application of knowledge. In the applications of medical science to health problems, prevention can be distinguished from treatment. Even though we possess effective "cures" for diphtheria and smallpox, treatment is an unwieldy, cruel, and costly way of dealing with the problems of those diseases. Preventive medicine engages in activities that forestall or reduce the occurrence of the events that constitute the problem or illness or, if not forestalled, reduce their intensity. The inoculation

of dogs with antirabies serum is a preventive for the occurrence of rabies in both dogs and humans.

It is, of course, always possible to respond to any problem solely through treatment, even when prevention might be possible. Expensive methods of preventing the common cold or the ordinary headache may not be as practical as equally expensive methods of preventing cancer or suicide. In these cases, the severity of the "illness" must be weighed against the costs of its prevention.

The argument for attempts to prevent problem drinking as an alternative or in addition to treatment rests on the following three propositions, the data for which are spelled out in the essays in this volume: 1. treatment for the various problems of alcohol misuse is expensive and not consistently effective; 2. the suffering and economic loss to both person and society are themselves painful and expensive (and their occurrence and recurrence thus need to be avoided); 3. under present conditions, treatment is available or acceptable to only a small percentage of those whose alcohol misuse creates pain for themselves or others. To increase treatment facilities to cover this target population would be immensely expensive, if at all possible.

In this chapter I will examine a variety of past and present attempts, largely but not exclusively in the United States, to prevent the occurrence of problems associated with drinking. It is my thesis that these have involved a common mode of conceptualizing the relation between drinking and drinking problems which has unwisely curtailed the development of new approaches and restricted the reemergence of useful past approaches. Methods of prevention used in the field of public alcohol policy have depended chiefly upon the character of the problem as it has been perceived by those devising the policies. The perception of the problem, I maintain, has been closely related to the prevention solutions suggested. The distinction between problem and solution has been blurred.

This chapter presumes an audience interested in public, not private, policies. The issues are not posed to influence individual action but to affect public agencies and institutions. The chapter presupposes that it is public policy, as enunciated in laws, institutional actions, educational campaigns, etc., that is being analyzed, although such public actions *may* have individual policy as their objectives.

THE CHARACTER OF DRINKING PROBLEMS AND SOLUTIONS

Human problems, including medical ones, do not spring full blown into human consciousness. Even to recognize a situation as painful requires a system of categorizing and defining events. To perceive the event as requiring a solution and to search for that solution is not given by the event but is the product of a social and historical process. There is a long history, for example, to the events we today label "mental disorder." In that history much of what are now seen as

abnormalities that cry out for remediation went unnoticed as special actions requiring alleviation or were seen as unique behavior, often of a valued rather than devalued nature [33,35].

Phenomena become problematic when their continued existence and attributes are no longer taken for granted, but are selected for investigation, explanation and possible correction. Thus the change of seasons is not problematic; however people may think of it, the cycle of weather is not yet seen as capable of being changed by human control. Neither is the aging process, except in Faustian fantasies. Crime and juvenile delinquency are problematic in this society. Efforts are made to understand their occurrence and to eradicate or limit their frequency [3;18, pp. 8-9].

At least two aspects of problem formation follow from this reasoning. First, problems involve both a cognitive and a moral judgment. The moral judgment is entailed in the conclusion that this phenomenon is painful, that it should be eradicated. Medical conceptions of illness also contain this moral element [14]. Many would certainly view the aging process as unwelcome as many have for long viewed the position of black people in the American social structure as painful, from a moral concern with human equality. But problems are also cognitive; they involve a belief that the situation need not be, that it is capable of alteration toward a less painful or better state. Many do not believe this about the aging process today and it is only very recently that it has become an active subject of biological research.

A second aspect of this perspective toward problem formation is that what is problematic to A need not be so to B. The aphorism, "One man's moral turpitude is another man's innocent pleasure," sums up the implications of a pluralistic society. The difference may be moral or cognitive or both. Many social issues involve just such disagreements about whether or not a given state of affairs should be altered. Racial disputes, pornography, sexual equality are but three examples where moral diversities are at work. While cognitive disagreements are less productive of social conflict, they are also at work and the shifts in the agenda of issues from one historical period to another testify that one generation may define as problematic situations that another has ignored. Poverty, for example, has a history of diverse attitudes across generations and historical periods ranging from positive acceptance, through resignation, to positive rejection [27].

An analysis of drinking problems must then include the stance from which the situation is seen as problematic, both in moral and cognitive terms. It must include the standers from whose perspective this is a problem. It should also include those from whose perspective the situation is not a problem.

The cognitive element, however, contains a further feature in the development of the reality of the problem. What, exactly, constitutes the problem? Here we are in the realm of conceptualization, which bears heavily on the issues of prevention because it deeply affects the character of proposed solutions. For

example, let us consider the implications of heavy drinking for pedestrian behavior on icy sidewalks. I believe that, other variables being the same, someone who has been drinking to the edge of sobriety is less able to navigate an icy sidewalk than someone who has not been drinking. If I am interested, for humanitarian or economic reasons, in preventing injury to the drinker from icy sidewalks, am I involved in the prevention of drinking problems? The reader will immediately recognize that there are many ways of conceiving of this situation which lead to many possible solutions. Deicing sidewalks by an effective friction-producing substance is one solution. The wearing of specially constructed shoes is another. Staying inside is still another. Moving to Florida is still another. Staying sober is yet another. The designation of injury as a result of drinking is not contained in the situation but is a designation by the observer from among a number of possible interpretations of the problem.[1]

The designation of problems as drinking problems is therefore both a theory of causation and a strategy of attack on them. For example, when absenteeism in industry caused by alcohol use is designated as a drinking problem, the process may lead to a strategy aimed at diminishing drinking among employees as the way to reduce and prevent absenteeism.

It is a major thesis of this chapter that the way in which drinking problems have been conceptualized in the United States has unprofitably limited the range of potential prevention policies. The relationship has also operated in reverse: experience with prevention policies has unduly limited the range of conceptualization of drinking problems. The legacy of past policies and concepts has led to a narrowed focus on the amount of alcohol consumed as the major target of public action and on changing the individual's decision to consume as the major mechanism for preventing problems of alcohol use.

This thesis will be elaborated through the remainder of this chapter as we examine the diverse forms of prevention attempted in the United States and elsewhere.

THE OWNERSHIP OF DRINKING PROBLEMS

For much of the nineteenth and part of the twentieth centuries, the Protestant churches were the major source of agitation and activity in the definition, conceptualization, and development of public strategies toward alcohol use in the United States [15]. As such, they defined the legitimate cognitive and moral approach to alcohol problems, concentrating on the consumption of alcohol as the central problem. The churches played a central role in putting issues of drinking high on the political and public agenda, in publishing persuasional

1. In reading an earlier draft of this paper, Mark Keller pointed out a similar example used by a Greek orator at the funeral of Polyxenos, who had fallen off a cliff while coming home from a country feast. The orator did not know whether to blame the wine or Bacchus or the rains of Jupiter, but he warned topers to beware of slippery paths.

materials, and in developing their personnel as authoritative persons qualified to examine cognitive aspects of drinking. In becoming the legitimate source of public policies toward alcohol use, the churches came to "own" problems of drinking. Other possible sources of ownership were absent or weak. The medical profession was poorly organized in America and unequipped to present an alternative conceptualization until well into the twentieth century. The same was true of the universities, which were less autonomous from religious auspices than has been true in recent decades. Government was less the initiator than the recipient of alcohol policies. In general, the alcohol industry, both beer and spirits, "disowned" the issue, seeking neither to develop strategies toward drinking problems nor to counteract those developed by the churches.

Much of the persuasional literature of the temperance movement (and later the prohibitionists) recites many of the same "problems" detailed in this volume—the relation of alcohol to crime, ill-health, immorality, and low productivity. Implicitly, and often explicitly, however, the theme was sounded that drinking is itself immoral, that it leads to excessive drinking, and that the only effective strategy is one that decreases the total amount of national consumption.

This strategy—the diminution of consumption—was congenial both as a cognitive judgment and a moral one. As a cognitive judgment it focused attention on laws to limit the sale of alcohol, on efforts to persuade users to discontinue use, and on the public appearance of abstinence. To conceive of solutions to alcohol problems that still permitted drinking would be contradicted by cognitive theories and moral disapprobation. While distinctions were drawn between the "alcoholic" and the "normal" drinker, in practice they were both targets of policy. Since drinking per se was a suspect activity and normal drinking led to excessive drinking, the curtailment of consumption was the heart of policy.

With repeal of the Eighteenth Amendment, the churches receded as the legitimate authority in the area of alcohol problems, and with them prevention receded as a strategy. Both within the churches and in relation to the secular world, religion was no longer of major influence in defining any drinking as a moral failing. The postrepeal period, until the midsixties, has been one of low national and political salience for issues of alcohol and problems of drinking. With the development of the Yale Center of Alcohol Studies (now the Rutgers Center) and the gradual development of medical interest in the field, ownership shifted toward the universities, the medical profession, and the growth of a secular occupational group responsible for treatment of alcoholics. All of these activities and their knowledge base led in the direction of treatment for those who defined themselves, or were defined by others, as people in trouble through excessive drinking. Alcoholics Anonymous and the role of the "recovered alcoholic" in the proliferating voluntary organizations devoted to alcoholism added still another group whose interests came from experience and expertise in treatment.

The most recent period in alcohol policy (1933-1968) has seen a strong reaction against the religious and moral conceptions of drinking problems of the temperance movement and Prohibition. The slogan "Alcoholism is a disease," has been a self-conscious attempt to shift the moral character of the drinker toward public acceptance and of the excessive drinker toward that of a sick person. As we shall see, this orientation has had two consequences. First, by attending chiefly to treatment it has eschewed preventive policies. Second, insofar as prevention has been discussed or attempted, the cognitive concern for diminution of drinking has continued as the major strategy in preventing alcohol problems.

Situational and Individualistic Policies

An understanding of past prevention policies in the United States must recognize the primacy given to the act of drinking as the focus of preventive efforts. The temperance movement was concerned with decreasing intake, Prohibition with destroying it. Others have been concerned with preventing only excessive drinking. Some have been concerned with changing the methods, the substances, the settings, or the cultural meanings of alcohol. But the major thrust has been directed at the phenomena of the consumption of alcohol as the place toward which to direct prevention of problems arising from its use.

Within this common focus on drinking, I want to distinguish between two kinds of policies—the situational and the individualistic. Situational policies are directed at the conditions, structures, environmental availabilities, on physical facilities which surround the person. These policies do not attempt to change the drinker but to change the conditions under which he or she is able to drink or act as a consequence of drinking. The regulation of hours when bars and liquor stores may do business is one example of preventive measures that are situational in objective. Such laws make no effort to change the desire or demand for alcohol but only its availability. Individualistic policies attempt to affect or influence the action of the person toward drinking. Television advertising with the message, "If you drive, don't drink," is an example of such a policy. It is an effort to change the demand for alcohol or for driving by an appeal to the user to change his or her actions.

These diverse strategies, by no means inconsistent in their use, nevertheless operate on different assumptions about how change is effected, require different political climates, and raise moral issues of differing sorts. I will first describe the major policies that have been used in prevention of each type and then analyze these assumptions and climates.

Situational Policies. All modern industrial societies have some measures to inhibit and limit the sale of alcohol [39,42]. Among these are zoning regulations, fixed hours of sale, heavy excise taxes, state-owned monopolies of alcohol, advertising limits, price controls, and the direct prohibition of sale or possession

and use. Most of these measures attempt prevention of drinking problems by preventing or diminishing the availability, to potential users, of the substance seen as causing the problem.

Other situational policies, including some of those above, attempt to influence the drinking act in ways that will minimize, or mitigate, its presumed ill effects. These are less concerned with the amount of drinking than with the style of accompanying elements of the drinking act. For example, many states in the United States have laws requiring the availability of food in bars, under the assumption that eating slows the absorption of alcohol into the bloodstream and thus minimizes its ill effects. Other measures, sometimes used and sometimes suggested, are those that substitute beers or wines for distilled spirits, or systems of taxation and price control. Among measures also considered are diminishing the alcohol content of beverages and developing a pattern of sipping rather than gulping drinks. All of these policies attempt to control and decrease the amount or kind of drinking by measures that do not require the deliberate cooperation or assent of the drinker.

Less easily classifiable are strategies to change the cultural meanings of alcohol usage which will be discussed in greater detail below in connection with the influential recommendations of Rupert Wilkinson. Insofar as they attempt to change such aspects of drinking as the availability of alcohol, the settings for alcohol, the alcoholic strength of beverages, and the actions of socializing agencies (parents, teachers, doctors, mass media), they are situational. What distinguishes this strategy from the others described above is that these are not oriented to the diminution of drinking but to the development of new ways and settings for drinking. The objective is to disseminate and influence a conception of drinking that will make excessive use less acceptable for its present functions. One example of such situational policies is the proposal to change licensing so that a wide range of recreational facilities—such as bowling alleys, sports events, theaters, and resorts—will be permitted to serve all types of alcoholic beverages. The proposal is based on the effort to take alcohol out of a drinking only setting and, by placing it in familial contexts, in controlled contexts, and in a setting of normal leisure, to reduce or eliminate the concept of alcohol as a special, forbidden, and thus particularly appealing substance [42, Chs. 8 and 9].

Individualistic Policies. Individualistic policies attempt to prevent drinking or behavior connected with it from occurrence by persuading the person to change his individual drinking behavior or the behavior connected with it. Two very different types of effort have been the focus of the majority of such policies—law and education.

Laws against drunkenness, against driving while impaired by alcohol, against injuries to others while under the influence of alcohol, exist in almost all states [43, Ch. 7]. Following Andrenaes [2], we can distinguish two levels of deterrence as the object of such laws. Specific deterrence refers to the impact of

punishment on those who are arrested for violating such regulations. The preventive character of the law is presumed to deter repetition of the action. General deterrence refers to the impact of the law on the general public—those who are not arrested. Here the deterrent effect is in the expectation that fear of detection and punishment will prevent persons from committing acts that, if detected, would lead to arrest and punishment. They are dissuaded from excessive drinking and the punishable acts connected with it.

The impact of laws on drinking problems is more diffuse, in theory, than the situational policies. From the standpoint of the law, being drunk in public is illegal (though in many states no longer a crime), but being drunk in private is not. One can avoid arrest and punishment by changing his drinking habits or by not being seen in public. In any case, however, the law as a preventive measure is an effort to use the threat of punishment as a device to persuade the individual to change.

Information and Education. During the nineteenth century in the United States, the temperance movement succeeded in getting legislation passed in most states requiring that time be set aside in public schools for classroom teaching of the "evils of alcohol." The movement was also successful in influencing the content of textbooks and other materials used in the schools. Even after repeal of the Eighteenth Amendment, such mandated teaching has remained in the statutes, although the vigor of its enforcement is much weakened. Such education is only one instance of efforts made by various groups, of widely differing persuasions, to control the drinking of others by methods of persuasion. These run the gamut from advertising to instructional film to informational literature. The recent television campaign prepared by the Office of Alcohol Countermeasures of the National Highway Traffic Safety Administration carries the message that many auto fatalities involve drivers under the influence of alcohol, that many of these are people with drinking problems, and that the audience should try to prevent others from driving while under the influence of alcohol.

At one level or another, such appeals aim at providing information thought to be lacking and to change behavior by appealing to the individual decisionmaker who consumes the alcohol. The effects of alcohol abuse are pointed out and the appeal is to the rational concern of the hearer or viewer or reader with the painful consequences of excessive drinking.

Natural Consequences. It must be pointed out that a great deal of prevention occurs without definite public policy or as a consequence of policies unrelated to an objective concerned with drinking. Fear of loss of job, of death or injury in auto accidents, or of loss of respect apparently all operate to curtail drinking and excessive drinking though these may not be embodied in legal punishments, educational campaigns, or other efforts of persuasion. The existence and perception of these consequences are not stable elements. As the general public and dominant classes have become more tolerant of drinking, and even more humane toward problem drinkers, the natural consequences are themselves changing. In similar fashion, without policy or planning, the nation shifted during the latter half of the nineteenth century from hard liquor toward beer, and recently it seems to be shifting toward wine, in response to the impact of immigrants as well as prices. We must not overestimate the percent of the variance that planning and policy can or do influence. Much prevention and treatment occur without public or institutional intervention.[2]

Policy Assumptions. Because they require institutional changes, situational policies must proceed from a much stronger political base than individualistic ones. Even laws aimed at deterring individuals require less political strength because they are applied to individuals and thus possess much variance in police and courtroom enforcement. The period of Prohibition indicated the great difficulty in maintaining situational policies without a very clear political dominance of those who sought and supported the Eighteenth Amendment. As America became a more plural cultural and political society, it became increasingly difficult to enforce a policy affecting all drinkers.

Situational policies thus apply uniformly to the entire body of drinkers—both those for whom drinking creates problems and those for whom it does not. Prohibition attempted to restrict both the moderate drinker and the alcoholic. Such policies operate on the assumption that individual rationality and foresight are insufficiently dependable for those segments of the society for whom alcohol use has become problematic. Individualistic policies operate on the opposite assumption—that the use of alcohol can be clearly seen as dangerous or punitive by those who have problems with it and that such perceptions will change their behavior.

THE EFFICACY OF PREVENTIVE MEASURES

In this section I shall examine the historical outcomes of measures and suggested measures intended to curtail or influence drinking problems.

Policies Aimed at Levels of Consumption: The Political Variable

To the best of our knowledge, most policies directed at decreasing consumption of alcohol through legal strictures have been aggregate policies, falling like the sober rain from heaven upon the problem and problem-free drinker alike.

2. An important example of the operation of such private processes is presented by Cahalan and Room in their study of male problem drinkers. A high degree of problem drinking appeared in the reports of young men (aged 21 to 25) and of older nonproblem drinkers about their youthful drinking. There appears to be a process of "maturing out" of much problem drinking [6,9].

Although Scandinavian countries have done so, I don't know of any political unit in the United States that has attempted to restrict sale of alcohol only to persons who have had no evidence of any problem connected with alcohol. The question is therefore raised whether or not efforts to decrease the consumption of a nation will affect the occurrence of problems connected with alcohol. Will the heavier drinkers, the "addictive" drinkers, and others highly dependent on alcohol be equally or less affected by such measures[3] than other drinkers?

Evaluating the efficacy of various past measures to prevent the occurrence of drinking problems is a difficult and perhaps impossible task. Few evaluative studies have been conducted with the care and sophistication essential for drawing adequate conclusions. A major deficiency stems from the use of statistical indexes that measure reporting and institutional behavior rather than drinking behavior and the problems connected with it. This is especially the case where such indexes as public drunkenness arrests, drunken driver convictions, and institutionalized alcoholics are used as units by which to measure the amount of problem drinking. Such indexes vary greatly as functions of police policy, reporting procedures, legal definitions, and medical practice. They cannot be used as direct measures by which to evaluate policy results without a considerable amount of direct observation of the activities of the reporting agencies.[3]

Recent analyses in France and Canada have suggested that there is a constant relationship between gross national consumption of alcohol and the prevalence of alcoholism, evidenced by heavy drinking or deaths from liver cirrhosis [24, 36], and that the lognormal distribution curve can be used to estimate the anticipated increase or decrease in alcoholism produced by an increase or decrease in total national consumption. It would follow that aggregate policies could be effective as measures to diminish that drinking which is associated with problems. The basic difficulty here, as in much of the evidence for and against various aggregative policies, is both conceptual and empirical. The studies supporting this view of the effectiveness of aggregate consumption measures are open to much criticism [25,32,37]. They rest on dubious assumptions regarding the relation between heavy drinking and drinking problems and between cirrhosis and alcoholism. Further, they limit drinking problems to the restricted model of classic alcoholism. The studies and the debate are recent and the area is still in flux [11].

If we turn to more empirical situations, again the data are far from clear. The Prohibition period in the United States (1919-1933) appears to have affected some decrease in total drinking, largely through increasing the cost of alcohol. Evidence, admittedly sketchy, indicates that while the urban upper middle

3. The use of drunken driver arrests or convictions to measure change in that behavior is a case in point. Studies of police and court procedures indicate that such arrests and ultimate convictions vary with the specific policies of the policy agency, plea-bargaining court practices, and the decision of the individual police to arrest on one of several available charges [17,34].

classes continued to drink, working classes did diminish their use of alcohol [16, pp. 257-308]. In areas which had been strongly pro-Prohibitionist, the law appeared to operate more effectively.

The Prohibition period, as well as Norwegian experience,[4] point up two great limitations on such aggregative measures: (1) Since they affect problem-free drinkers (the bulk of alcohol users) as well as those with excessive drinking patterns, they attempt to control a very large segment of the population by measures very difficult to enforce. (2) Unlike heavy commodities like automobiles, alcohol is easily and cheaply produced in homes. With prohibitive measures, a "black market" develops and the price of alcohol rises. While this result does decrease drinking, it accentuates the enforcement problem, and its impact on heavy drinkers is uncertain.

Does prohibition decrease problems connected with drinking? The data on the periods before, during, and after the 1920s suggest that it did have some effect in diminishing death from cirrhosis of the liver. However, the relation between that health issue and marital, occupational, and other alcohol-related problems is not clear, nor is the relation between alcoholism (as distinct from heavy drinking) and cirrhosis as direct and clear as once thought [New Report, pp. 47-48].

The Scandinavian countries have often been used as evidence for the view that regulation of sales can reduce problems of drinking. Under the Swedish *motbok* system, in operation from the end of World War I to the mid-1950s, moderate drinking was encouraged and excessive drinking discouraged by imposition of corresponding rations. This system was revised in 1955 to permit free choice, and the total consumption of alcohol rose sharply. Along with this went a rise in public drunkenness that was met by a pricing policy that increased the price gap between light beverages (wines and beer) and spirits. After this change, public drunkenness rates diminished. During the same period there is evidence that Swedish drinking patterns were becoming more moderate, but not as a function of public policy. (For Norway, see Brun-Gulbrandsen, footnote 4.)

Further evidence is provided by the occurrence of strikes in the state monopoly systems of Sweden and Finland. In 1963 the month long shutdown of all liquor stores in Sweden was accompanied by a sharp diminution in arrests for public drunkenness [1, pp. 279-284]. In Finland a similar recent strike of seven months led to a decrease in arrests for drunken driving. When the strike ended, however, the incidence rose sharply.[5] On the other hand, the end of the prohibition on alcohol sales in rural Finland in 1951 was not marked by an increase in excessive use [23].

The evaluation of the effectiveness of preventive measures based on total

4. S. Brun-Gulbrandsen, *A Study of Norwegian Alcohol Policy*. Unpublished document, Oslo National Institute for Alcohol Research.

5. Based on personal communication of relevant studies from staff of the Finnish Foundation for Alcohol Studies, September, 1973, supplemented by Mäkelä [26].

consumption rests on two kinds of evidence. The historical experience with prohibitory and other restrictions on sales in the United States and the Scandinavian countries is especially difficult to assess because it has largely depended on just such data as police and court reports, alcoholism rates, and other indexes discussed above as exceptionally poor sources for evaluation. The studies which seek to correlate total consumption with cirrhosis of the liver in a number of differing cultures seem on stronger ground. Nevertheless, what the recent studies of total consumption have done, as Mäkelä [25] pointed out, is to focus greater attention on the political variables in alcohol use and less on the cultural patterns of drinking habits.

Policies Aimed at the Consumption Act: The Cultural Variable

Recently, attempts to stress public acceptance of moderate drinking as a deliberate policy in the United States have attracted much attention. The report of the Cooperative Commission on the Study of Alcoholism [29] and Rupert Wilkinson's book [42] have championed limited drinking as the basis of a new public strategy. The same policy has been given governmental support in the NIAAA's development of campaigns to promote "responsible drinking."

These policies are responses to the ambivalent attitudes toward alcohol use in the American experience. On the one hand, public norms and laws relegate the display and context of drinking to special settings and adult age groups, which establish drinking as a less than respectable act. In this, the United States continues to treat drinking as not quite moral and legitimate behavior—a belief redolent of the Prohibition period. On the other hand, the sale and use of beer, wine, and liquor are legal and widespread. Drinking is part of the lifestyle of many groups and heavy drinking is far from rare [8]. The aim of the newer strategy is to create a public atmosphere that accepts moderate, safe, and responsible drinking and, by so doing, to diminish the cultural significance of heavy drinking as the major pattern of drinking and nonconforming behavior.

The policies suggested by this approach involve presenting alcohol, especially to the young, in "wholesome," respected surroundings that teach Americans how to drink in moderation and in settings in which peer, work, and kin groups operate to constrain alcohol misuse. Wilkinson's proposals [42, pp. 105-142], for example, include the removal of many present restrictions on alcohol use in such leisure settings as bowling alleys, theaters, resorts, and sports arenas. He would permit adolescent use of alcohol, abolish licensing that prevents sale in many restaurants and in grocery stores, and establish educational and advertising programs that stress and portray moderate use of alcohol. He further advocates the use of tax policies to increase existing differences between beer and wine on the one hand, and distilled spirits on the other. Wilkinson also proposes the development of lighter proof liquors and the establishment of newer, less exclusive taverns.

This attitude toward change in the culture of drinking is derived from a variety of studies of the drinking patterns of American ethnic groups and the socialization experiences of heavy and "normal" drinkers from abstaining and nonabstaining familial backgrounds.[6] Such studies have supported a conclusion that early induction into moderate drinking as a respectable pattern is associated with low rates of problem drinking and alcoholism. They have shown that, among drinkers, childhood backgrounds involving stern abstaining parental attitudes toward drinking may become associated with high levels of problem drinking and alcoholism. These studies have led to the belief that problem drinking can be diminished by associating early drinking experiences with situations in which drinking does not symbolize virility or cultural defiance. Wilkinson has summed up the gist of this approach in describing one aspect of his proposals as promoting "drinking on occasions when drinking itself, being only one of several integrated activities, does not become an overwhelming focus of the group's attention [42, p. 7]."

As Mäkelä points out in a recent criticism of these strategies [25], they assume a substitution rather than an addition effect; moderate drinking will become a substitute for heavy drinking rather than an addition to current practices. His analysis of Finnish consumption patterns, however, leads him to conclude that the increase in beer and wine drinking was not accompanied by a decrease in spirits consumption; patterns of moderate, daily drinking were added to the existing middle class patterns of episodic hard drinking.

It should also be pointed out that a rigid use of studies of Italian and Jewish cultures as models for drinking patterns ignores the consistency and interrelated character of food patterns and drinking customs with the history, economic position, and religious rituals of specific cultural groups and their patterns of mood-altering behavior. Grafting a device or activity from one culture to another is itself assuming a consistency of meaning from one culture or subculture to another.

Lastly, we need to recognize the resistance of alcohol misuse to control which results precisely from its place in the occasions of mood alteration and irresponsibility associated with leisure in the American and many other cultures. Between the "polite cocktail" and the "hard belt" there is a great gap in attitudes and function. Other areas indicate that the substitution effect is far from assured. There is no evidence that moderate driving has reduced the cultural significance of speeding and racing as symbols of masculinity or approved recklessness.

Policies Aimed at Persuasion: The Legal Variable

One of the most frequently used means to prevent disapproved drinking

6. Wilkinson's book [42] discusses the major studies on which this view is based. For an example of such studies, see those by Snyder [38] and Ullman [40].

behavior has been police and court enforcement of legislation, especially in the areas of public drunkenness and of driving an automobile under the influence of alcohol. In most countries and states, drunkenness is not an acceptable excuse in civil wrongs and even increases the degree of negligence. In most, if not all, states in the United States, it is a felony to cause an injury to others in an automobile accident while driving under the influence of alcohol. Driving under the influence of intoxicating beverages is per se an offense punishable by fine, jailing, or license suspension or revocation [44, Ch. 7]. Until recently in most American jurisdictions public drunkenness has been punishable by fine or jail or both [45, pp. 1-3]. Only quite recently have some states decriminalized public drunkenness and substituted detoxication centers for the formerly ubiquitous "drunk tank" [44, Ch. 7]. However, unlike insanity, drunkenness is not an acceptable defense in prosecutions for crime.

The laws prohibiting public drunkenness and alcohol-impaired driving have had as justification their supposed influence on potential offenders. The fear of an arrest record, of fine or jail or loss of driving license, and the public shame of arrest and a court appearance have been viewed as deterrents to the commission of the offenses and thus to the behavior whose eradication is sought.

In general, the results of such legislation in preventing problem behavior have been disappointing. Over many years the large number of cases of public drunkenness clogging the American courts and the very high recidivism rates of those convicted have been a major source of the agitation to take public drunkenness out of the realm of criminal actions [28].

There is little evidence that laws against drunken driving have been very effective in reducing automobile fatalities. The very careful study by Ross [34] provides a clear analysis of the aspects involved in such legislation. Ross studied the impact of the widely heralded campaign in Britain in which breath-testing equipment was used by police in patrol cars. Given much publicity,. this campaign was successful in sharply curtailing road traffic fatalities during the first year (1967) of its operation. Three years later, however, fatalities had returned to their precampaign levels. Careful examination both of the rates and of police enforcement showed that there had been a limited impact on fatality reduction. The complexities introduced by appellate court decisions in protecting defendants' rights had greatly reduced police incentive to apprehend and arrest on drunken-driving charges.

A recent study of the effect of heavier punishment for alcohol-impaired driving in Finland disclosed a situation much like that in England. As punishment increased, the rate of increase of drunken driving declined, but only temporarily, and was followed by a more permissive attitude of police toward the marginal cases [22]. Such studies indicate the complex character of preventive legislation, especially when it involves policing and traditional citizen rights.

Certainly the laws against alcohol-affected driving are variously enforced, both by police and by courts. Several studies in the United States have demonstrated that a first offense generally is not punished by license removal or jailing, that rates of recidivism are high (as much as 5 percent), and that severity of punishment has not reduced recidivism appreciably [4,17,31,46].

The crucial issue, however, is the effect of law in preventing automobile fatalities—the ostensible purpose of the legislation. Under the best of enforcement conditions, police can apprehend only a small portion of offenders. (The Ross study indicated the complexity of the effort.) It has often been said that, because of their heavy punishments of mandatory license revocation and jail sentences, Scandinavian countries have been successful in diminishing drunken driving. However, evidence of the success of such efforts in Finland, Norway, and Sweden is slight; blood alcohol analysis is indifferently conducted even in cases of fatalities.[7] Consequently, the conditions for ascertaining the claimed effectiveness do not exist in these countries. Analysis of traffic fatalities shows much difference between them, however, with Finland having a high rate per automobile owner and per miles driven, while Sweden and Norway are not unusually low compared to other countries with less rigorous legislation [5, pp. 11-15].

This discussion leads to a pessimistic attitude toward increased enforcement and harsher sentences as a means of preventing drinking-related problem behavior. Even in Norway, the most restrictive of the three Scandinavian nations, as automobile ownership has increased and the middle class is caught up in it, the populace has forced reconsideration of the mandatory character of their drinking driving laws.[8] Where a large percentage of a population engages in a practice, it is difficult to enforce proscriptive legislation except against a small percentage of offenders. In the absence of strong pressure groups, such laws have dwindling impact as they move from the halls of legislation to the highways of the traffic police and the courtrooms of local judges.

Policies Aimed at Persuasion: The Communication Variable

A great amount of time, effort, and money is spent on programs of advertising, leaflets, television, radio, and campaigns for school curriculum education. Such campaigns, of course, are of various kinds. Some stress dissemination of rational information, aiming at convincing the audience of the harmful effects of alcohol excess or the relation between fatalities and alcohol

7. Studies of blood alcohol level among automobile fatalities in Scandinavian countries are not found in the translated literature. Discussions in September 1973 with staff members at the following research centers failed to uncover reports of studies in Norwegian, Swedish or Finnish: State Institute for Alcohol Research, Oslo; Institute of Criminology and Criminal Law, Oslo; Department of Sociology, University of Lund, Sweden; Department of Alcohol Research, Karolinska Institute, Stockholm; Finnish Foundation for Alcohol Studies. I am grateful to the following for their aid in arranging meetings, Hans Klette, Nils Christie, Leonard Goldberg, Erik Allardt, and Klaus Mäkalä.

8. This was an issue in the September 1973 elections.

use. Within this category, some communications disseminate information designed to lead the audience to influence others, as in recent TV advertising concerning problem drinking and drinking drivers. Some are oriented toward a general audience, some toward special audiences such as youth, children, parents, police, etc. Others utilize more emotional, less rational styles.

It is doubtful that campaigns depending solely or largely on public information and education or even on school education are useful strategies for changing behavior. Most have not been evaluated by careful study. Where they have been, the results have been disappointing to their initiators or, at best, of limited value. Even Wilkinson, who advocates advertising and education programs, sees them as adjuncts to situational changes and ineffective as sole policies [42, pp. 43ff].

The history of seat belt use is a good illustration of the limited effectiveness of advertising and dedication in prescribing behavior. Despite much agitation and education, the use of seat belts, even though required as part of standard automobile equipment, has been low (approximately 20 percent of capacity use). A recent careful study by the Insurance Institute of Traffic Safety laid the basis for a series of special campaigns. Identifying the areas of concern of the population, they were able to use control groups and to conduct a series of TV ads aimed at specific audiences (children, youth, parents, etc.) over a nine month period. In spite of many favorable elements and astute methods, the campaign had no discernible impact, as other seat belt studies have found [13,20]. While advertising has at times been successful in switching interest from one brand to another and occasionally in the introduction of a new product, this is very different from preventing the use of a product among those with a high commitment to it. Wilkinson's assertions rest more on faith than on past experience. That information and education *may* be effective in conjunction with other policies is a different question.

Policies Aimed at Screening Individuals

Strictly speaking, efforts to detect people with drinking problems and to persuade them to obtain treatment are not aggregative prevention measures. However, they are a method of preventing one problem from becoming a collection of problems. The use of police and court agencies as possible screening mechanisms is a recent aspect of legal enforcement agency activities in this field. The Alcohol Safety Action Project programs have made the detection of problem drinkers among those arrested and convicted of drunken driving one of the major devices for prevention of recidivism. Similarly, the use of schools for drunken-driving offenders has this as one of its major functions. Research is now in progress to construct a simple, workable test for the detection of problem drinkers which would supplant expensive probationary methods.

Much of the action of detection has been hindered by lack of knowledge or concern among groups that are in especially good positions to observe drinking behavior and to make recommendations that will be taken seriously by the

drinker. Police and the courts are in an especially authoritative position, as are employers. The medical profession is a key group. Here ignorance about alcohol problems is a major block to prevention on the case level. In part this is also a reflection of the currently indefinite and diffuse character of the treatment of alcoholism and alcohol misuse. For example, the unwillingness of health insurance underwriters and hospital authorities to accept alcohol misuse on an equal footing with other illnesses is an obstacle to effective case-finding procedures. It leads to an ambiguity which perpetuates the stigma of alcohol as immoral. It corrodes the doctor's interest and willingness to advise patients when their medical problems are closely associated with excess in drinking. In general, physicians are reluctant to accept cases when they see little that can be done to alleviate the patient's condition [14].

PREVENTION: *DRINKING* PROBLEMS OR DRINKING *PROBLEMS?*

This short survey of prevention efforts has shown that past policies have been concentrated either on diminishing the total amount of drinking by a population or on persuading individuals to drink less. Especially in the United States, both discussion and action have displayed the "hang-ups" resulting from a disposition to defend or to attack the moral status of alcohol use rather than the specific issues arising from the problems created by alcohol use.

In the remainder of this chapter I want to set forth two ideas that may facilitate a broader discussion of prevention possibilities. Both follow from the general conclusion that past policies have had limited effectiveness. The first idea is that it is important to view the problem situation as well as the drinking situation. The second, which follows from the first, is that it is necessary to create a political situation, rather than an educational one, in which the search for effective prevention and treatment can be conducted.

The Drinking Problem as Situational

Throughout this chapter I have cast much doubt on the utility of individualistic policies as effective prevention mechanisms. Appeals to punishment and to rational thought have not proved to be very useful means to decrease drinking or alcohol misuse. By an emphasis on the situational, I refer to measures that change the environmental surroundings of behavior, but that do not depend on changing the psychic or consumer values of the alcohol user. Thus, in recommending that colleges provide safe facilities for drinking experiences, Wilkinson [42, p. 158] is suggesting a change in a situation within which drinking occurs in the United States, without any attempt to directly change the college student's attitudes toward drinking.

It is also possible to examine the situation as a total environment, concentrating on other aspects of the problems inherent in their definition. Thus, the

problem of the relation between alcohol and absenteeism in industry can be conceptualized as a problem of workers being late or absent from work, rather than a problem of drinking. If the "Monday morning hangover" is a severe problem for industrial establishments, possible redesign of the job to provide a greater measure of individual decision as to how to stagger his or her work week may be a solution. The large amount of experiment and analysis of job redesign and work hours now going on in Europe, America and Japan is not instigated by alcohol misuse and has had little input from alcohol problems experts but represents an important way to approach the problem of job security often associated with excessive drinking [41].

This mode of reasoning reverses the characteristic way in which we have approached problems of alcohol. Instead of asking, "How do we adjust the individual drinker to his or her social functions?" it asks, "How do we adjust social functions so as to permit 'excessive' drinking?" Put in another form, it asks, "How can we minimize the painful consequences of drinking without minimizing the drinking?"

The case of alcohol-affected driving provides an area in which this mode of conceptualizing a problem of prevention can be illustrated. Objectives of changing the situation need not emphasize drinking alone but can be oriented toward other aspects of the total action, such as the act of driving or the physical characteristics of the automobile. Those interested in the problem of drinking and driving have, with few exceptions, paid little attention to the act of driving. For example, is it possible to provide the drinker with alternative modes of transportation, such as inexpensive taxi or bus service? Is it possible to inspect automobile drivers in areas near bars to prevent those found to have above legal amounts of alcohol from driving? One vital exception to the nonsituational character of current drunken-driving prevention activity is the process of developing an ignition interlock system that would prevent the impaired driver from starting the automobile. All these measures "bypass" the decisionmaking process of the person, as does the seat belt interlock, without changing the motorist.

The problem of drinking and driving can be looked at from a still wider level, one that has had a profound impact on thinking about automobile injuries and fatalities in the past decade.[9] Research during the 1950s had established that a major source of death and injury in automobile crashes came not from the impact of the crash but from the "second collision" with such dangerously designed equipment as protruding dashboard knobs, noncollapsible steering wheels, noncollapsible telephone poles, breakable windshields, and other objects, as well as the ejection of the occupant because of badly designed door locks. Much concern of legislation and agitation through the past decade has gone into developing more crashworthy vehicles and less dangerous roadside objects. From

9. The work of William Haddon, Jr., has been seminal in this area, and in accident research in general. Other examples are references 19, 20, and 21.

this standpoint, a more efficient strategy should be taken oriented toward the reduction of injury and death after the crash rather than toward the prevention of the crash itself. Automobiles and roads would then be built with the assumption that drivers, for whatever reason, including drinking, will sometimes be impaired.

Not all actions seen by participants (drinkers) or by others as problems are equally amenable to such situational analysis. If we look at the 11 problem areas used in the public opinion survey by Cahalan and associates in the mid-1960s, some–like "binge drinking"–refer to drinking itself; some–like "job problems"–refer to consequences of drinking; and some–like "problems with spouse, relatives"–are mixed [6]. However, solutions to problems with a new conceptualization cannot be given readily until they have been attempted.

Even the phenomenon of drinking itself may be attacked in a wider scope. One report of preventive action in a remote Alaskan village showed considerable improvement in drinking problems with the opening of a recreation center.[10] It is possible to examine alternatives to drinking, as the Committee of Fifty did in *Substitutes for the Saloon* in 1901 [10]. Recent emergence of new forms of drugs used for mood alteration, such as marijuana and LSD, and the use of prescribed tranquilizers raise the need for research and policy toward provision of competitive mood-altering substances that may be less "dangerous" than alcohol.

Drinking Problems as Political

Two significant conclusions follow from the promotion of prevention policies through situational strategy. First, whether the emphasis is on drinking or on problems, it is wiser to attack a series of specific problems, each with its own characteristics and groups, than to concentrate only on *the* problem of drinking. To seek the prevention of drinking problems largely through prevention of drinking or even through changed drinking patterns unduly narrows the range of potential "solutions." Problems of alcohol misuse need to be considered as parts of wider problems in which both alcohol and nonalcohol "experts" are engaged.

This would mean that alcohol problems prevention could play a role in areas in which it is customarily absent, as well as bringing in nonalcohol specialists in areas that have traditionally been the province of the alcohol expert. An example I frequently use is that of the zoning and construction of hotels, motels, and associated bars along expressways and other highways. Such places are often highly dependent on the resident as well as the transient population for sale of entertainment and drink. Urban planning does not seem to have taken account of the relation between drinking and driving in planning such areas. The drinker has no access other than his automobile or expensive taxis. Similarly, specialists interested in alcoholism in industry could work with job designers to

10. M.E. Chafetz. Unpublished remarks at Conference of Task Force on Alcohol Abuse and Alcoholism, Education Commission of the States, December 17, 1973.

create occupational contexts where such phenomena as binge drinking are not inconsistent with the character or scheduling of the work.

The second conclusion is perhaps more significant and involves a more directed strategy than the first. It is that situational changes frequently involve political conflicts. As I have insisted throughout this chapter, individualistic strategies are not very effective. However, since they involve little coercion, they do not meet political objections as readily as attempts to alter the environment. For example, a proposal of Wilkinson's [42, p. 158] that all grocery stores be permitted to sell low strength alcohol products associated with eating occasions threatens the economic interests of soft drink industries, of liquor stores which have invested in license costs, and of higher strength alcohol products which cannot compete in the same market. It must face the opposition of moral interests in keeping alcohol away from "respectable" people and activities. This may be compared with another Wilkinson proposal intended, as is the first, to associate food with drink—that liquor stores be required to prominently display light foods and booklets on serving food with alcohol. This move disturbs no one. Neither does legislation as diffuse and unenforced as laws against drunken driving and public drunkenness.

The political fallout of situational strategies merits extended analysis because it bears heavily on the second aspect of strategy—the conditions of problem solving.

POLITICAL CONSTITUENCIES AND THE PREVENTION OF DRINKING PROBLEMS

Attempts to change institutions, even on an experimental and limited basis, involve costs and benefits. Especially in areas of behavior where moral and economic interests are deep and intense, the attempt to change situations cannot fail to engender public issues and conflicts. The willingness to seek solutions and to support them in the face of conflicts requires more than a casual commitment. It is this realization which leads to the second point about prevention—the need for an appropriate political climate within which to seek solutions.

Most of this chapter has explored prevention strategies and tactics as possibly effective mechanisms for alleviating the problems associated with alcohol use. That represents one way to discuss the issues of prevention in a more dynamic fashion—seeking for mechanisms of problem solution that may generate the creation and implementation of new strategies and tactics. In one sense, this is analogous to the ways in which solutions to infantile paralysis were implemented—not by picking and choosing from among past programs but by devoting energy and money to establishment of laboratories in which new solutions could be discovered. What is needed in the field of alcohol prevention is the appearance of groups of concerned and committed persons and constituencies for whom the problems associated with drinking have a high priority on the agenda of public issues.

The repeal of Prohibition removed issues of alcohol from the agenda of the national and state political scene. The constituency of morally concerned persons operating through the structure of organized churches now plays a minor role as an initiating and even as a veto group. For much of the postrepeal period that has meant an absence of politically relevant constituencies. In recent years, however, new groups have emerged as possible bases for prevention policies as well as treatment programs.

Following the demise of Prohibition the "ownership" of alcohol problems descended on the universities and the medical profession. The universities, notably the Yale (now Rutgers) Center of Alcohol Studies, gave alcohol concerns a legitimacy as scientific and morally neutral interests, in sharp contrast to the long period of church-organized campaigns against Demon Rum. They could not, however, provide either the public pressure or political leadership essential for an atmosphere in which prevention or treatment could assume a high priority among public concerns. Neither did the medical profession accept alcohol as a major health hazard, either in research or teaching or advice to patients.

Two groups have emerged as possible effective sources of prevention programs. One, as has occurred before in the United States, consists of recovered alcoholics, people whose own personal experiences have given them more than a casual interest in this specific set of problems. They have been an active force in organizations, and in the informal roles through which legislation is won, funds raised, and programs implemented.[11] They bring to the alcohol field a moral drive that is lacking in other alcohol activities.

The other element has been the recent appearance of the national government. A number of events, including the public interest occasioned by marijuana, heroin, and LSD use among youth, and also including the work of recovered alcoholics, has brought about the establishment of federal agencies concerned with treatment and prevention. There are now governmental structures dedicated to national policy in the field of alcohol, such as the Office of Alcohol Countermeasures of the National Highway Traffic Safety Administration and the National Institute on Alcohol Abuse and Alcoholism. These are important initiating mechanisms for development of problem solutions and for implementing climates within which new constituencies can be formed.

These agencies, however, are dependent on others. Global campaigns oriented to the decrease of drinking and depending on arousal of a general public are not likely to be effective in building the kinds of constituencies from which new solutions can be expected. While they may lead to a general and diffuse interest in alcohol problems as an aspect of welfare, such programs are not likely to develop organized activities and groups in which the problems of alcohol have a

11. The role of Senator Harold Hughes was monumental in the passage of the 1970 Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act. His own public testimony as a recovered alcoholic has been illustrative of the role this group has played in keeping the issue alive before the public and in creating a positive legislative and executive atmosphere.

high priority. While moral constituencies are lacking, there are economic groups with potential interests in preventing specific and particular problems. Insurance companies represent one major source of interest in the health and injury aspects of drinking. Police and the courts have a considerable concern for the elimination of impaired driving and public drunkenness, problems they are reluctant to handle through rigorous enforcement. Industries have a vital interest in absenteeism, turnover, and productivity, and the recent surge of concern for problems of work alienation and redesign is a signal of this new atmosphere. The medical profession, increasingly organized into medical insurance programs, has an interest in the development of organized and reliable systems of screening and treatment, an area in which the commitment of medical insurance interests would be vital. Other groups, such as educators or labor unions, cannot be expected to play more than a partial, peripheral role. Their major objectives and skills do not lead to a high level of commitment.

The significance of an adequate political atmosphere is not only that it is necessary to the passage, implementation, and execution of programs. Even more important is the effect of moral and economic interests in unleashing the imagination and energy with which new solutions, concepts, and programs are created and organized. Without interest in achieving a solution, commitment to finding it and to the development of innovative plans, the best policies "on paper" can be poorly carried out. With such concerns, many things become possible and new ideas can emerge.

The development of such creative climates is especially important in the area of prevention. There have been many false starts, and much has been accepted and rejected without adequate test, experiment, or evaluation. Proposals for new programs and for the reappearance of old ones will need the careful assessment that comes with experience, experiment, and controlled research under realistic conditions of actual practice.

SUMMATION

This chapter has examined past efforts to prevent alcohol problems and, on that examination, has based some suggestions for alternative approaches. The following statements summarize my major assertions:

1. Following Prohibition, American prevention measures have been concentrated on persuading individuals to drink less.

2. Alternative approaches need to consider situational rather than individualistic approaches. These involve new measures to affect total national consumption and to change the context of drinking so as to minimize "excessive" drinking.

3. There is need to consider measures that minimize the problems consequent on drinking by changing the situation rather than the drinking, by adjusting the social function to the drinker as well as the drinker to the function.

4. A global concern with *the* drinking problem needs to be supplanted by differentiated approaches to the variety of drinking problems and drinking groups.

5. There is need for the development of an atmosphere of interested groups for whom the solution of drinking problems is important. Such an atmosphere is essential as a base for the development of new approaches.

6. There needs to be less concern with building a wide public opinion on alcohol issues, and more with creating a climate among highly committed and concerned groups for whom alcohol problems are central to their major moral, professional, or economic objectives.

7. There must be recognition that many prevention programs will involve political conflicts if they are to be effective.

8. Lastly, social experiment and careful evaluation of results are necessary to acceptance of new policies.

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Definitions

public health problem in America, surpassed only by cancer, heart disease, and mental illness. But there is no accepted ranking of diseases as "public health problems." If such a listing could be prepared, it is not known exactly whether alcohol would properly be ranked fourth, second, tenth, or third. Whatever its rank, alcoholism is one of our major public health problems; it is responsible for thousands of deaths annually and shortens the average alcoholic's life by 10 to 12 years. It has been suggested that only about 10 percent of all alcoholics live to be 70 years of age, and about 50 percent die before the age of 51.

DEFINING ALCOHOLISM AND PROBLEM DRINKING

Alcoholism is a complex problem, and this in itself creates considerable difficulty for those who would deal with it.

> It is a problem for the alcoholic.
> It is a problem for his family and close friends.
> It is a problem for his community and his neighborhood.
> It is a problem for the state and for the nation that must pay the human costs — the costs of personal and community disruption and the costs of planning for prevention and control measures.
> It is a problem for the professionals and those allied to them, who must provide treatment services for the victims of alcoholism.(30)

Realistically, then, the problem drinkers are those who cause significant damage to themselves, their families, or their communities because of drinking. Some are clearly addictive drinkers or alcoholics. They are those who are not only psychologically dependent, but also physically dependent and have developed some degree of tolerance. *Physical dependence* manifests itself as the drinker continues to ingest quantities of alcohol and repeatedly exposes nearly every tissue of his body to blood-alcohol mixture. Soon the cellular structures in the brain and elsewhere in the body begin to adapt to the presence of alcohol, and increasing amounts of alcohol become necessary to produce physical and behavioral effects. This adaptive phenomenon of tolerance to alcohol is much like the adaptation of insects to insecticide.

Paradoxically, in the later steps of alcohol addiction there frequently is a reversal of tolerance. The addict needs less alcohol than he once did to get the same effects. The cause of this phenomenon is not known, although some investigators spectulate that the prime reasons for loss of tolerance are the progressive brain damage and the destruction of liver cells with their ability to detoxify alcohol.

Completely terminating the intake of alcohol and observing the alcoholic's reaction in the form of a withdrawal syndrome dramatically demonstrates physical dependence.(33)

Dunn and Hedberg describe *behavioral dependence*, also called emotional or psychic dependence, in the following way:

> This type of dependency is a learned preference for alcohol. As other addictive drugs, alcohol causes several immediate effects experienced by some drinkers as pleasant and positive — physical calm, ease, relaxation, or euphoria. Furthermore, alcohol usually facilitates social assertiveness or approach behaviors and alters many unpleasant moods or states of being such as anxiety, depression, boredom or irritability. Also, alcohol consumption commonly reduces physical pain — real or imagined — that may be totally unrelated to drug usage, such as that resulting from back injury. These effects can be considered positive or pleasant by the drinker and serve as a basis for a positive conditioned response.[1]

Apparently, these associations are stored in the neural memory system, and as the individual continues to use alcohol to gain positive effects, a habit gradually develops. Thus, the drinker learns to depend on alcohol for its effects.

In addition, the list of problem drinkers must include those who are apparently not addicted to alcohol — who show no symptoms of dependency — but whose drinking has nontheless created serious personal or family problems.

Within our society at large, problem drinking is usually recognized as such whenever anyone drinks so much that his ability to control his actions and maintain a socially acceptable life adjustment is impaired. Several authorities in the alcohol field have suggested some behavioral criteria that characterize the person who drinks too much:

> 1. Anyone who must drink in order to function or to "cope with life" has a drinking problem.
> 2. Anyone who, by his own personal definition or that of his family and friends, frequently drinks to a state of intoxication (four times a year) has a drinking problem.
> 3. Anyone who goes to work intoxicated has a drinking problem.
> 4. Anyone who is intoxicated and drives a car has a drinking problem.
> 5. Anyone who sustains bodily injury requiring medical attention as a consequence of an intoxicated state has a drinking problem.
> 6. Anyone who, while under the influence of alcohol, does something he contends he would never do without alcohol has a drinking problem.

[1] Robert B. Dunn and Allan G. Hedberg, "Treating the Two Faces of Alcoholism," *Modern Medicine* (10 June 1974): 35-36.

7. Anyone who must drink in order to get to and perform his work has a drinking problem.

8. Anyone who comes in conflict with the law as a consequence of an intoxicated state has a drinking problem.(3,6)

DESCRIBING PROBLEM DRINKERS[2]

Many Americans drink liquor as they live life — rapidly and under tense circumstances. At those two indigenous American institutions — the cocktail party and the commuter bar — drinking is usually done standing, the alcoholic beverage is gulped rapidly with the barest minimum of food, and the general aim is to reach the desired end point of "being high." Even more significant is the fact that this pattern is condoned; in the United States it is frequently all right to drink just for the purpose of getting drunk.

In this age of psychiatric sophistication, Americans conveniently forget that a state of drunkenness is a state of illness. Paradoxically, a dose of alcohol can be used as a form of self-medication.

From time to time, for example, we are called to perform an activity we wish to but cannot. Our conscious desire to perform is overwhelmed and incapacitated by unconscious restrictions. For many of these blocked responses liquor is an easy releaser; the hounding inhibitions melt quickly before its chemical presence. The actor may bring himself to the otherwise terrifying center stage; the lecturer can speak; the author can write; and the sexually frigid can respond. This group of liquor drinkers is growing because it seems that the demands of increasingly complex situations require alcohol to ease the way. Unfortunately, alcohol's alliance is fickle, and increased amounts may lead to states of intoxication and responses not appropriate for the circumstances. In an increasingly complex society, the danger of alcohol fulfilling a tranquilizing role must be guarded against.

Another common experience is to find people who use liquor to lift depression, to dull the inner pain, and dispel the sense of ugliness within them. Some find that liquor provides what they seek, and become fearful of giving up the bottle for fear that the pain will return. On the other hand, some patients find that alcohol actually deepens their depression. They respond to the deepened depression by imbibing more and more of the liquor, hoping to achieve the relief they seek.

Another kind of liquor user is the person who employs alcohol to blur his perceptions. When such an individual becomes aware that some socially

[2] Adapted from an article by Morris E. Chafetz, printed in *Preventive Medicine*, 3 (1974): 5-10, and presented in the Second Special Report to Congress on Alcohol and Health.

forbidden impulses are coming too close to the surface, he may use alcohol heavily. In this circumstance, the alcohol may obliterate the discomforting feelings, or it may dissolve inhibitions to the point where he permits himself to act on his instincts.

One common type of liquor drinker is the individual who uses alcohol to sustain a psychological system of defenses. Here, the "blackout" phenomenon is usual. In other words, repressed unconscious desires become a reality when he is intoxicated, but he has no recollection when sober of what has transpired. People with a sober characterological attitude of complete kindness, nonexistent hostility, and abject passivity will, with liquor, become brutal, hostile, and aggressive. Once the effects of the liquor are gone, however, they undergo what appears to be a form of selective amnesia, as they express incredulousness at descriptions of their behavior while intoxicated.

Liquor for a certain segment of the population has one goal worth drinking for: oblivion. The inhabitants of this unhappy drinking state down their drinks in a state of bliss. To them, reality is terror, and a dream state of narcosis is the only way to continue.

Another liquor drinker is the individual who is more tolerable to his social unit when he is intoxicated than when he is sober. This syndrome is seen most often in configurations where nonalcoholic, extremely dominating mates or parents exist. On the one hand, the nonalcoholic mates or parents appear to suffer greatly as a consequence of the alcoholic state of the other. If treatment or extraneous events result in sobriety, however, the healthy members become proportionately more disturbed as the alcoholic member becomes less dependent on alcohol. What becomes clear is that the pathological drinking behavior of the alcoholic person was a cover-up for the disturbances in another.

Less obvious is that subgroup of individuals who, although heavily under the influence of liquor, do not seem so to the casual observer. This type of individual can carry on highly complicated business and social activities and seems to be none the worse for his drinking. Only when a fall in his blood alcohol level occurs, does he suddenly return to his original state of awareness. This person, when he regains his nondrinking self, has no inkling of people, places, or events that have transpired for hours, days, or weeks. Then, not only is he stunned by sudden situations, but innocent sharers or that "other" personality are confronted with a new individual in an old body.

The clinical syndrome of liquor drinkers I shall consider last is the one I feel contributes much to unhealthy alcohol use and may give us some clues to preventive measures: the cocktail party. At least in America (and I suspect it is spreading to other nations as well), the cocktail party epitomizes the

essence of unhealthy drinking practice, unfavorable responses to liquor, and unrelating social behavior. The cocktail party is supreme in emphasizing man's emotional isolation from man; his isolation from what he does, thinks, and feels. People are brought together — many of them unknown to one another — to drink, to talk, to be gay. The drinking is done under circumstances that engender little of the pleasurable responses of relaxation and socialization that alcohol can provide.

The talk of the cocktail party emphasizes this. People do not listen; they do not care. All of us are familiar with the habitue of the cocktail party who, while pouring liquor into himself, pours into our ears the intimate details of his life he would never utter to a close friend. The reason for this is fairly obvious — we do not matter; we probably do not care. It is simpler to share intimate details of one's life with an individual with whom we are not emotionally involved than with those with whom we wish to continue our involvement. Words spoken at cocktail parties are often spoke to oneself rather than to another because excessive drinking creates a pharmacological barrier to emotional and social communication. Some people even think their heavy alcohol use encourages communication. But drinking that points in the direction of isolation, even in the midst of a crowd of persons, produces a liquor syndrome for perpetuating and intensifying alcohol problems.

If we are to make any headway in reducing these unhealthy ways in which alcohol is used psychologically and socially, we must come up with bold ideas that face the problem directly.

We know that the variety of influences that can mediate the imbibing of a definite amount of alcohol is innumerable. The psychological, physical, and social factors that determine our response to a given quantity of alcohol are not consistent from individual to individual, nor within the same person at separate times. Since responses to alcohol are unpredictable, it is easy to see why drinkers who use alcohol to achieve a delicate balance between feeling good and feeling sick often cross the border and suffer complications, and why the hairline or end-point difference between responsible drinking and unhealthy drinking is a tough target to hit.

DEFINITION OF ALCOHOLISM

Alcoholism has been called a disease. In the broadest sense of the word, it *is* a disease — a disabling condition, progressive in nature, and manifested as a syndrome with interrelated biological, emotional, social, spiritual, and behavioral aspects. On this point most experts agree. However, there is no formal definition of alcoholism or of an alcoholic person which is universally or even generally accepted. Perhaps the definition most widely considered as authoritative is that of

Mark Keller of the Center of Alcohol Studies at Rutgers University:

> Alcoholism is a chronic disease or disorder of behavior characterized by the repeated drinking of alcoholic beverages to an extent that exceeds customary dietary use, or ordinary compliance with the social drinking customs of the community and which interferes with the drinker's health, interpersonal relations, or economic functioning.[3]

Another important concept described by Dr. Ebbe Curtis Hoff, of the Medical College of Virginia is based on three facets:

1. There is loss of control of alcohol intake. The victim finds himself drinking when he intends not to drink or drinking more than he has planned.
2. There is functional or structural damage, physiological, psychological, domestic, economic, or social.
3. Alcohol is used as a kind of universal therapy, as a psycho-pharmacological substance through which the problem drinker attempts to keep his life from disintegrating.(4)

One more psychiatrically oriented definition which combines descriptive criteria with a suggestion concerning the origins of alcoholism as a chronic behavioral disorder is that of Doctors Chafetz and Demone:

> We define alcoholism as a chronic behavioral disorder which is manifested by undue preoccupation with alcohol to the detriment of physical and mental health by a loss of control when drinking has begun (although it may not be carried to the point of intoxication) and by a self-destructive attitude in dealing with personal relationships and life situations. Alcoholism, we believe, is the result of disturbance and deprivation in early infantile experience and the related alterations in basic physio-chemical responsiveness. The identification by the alcoholic with significant figures who deal with life problems through the excessive use of alcohol, and a social, cultural milieu which causes ambivalence, conflict, and guilt in the use of alcohol.[4]

The National Council on Alcoholism suggests that alcoholism fits the definition of disease given in Dorland's Illustrated Medical Dictionary, 24th Edition: "A definite morbid process having a characteristic train of symptoms; it may affect the whole body or any of its parts, and its etiology, pathology, and prognosis may be known or unknown."

[3] *Alcohol and Alcoholism: Problems, Programs and Progress*, National Institute of Mental Health, National Institute on Alcohol Abuse and Alcoholism, PHS Publication No. (HSM) 72-9127, 1972, p. 9.

[4] *Ibid.*

Dr. Marvin Block, an authority on alcoholism, suggests that one of the most interesting ways of classifying alcoholics was developed and delineated by E. M. Jellinek, perhaps the greatest authority on alcoholism who ever lived. He named the types with the letters of the Greek alphabet. They fall into five main categories:

Alpha type. The alpha alcoholic is psychologically dependent. He uses alcohol to gain courage, to remove self-consciousness, and to deal with inhibitions. This type of alcoholic is using alcohol to make life more bearable. It is purely a psychological reliance, for the purpose of relieving psychic pain.

Beta type. The beta alcoholic is not psychologically dependent. As this individual drinks alcohol, it produces an adverse affect on the lining of the stomach causing gastritis, or it may cause a swelling of the nerve sheaths which brings about neuritis (or, when it affects more than one nerve, polyneuritis.) These conditions are painful, and the alcohol is responsible for the pain. Thus, the beta alcoholic is in pain caused by the alcohol and, in turn, he continues to drink to relieve the pain. If the individual drinks enough, alcohol acts as an anesthetic and affects the brain much as either, chloroform, or other anesthetic drugs would, but much more slowly.

Gamma type. This is the most common type of alcoholic in the United States. A gamma drinker has all the characteristic marks of alcoholism: psychological dependence, physiological dependence, and the development of tissue tolerance. When tissue tolerance develops, it takes more and more alcohol to produce the effect he desires. There are no accurate figures available, but it is estimated that 90 percent of the alcoholics in the United States fall into this classification.

Delta type. Even though this type of individual drinks alcohol over long periods of time and in excessive amounts, there is no psychological dependence. But because of the chronic, heavy use of alcohol, his tissues become dependent on alcohol. He becomes physiologically dependent. He suffers withdrawal if alcohol is taken away, he is just as alcoholic and as physiologically involved as the gamma type. This type of alcoholic is particularly found in countries such as Chile and France where it is common to drink wine instead of water. He may drink wine all of his life and never be withdrawn from it. Sometimes this type is unaware that he is alcoholic until he is removed from alcohol by chance and suffers delirium tremens.

Epsilon type. This type of alcoholism is most predominantly found in the Scandinavian countries. This drinker is often referred to as the "spree," "binge," or "fiesta" drinker. He may drink nothing between sprees and then go on binges

of drinking, lasting anywhere from three days to weeks or longer. This type of drinker is just as alcoholic as those in other classifications, even though he doesn't drink between sprees. When this person does drink, he loses control, and he keeps on drinking until it gets out of hand or until he is unconscious.(16)

Whatever the definition used, the population of alcoholic and problem drinkers is sufficiently large to warrant attention as a major public health problem in the United States. Although criteria and estimates vary considerably, it is generally thought that about nine to ten million people in the U.S. are alcoholics or problem drinkers. Of those, depending upon the definition used, the number of actual alcoholic individuals has been estimated to be somewhere between six and ten million.

ATTITUDES ABOUT ALCOHOLISM[5]

Through the years a variety of attitudes and definitions concerning the problem of alcoholism have been expressed. The following models as presented by Siegler, Osmond, and Newell(80) are an expression of some of the more common attitudes that exist. These models are a simple method of classifying the attitudes and related theories. They are not theories themselves. However, the number and variety of the models suggests that the problem of alcoholism has not been solved to everyone's satisfaction.

1. the impaired model

Definition: An alcoholic is a drunk, souse, topper, tippler, soak, lush. When he gets drunk, he is plastered, bombed, stoned, tight, oiled.

Etiology: Some people are just that way for unknown reasons.

Behavior: Drunks are repulsive and dirty; nice people do not like to get close to them. Sometimes they are comical. They fall down, talk to lamp posts, try their door key in the wrong house, get their words mixed up, and so forth. But it is wrong to laugh at them and make fun of them because they can't help it.

Treatment: There is none. Once a drunk, always a drunk.

Prognosis: There will be no change.

[5]Miriam Siegler, Humphrey Osmond, and Stephens Newell, "Models of Alcoholism," *Quarterly Journal of Alcohol Studies*, 29 (1968): 573-581.

Native alcoholism material from training packet

WHAT IS ALASKA NATIVE ALCOHOLISM?

MANY PEOPLE HAVE ASKED WHY THE NEED FOR COMMUNITY ALCOHOLISM PROGRAMS. ALCOHOLISM IS THE SAME WITH ALL ETHNIC GROUPS. THIS MAY BE TRUE AS FAR AS THE ACTUAL PHYSICAL SYMPTOMS OF ALCOHOLISM ARE CONCERNED. BUT NOT TRUE WHEN YOU START INVESTIGATING SOME OF THE CAUSATIVE FACTORS INVOLVED AND THE TREATMENT METHODS EMPLOYED.

THE ALASKAN NATIVE'S PROBLEMS AND AREAS OF NEED HAVE BEEN DEFINED FOR HIM FOR MANY YEARS, BY PEOPLE WHO ARE NOT EVEN AWARE IN THEIR OWN PROBLEM AREAS. THESE PEOPLE SURELY CANNOT BE CAPABLE OF DEVISING PROGRAMS TO CORRECT THESE DEFICIENCIES FOR THE ESKIMO, ALEUT AND INDIANS ALIKE. THUS, THE NATIVE HAS BEEN HELPED TO DIE BY GENUINELY CONCERNED GROUPS WHO ASSUME THAT ASSIMILATION INTO THE DOMINANT SOCIETY IS THE GOAL OF ALL THE NATIVE PEOPLE.

IF YOU HAVE EVER KNOWN THE FEELING OF UTTER HOPELESSNESS OF NOT BEING ABLE TO DIRECT YOUR OWN DESTINY, THEN YOU MAY BE ABLE TO IDENTIFY SOMEWHAT WITH A PERSON WHO SEEKS ESCAPE FROM THIS FEELING WITH ALCOHOL, DRUGS, AND OTHER DESTRUCTIVE METHODS. COULD NOT SOME OF THE BASIC REASONS BEHIND ALASKAN NATIVE ALCOHOLISM STEM FROM THE FACTS THAT NATIVES' SELF-EXPRESSION AND SELF-DETERMINATION HAVE BEEN STIFLED? THAT THE NATIVE'S SELF-CONCEPT IS DIFFERENT FROM WHAT OTHER PEOPLE THINK SHOULD BE AND THAT THE STEREOTYPE IMAGE OF THE DRUNKEN NATIVE IS A VERY REAL FACTOR IN TODAYS SOCIETY'S ATTITUDE TOWARD THE ALASKAN NATIVE?

ITATION ARE BASED ON WHITE MIDDLE CLASS SOCIETY'S CONCEPT OF WHAT IS VALUABLE. THE NATIVE'S VALUE SYSTEM IS MARKEDLY DIFFERENT AND THESE SYSTEMS VARY FROM REGION TO REGION. THE WHITE-MANS TRADITIONAL MOTIVATING CRITERIA FOR EXAMPLE, OF A NICE HOME, A NICE CAR, A GOOD PAYING JOB, ETC. MAY BE ENOUGH TO ENTICE A PERSON WHO VALUES THESE MATERIAL THINGS TO ABSTAIN FROM ALCOHOL IN ORDER TO REACH THESE GOALS. WHAT ABOUT THE PERSON WHO'S MOTIVATION WOULD COME FROM THE CHANCE TO AGAIN LIVE AS A PART OF NATURE AND THE FEEL OF FREEDOM THAT COMES WITH THIS TYPE OF EXISTENCE, JUST AS THE ALASKAN NATIVES EXISTED FOR HUNDREDS OF YEARS. THESE ARE VERY REAL DESIRES AND VALUES AND A DIFFERENT APPROACH IS NECESSARY WHEN WORKING WITH SOME OF THOSE PEOPLE WHO FEEL THIS WAY.

NO ONE HAS MADE A CONCERTED EFFORT TO FORCE ASSIMILATION UPON OTHER ETHNIC GROUPS WHO WERE DEFEATED UPON THE FIELD OF BATTLE, SUCH AS THE JAPANESE OR THE GERMAN RACES. TO THE CONTRARY, ALL EFFORTS WERE DIRECTED TOWARD HELPING THESE GROUPS TO REBUILD UPON THEIR OWN CULTURES AND VALUE SYSTEMS. WHY THEN, THIS SEEMINGLY URGENT NEED TO HAVE THE ALASKAN NATIVE BECOME AS ALL AMERICAN PEOPLE?

ALASKA NATIVE, EITHER ESKIMO, ALEUT, OR INDIAN ALCOHOLISM IS DIFFERENT AND THE DEFINITION OF THE PROBLEM AND METHODS OF CORRECTION MUST COME FROM THE NATIVE'S THEMSELVES. THESE MUST COME FROM YOU ALSO, WITH PROPER DIRECTIONS.

Figure 8

AVERAGE ANNUAL ALCOHOL DEATH RATES
FOR ALASKA NATIVES AND NON-NATIVES
FOR FIVE YEAR INTERVALS 1950-1974

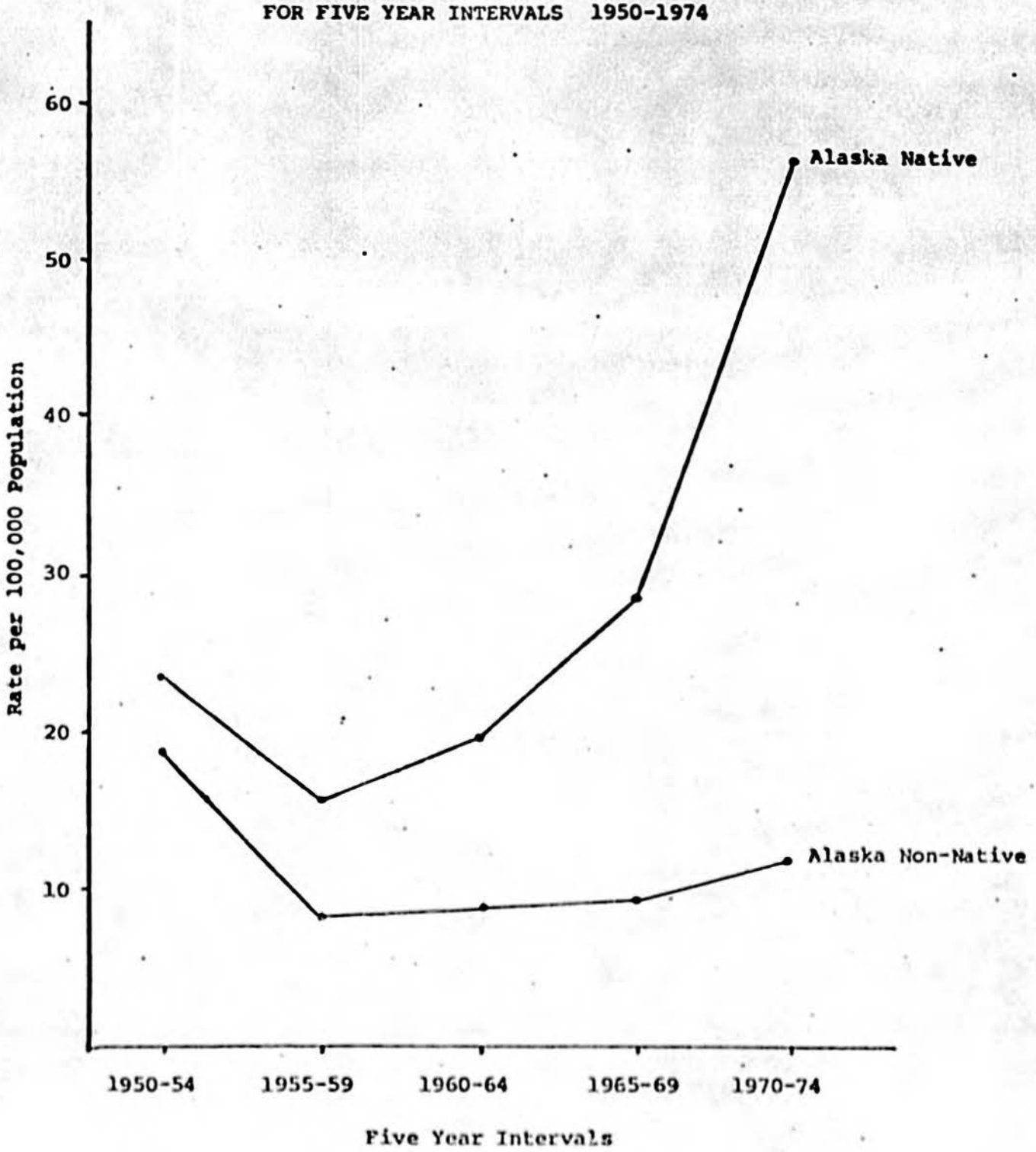


Figure 6

AVERAGE ANNUAL HOMICIDE DEATH RATES
FOR VARIOUS AMERICAN POPULATIONS
FOR FIVE YEAR INTERVALS 1950-1974

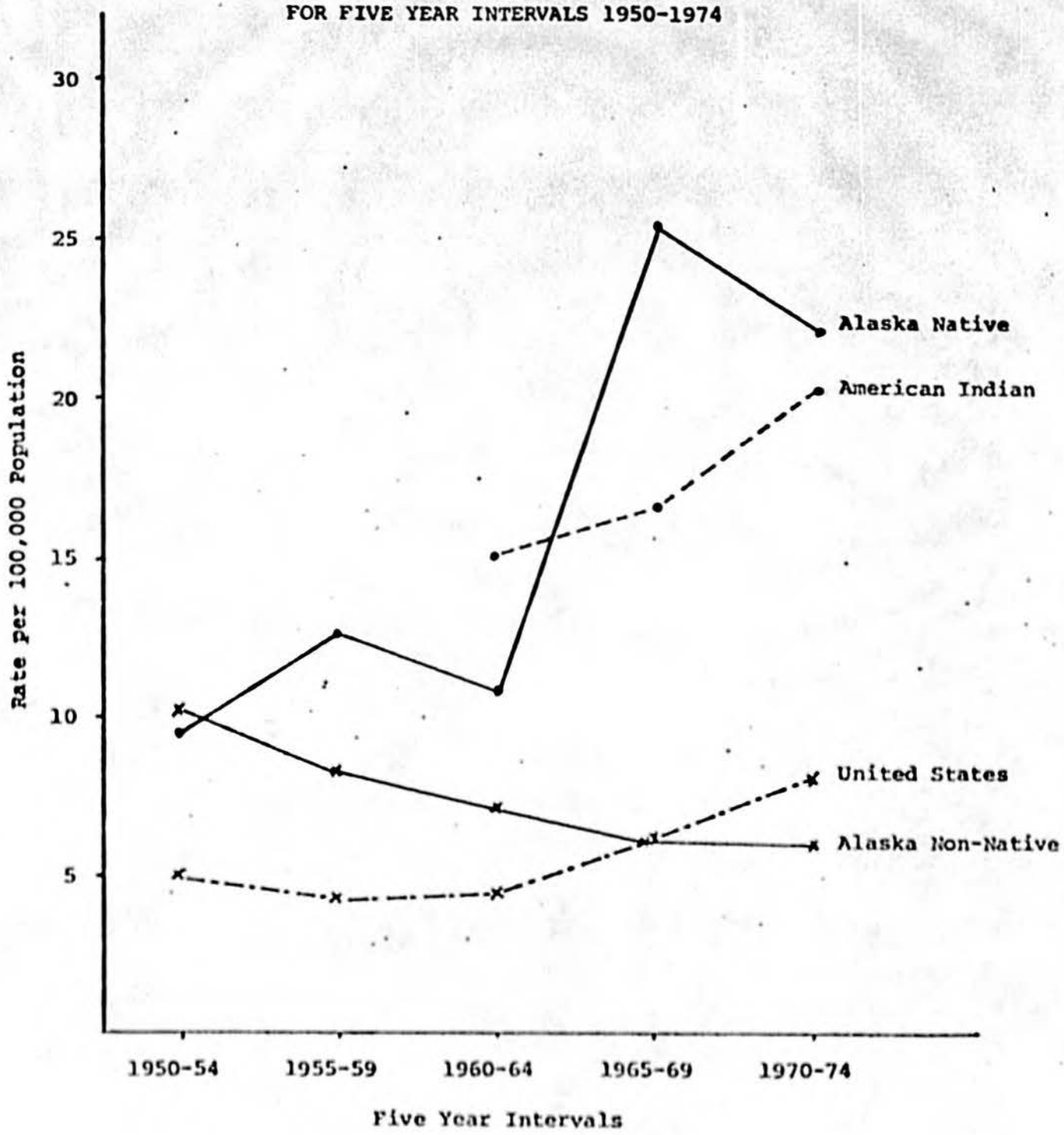
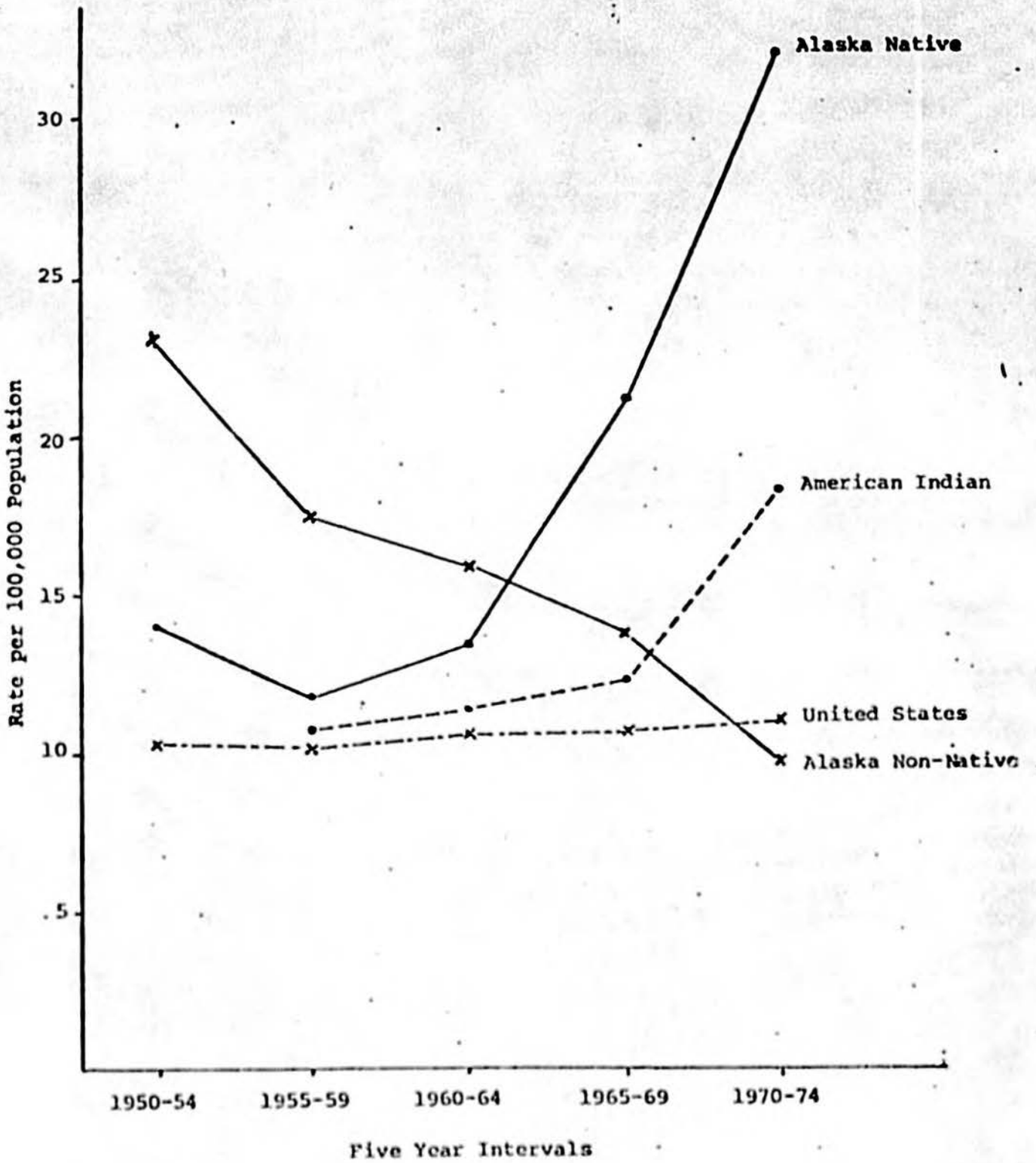


Figure 7

AVERAGE ANNUAL SUICIDE DEATH RATES
FOR VARIOUS AMERICAN POPULATIONS
FOR FIVE YEAR INTERVALS 1950-1974



9/21/77 Meeting with Dr. Leigle - U of A - Center for Addiction Studies

- U of A several years ago offered course on responsible drinking > in a party situation / Current liability problem / also curtailment peaks then over period of time dwindles
- NIAAA now getting away from resp drink. programs - has undergone program emphasis change
- Need in Alaska > ① treatment program standards / Guidelines ② re define treatment, client (ie PI, alcoholic, problem drinker, abuser etc). ③ more training on ~~continuous~~ continuous upgrade of skills ④ certification for personnel Consider reciprocation
- Rural vs Urban ~~Discussion~~ Discussion -

Why the natives / Villagers abuse alcohol

FRUSTRATION: 1) restrictive subsistance Hunting / Fishing
2) White minority run services
3) " " " Education traditional pattern - hard village for kd. reentry into village life difficult
4) Missionary impact > the way you live not good!! —
5) transition to cash economy welfare mentality demands to work create restraints to subsistance Hunt / fish life style low job opportunities
6) Climate

- Recommends getting Russell Smart's Reports (Addiction Research, Ontario) ie. Legal Ages & Drinking Also back issues of The Journal

- Legislative Recommendation:
  Develop Plan
    - effective date after base line period
      survey & data of current status
      so can measure effectiveness of act.
    - 2 year life - reevaluate
    - Mandate - changes & up dating

Materials made available to committee
- Alaska Death rate statistics
- Statement to trainees re: bush work
- "Do It now Foundation" Publications/Re Drug & Alcohol abuse
- Reprint digest of legislative effort to
  reduce problems &
  - Definitions: Alcoholism, Problem Drinking

MS 9/21/77

also discussed style of drinking/drinking patterns
suggested locating research on why people
don't drink & do drink -

Dr. ~~Singh~~ Segal (275-5522
Call NCA — X131)
<30-Hour>
Alcohol in my
<Land in "Canada">

<Dr. Robert Krause>

NCA —

Commissioner
Frank
Williamson

To Marcie

Date 10/21 Time ~~12:20~~

WHILE YOU WERE OUT

M Dr Seagal

of

Phone
Area Code Number Extension

TELEPHONED	✓	PLEASE CALL	
CALLED TO SEE YOU		WILL CALL AGAIN	✓
WANTS TO SEE YOU		URGENT	
	RETURNED YOUR CALL		

Message

Operator

Reginal Smart &
Conference on Alcohol
Legislation
available to come to Alaska
early part of January
as Service to Legislative
Committee

Evaluation Studies
Pattern of use
availability of Alcohol
& drinking
Age Patterns
will mail info to us —

272-5532X

10/21
told him
not interested

PLEASE NOTE: THE PRECEDING PAGES WERE TREATED AS A UNIT IN THE ORIGINAL DOCUMENT.

SCOMM

#6:42

INVENTORYING AND PLANNING FOR ALCOHOLISM AND ALCOHOL ABUSE SERVICES IN THE MUNICIPALITY OF ANCHORAGE

July 14 -15, 1977

MUNICIPALITY OF ANCHORAGE
George M. Sullivan, Mayor
Department of Health and Environmental Protection
Robert A. (Bert) Hall, Director

INVENTORYING AND PLANNING FOR ALCOHOLISM AND ALCOHOL ABUSE SERVICES IN THE MUNICIPALITY OF ANCHORAGE

July 14 - 15, 1977

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