

Phases in the Drinking History of Alcoholics

Analysis of a Survey Conducted by the Official Organ
of Alcoholics Anonymous

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The study of the genesis of alcoholism seeks, as a rule, such landmarks in the personality development as may indicate the problem which the individual attempts to solve by means of intoxication. There may or may not be a further attempt to understand why the alcoholic man or woman chooses this particular solution instead of some other means. Supplementarily there is usually a search for environmental elements which presumptively foster such artificial adjustments as habitual inebriety.

Thus etiological research on what is commonly called alcohol addiction but less pretentiously may be designated as habitual inebriety* concerns itself primarily with psychodynamics leading up to - and social factors which may precipitate - gross inebriety. The weight is nearly all on the prealcoholic phase of alcoholism. The drinking career receives little attention in such studies. Phases of inebriety, forms of drinking, changes in the drinking pattern and even changes other than drinking habits occurring in the course of inebriety, do not appear to be regarded as significant landmarks in the development of alcoholism. Drinking histories of sorts are nearly always obtained but they are limited to such questions as the time heavy drinking began, what and how much the drinker consumed and how frequently, what kind of relief or discontent was brought about by drinking, why - if ever the drinker went "on the water wagon" and whether there had been any hospitalization because of alcoholism. Such data are gathered routinely and seldom form the basis for any theoretical elaborations. There are, nevertheless, some investigators who see significance in the drinking behavior itself. Tiebout's thoughtful paper on the syndrome of alcohol addiction# is one of the exceptional instances.

* The term addiction conveys to many the idea of a physiological process but in the case of alcohol there is no evidence for such a process.

Tiebout, H.M. The Syndrome of Alcohol Addiction. Quart. J. Stud. Alc. 5: 1945.

As the etiological research on inebriety is, by and large, carried out by psychotherapists it is quite understandable that the emphasis is on the psychological aspects leading to alcoholism and that little attention is given to the drinking behavior. The therapist proceeds from the assumption that the function of alcoholic intoxication is to solve a personality conflict. Consequently, the therapist explores his patient with a view to discovering this conflict, bringing it to the awareness of the patient, and enabling him to adjust to it normally. This therapeutic preoccupation explains but does not justify the lack of interest in the drinking history. A conflict that leads to alcoholism is present in many alcoholics, but by no means in all of them. A study of the drinking history could possibly reveal relevant factors in the development of inebriety when the prealcoholic psychodynamics do not seem to yield relevant information.

More importantly, a study of drinking behavior may furnish criteria for the diagnosis of potential alcoholics. Admittedly, the personality study of alcoholics does not enable one to recognize the man or woman who might become an alcoholic.

The psychotherapist proceeds largely empathically. He can produce empathy in spheres in which he has had some analogous experience. He can have insight into the personality conflicts which led his patient to alcoholism. The psychotherapist has not the empathy but he has also the background which makes it possible to see the significance of the empathic gleanings and to utilize them therapeutically. But the therapist lacks empathy for the psychological repercussions of gross excessive drinking; he has not experienced them, nor can he find anything even analogous in his experience. Consequently, he tends to overlook the possible significance of drinking behavior and its psychology.

Recovered alcoholics, on the other hand, with the rare exception of those who may have had psychiatric or psychological training, lack the background which would enable them to see the significance of psychological factors not overtly connected with drinking. But they are in a position to understand the relevance of apparently insignificant drinking behaviors, to see in them the reflections of struggles through which they themselves have gone. Their particular background enables them to utilize this understanding therapeutically. Nevertheless, they probably overestimate these factors as much as psychologists underestimate them.

The practical disregard of the drinking behavior by psychologists and psychiatrists may contribute to some extent to the mixed feelings with which they are regarded by alcoholics and recovered alcoholics. Members of Alcoholics Anonymous see their own experience duplicated day in, day out by the many inebriates who come to them for help. Again and again they hear about those drinking incidents and behaviors which in their own cases seemed significant to them. The older members of that informal organization of recovered alcoholics, no doubt, would like to see some systematization of the knowledge derivable from the drinking history. It is, presumably, because of this that the Grapevine, now the official organ of Alcoholics Anonymous, published in its May

1945 issue a questionnaire designed for members of Alcoholics Anonymous. The object of the survey was to gather information on the ages of alcoholics at the times of certain events which the designers of the questionnaire assumed to be of significance in the drinking history of the alcoholic. The data obtained were to be used for establishing the significance of certain behaviors and what may be called a phaseology of alcoholism. The questionnaire is reproduced here in its original wording.

Text of the Grapevine Questionnaire

The purpose of this questionnaire is to ascertain at what age the incidents or experiences listed below first happened. The order in which they are set down may not accord with your own experience, but please fill in the year after the item anyway. If you never had a particular experience, leave the space blank. The samples are intended to be suggestive only and are in no way definitive.

At What Age Did You First:

1. Get drunk? (No example or illustration is attempted or necessary. If you were ever drunk you will know what we mean)
2. Experience a blackout? (Example: Wake up in the morning after a party with no idea where you had been or what you had done after a certain point)
3. Start sneaking drinks? (Example: Take a quick one in the kitchen without anyone seeing you when you were pouring drinks for guests)
4. Begin to lose control of drinking? (Example: Intend to have only a couple and wind up cockeyed)
5. Rationalize or justify your abnormal drinking? (Example: Excuse your drinking on the ground that you were sad, or happy, or neither)
6. Attempt to control your drinking by changing its pattern? (Example: Deciding to drink only before dinner)
7. Attempt to control your drinking by going on the wagon?
8. Act in a financially extravagant manner while drinking? (Example: Cash-ing a check for more than you need and spending all of it without getting anything for it except a hangover)
9. Start going on week-end drunks?
10. Start going on middle-of-the-week drunks?
11. Start going on day-time drunks?
12. Take a morning drink? (Example: Feel the need of and take a drink the first thing in the morning in order to get yourself going, or "for medicinal purposes only")
13. Start going on benders? (Example: Staying drunk for more than a day without regard for your work or your family or anything else)
14. Develop indefinable fears?
15. Experience acute and persistent remorse? (Example: Realizing that you have made a fool of yourself while drinking without being able to shake the realization off)
16. Develop abnormal and unreasonable resentments? (Example: Going into a rage because dinner wasn't ready the minute you got home)
17. Commit antisocial acts while drinking? (Example: Pick a fight with a stranger in a saloon for no justifiable reason)
18. Realize that your friends or family were trying to prevent or discourage your drinking?
19. Become indifferent to the kind or quality of the liquor you drank so long as it did the business?
20. Experience uncontrollable tremors (i.e., the jitters, the shakes, or whatever your pet name is) after drinking?

21. Resort to taking sedatives to quiet yourself after drinking?
 22. Seek medical advice or aid?
 23. Seek psychiatric advice or aid? (This includes advice or aid from any adviser, such as a minister, a priest or a lawyer, as well as from a psychiatrist)
 24. Have to be hospitalized as a result of drinking?
 25. Lose a friend as the result of drinking?
 26. Lose working time as the result of drinking?
 27. Lose a job as the result of drinking?
 28. Lose advancement in a job as the result of drinking?
 29. Use alcohol to lessen self-consciousness concerning sex?
 30. Attempt to find comfort in religion?
 31. Desire to escape from your environment as a solution for the drinking problem? (Example: Deciding that all would be well if only you could get a job in Chicago instead of having to go on working in New York)
 32. Start solitary drinking?
 33. Start to protect your supply? (Example: Buying a quart on the way home so you would be sure to have a drink in the morning)
 34. Admit to yourself that your drinking was beyond control?
 35. Admit to anyone else that your drinking was beyond control?
 36. Reach what you regard as your lowest point?
- Please state the following: (a) Present age (b) Sex

After the questionnaires were returned, the editors of the Grapevine requested me to prepare a statistical analysis of the data. I have undertaken this work with great interest but also with many misgivings. Statistical thinking should not begin after a survey or an experiment has been completed but should enter into the first plans for obtaining the data. In the questionnaire under consideration this requirement was neglected.

Frequently, when a questionnaire is decided upon, the only consideration underlying it is that "we must have some information on this matter." But it would be good to pause and to reflect a bit on certain implications, and even on some entirely obvious and common-place ones. By skipping over what is commonplace one is liable to lose sight of those requirements which flow from it. If an expert were to point out to the devisers of a questionnaire that they are distributing it to a large number of people because they are anticipating a possible wide variation of replies, he would probably be told with some irony that for such a "startling" statement they did not need an "expert." Of course they are expecting wide variation, otherwise they would simply ask their questions of one person, or they might even know the answers without asking. It is necessary to stress these commonplace reasons for questionnaires because all the requirements of the questionnaire flow from this banal fact of variation.

The object of statistical analysis is not to analyze "figures" as is commonly thought, but to analyze variation. Surely the main object of the surveyors cannot be the mere description of variation. They cannot be satisfied with a statement of, let us say, how many per cent of the alcoholics reach the compulsive stage after 5 years, how many per cent after 10 years, and how many per cent after 20 years of drinking. Such information is by no means

irrelevant, but its usefulness is greatly limited. The questionnaire will yield the most useful information when it is so constructed as to permit of an estimate of those factors to which the variation may be reasonably assigned. In other words, to use the same example, at least some indications should be obtainable from the data as to the characteristics of those alcoholics who reach the compulsive state after a short or after a longer period of drinking. Thus the questionnaire must contain some basic categories by which the data can be analyzed. Such essential categories are lacking in the Grapevine questionnaire and this fact imposes a definite limitation on the analysis.

Another limitation is inherent in the small number of completed questionnaires. While 158 members of Alcoholics Anonymous filled in the forms, only 98 questionnaires of male alcoholics could be used.*

At the time the questionnaire was published the Grapevine had a circulation of about 1,600 copies. Thus 158 responses represent a return of approximately 10 per cent only. Such a small return gives rise to surmise on the possible selectiveness of the sample. On this score, however, I would be inclined toward optimism. The questionnaire was not printed separately but on the front page of the Grapevine. Since at that time group subscriptions predominated, individual members of any such group could not very well deprive other members of two pages of the magazine. This feature along would tend to bring about a great reduction in the number of possible returns.

The questionnaires were presented to members of Alcoholics Anonymous only. Interpretation of the data must be limited, therefore, to alcoholics of the same types as those which populate Alcoholics Anonymous groups. Since these types form a large and important proportion of all alcoholics the limitation is not a serious drawback. It would be awkward to reiterate this limitation in connection with every item of the analysis.

There is, on the other hand, a great advantage in the fact that all subjects were members of Alcoholics Anonymous. It is generally known that it is difficult to get truthful data on inebriate habits, but there need be no doubt as to the truthfulness of the replies given by an A.A.* to questions coming from his own

* Fifteen questionnaires were returned by female alcoholics and these were excluded from the analysis because on the one hand the number was too small to be analyzed separately, and on the other hand the data differed so greatly for the two sexes that merging the data was inadvisable. Seventeen questionnaires were not properly filled in as the subjects did not state their ages in relation to the questions, but simply answered with "yes" or "no." Twenty-eight members of one Alcoholics Anonymous group pooled their information and recorded their averages only.

* "A.A." is a form of brief reference to Alcoholics Anonymous in common use among members of that organization and increasingly adopted by writers in formal publications. It will be used occasionally in the present analysis in the interest of brevity.

group. This element of the survey is one of its greatest assets.

In view of methodological deficiencies and numerical limitations a detailed analysis of this material may not seem justified. The material is so suggestive of future possibilities, however, that it would appear not only useful but practically imperative to submit the data to students of alcoholism. There is every indication that questionnaires of this nature, if carefully devised, may yield valuable information and contribute toward the understanding of an aspect of alcoholism which heretofore has not received much attention. It is essential to devise questionnaires which may be suitable for yielding more definite information on this important but neglected aspect of alcoholism. A part of the analysis will be devoted to the determination of the contents and formulation of a revised questionnaire. This aim can be achieved through a critique of deficiencies of the present questionnaire and methodological considerations.

Selected Group Characteristics

The distribution of ages over various age classes and the characteristics of these distributions such as the arithmetic means, the medians and the standard deviations * for each item of the questionnaire are presented in Table 1.

No conclusions concerning the nature and sequence of phases of alcoholism should be drawn from the comparison of either the median or mean ages at various events. The reason for this caution will be explained later. In the analysis of phases occasional reference will be made to the data of Table 1, but the primary data for the determination of phases are not shown in this table.

On the other hand, the tabulated data contain much information on isolated events of the drinking history. A study of the percentage frequency ** of ages at a given event, discrepancies between mean ages and median ages, and the variation as characterized by the standard deviation, furnish some knowledge pertaining to alcoholics as a group.

It will be seen that in most instances there is only a small difference between the mean and median ages. For some items, however, the difference between mean and median ages is considerable. Thus, for instance, in this sample the mean age when the first "blackouts" occurred was 25.2 years against a median age

* The arithmetic mean is more commonly referred to as the "average." The median is the point dividing the distribution into the lower and upper 50 per cent of observations. Thus the median age is exceeded by 50 per cent of the ages while 50 per cent fall below it. The standard deviation is a measure of the variation around the mean. These three characteristics are expressed in concrete units. In the present analysis they are stated as years.

** Since not every event listed in the questionnaire occurred in the history of each of the 98 men and, in addition, some men could not recall their ages at some events, answers to the various items differ considerably in number. Because of this the table shows the frequency in each age class as a percentage of the number of men who stated their ages in answers to the specific question.

TABLE 1.—*Distribution of Ages Pertaining to Questionnaire Items*

Question	Number Not Reporting Event	Number Reporting Event Without Age	Number Reporting Age at First Occurrence of Event	PERCENTAGE OF MEN REPORTING AGE: BY 5-YEAR INTERVALS												60 and Over	Medians, Years	Mean, Years	Standard Deviation, Years
				10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59						
Present Age	—	—	98	—	—	1.0	2.0	8.2	19.4	30.6	20.4	8.2	6.1	4.0	46.3	43.2	8.1		
Age at first occurrence of																			
1. Getting drunk*	—	—	98	6.1	65.3	19.4	3.1	4.1	1.0	—	—	—	—	—	18.3	18.8	4.5		
2. "Blackout"	8	1	89	1.1	28.1	28.1	14.6	11.2	12.4	3.4	—	1.1	—	—	23.7	25.2	7.9		
3. "Sneaking drinks"	7	2	89	2.2	17.8	23.3	24.4	14.4	11.1	5.6	1.1	—	—	—	26.2	25.9	7.3		
4. "Loss of control"	—	3	95	—	15.8	23.2	21.0	21.0	8.4	8.4	1.1	1.1	—	—	27.6	27.6	7.6		
5. "Rationalizing"	16	1	81	—	6.2	23.5	18.5	32.1	8.6	7.4	—	3.7	—	—	30.3	29.2	7.4		
6. "Changing drinking pattern"	23	2	73	—	2.7	8.2	19.2	28.8	20.5	13.7	4.1	2.7	—	—	33.5	32.7	7.2		
7. "Water wagon"	16	2	80	—	6.2	13.7	21.3	23.8	23.8	10.0	1.2	—	—	—	31.8	30.7	6.5		
8. "Extravagant be- havior"	18	3	77	—	16.9	23.4	18.2	18.2	9.1	13.0	1.3	—	—	—	27.6	27.6	7.8		
9. "Week-end drunks"	24	—	74	—	18.9	20.3	24.3	16.2	8.1	9.5	1.4	1.4	—	—	27.2	27.2	7.5		
10. "Midweek drunks"	19	1	78	—	3.8	21.8	15.4	30.8	14.1	9.0	2.6	2.6	—	—	31.5	30.4	7.9		
11. "Daytime drunks"	13	—	85	—	4.7	16.5	22.4	25.9	15.3	9.4	3.5	2.4	—	—	31.2	31.0	7.9		
12. "Morning drink"	6	1	91	—	8.8	14.3	26.4	23.1	16.5	4.4	4.4	2.2	—	—	30.1	29.9	7.8		
13. "Benders"	9	—	89	—	6.7	13.5	20.2	23.6	16.9	10.1	5.6	2.2	1.1	—	32.0	31.8	8.6		
14. "Fears"	24	2	72	—	2.8	15.3	13.9	23.6	20.8	16.7	4.2	1.4	1.4	—	33.8	32.9	8.1		
15. "Remorse"	7	—	91	—	2.2	13.2	19.8	25.3	22.0	11.0	4.4	2.2	—	—	32.9	32.2	7.4		

* 1 per cent below the age of 10.

PERCENTAGE OF MEN REPORTING AGE: BY 5-YEAR INTERVALS

	<i>Number Not Reporting Event</i>	<i>Number Reporting Event Without Age</i>	<i>Number Reporting Age at First Occurrence of Event</i>	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60 and Over	Median, Years	Mean, Years	Standard Deviation, Years
16. "Resentments"	28	1	69	—	—	14.5	18.8	20.3	24.6	14.5	4.3	1.4	1.4	—	34.0	33.1	8.0
17. "Antisocial behavior"	38	—	60	—	6.7	21.7	18.3	15.0	15.0	15.0	5.0	1.7	1.7	—	31.2	31.3	9.2
18. "Family disapproval"	3	—	95	—	8.4	14.7	24.2	18.9	18.9	8.4	4.2	2.1	—	—	30.6	30.5	8.1
19. "Indifference to quality"	12	2	84	—	10.7	17.9	14.3	25.0	19.0	9.5	3.6	—	—	—	31.5	30.0	8.0
20. "Tremors"	7	1	90	—	1.1	10.0	21.1	30.0	21.1	8.9	4.4	2.2	1.1	—	33.0	32.7	7.4
21. "Sedatives"	38	—	60	—	—	6.7	8.3	30.0	23.3	20.0	8.3	1.7	1.7	—	36.2	35.5	7.4
22. "Seeking medical ad- vice"	18	—	80	—	—	7.5	11.3	25.0	26.3	15.0	10.0	3.8	1.3	—	36.3	35.8	7.6
23. "Seeking psychiatric advice"	45	—	53	—	—	9.4	18.9	17.0	24.5	17.0	5.7	5.7	1.9	—	36.0	35.0	8.4
24. "Hospitalization"	37	1	60	—	1.7	1.7	18.3	16.7	23.3	23.3	6.7	6.7	1.7	—	37.5	36.8	8.1
25. "Losing friend"	27	8	63	—	14.3	15.9	15.9	25.4	12.7	9.5	4.8	1.6	—	—	30.7	29.7	8.6
26. "Losing working time"	4	4	90	—	10.0	13.3	26.7	14.4	22.2	5.5	4.4	2.2	1.1	—	30.0	30.4	8.6
27. "Losing job"	41	1	56	—	5.4	14.3	28.6	16.1	25.0	3.6	3.6	1.8	1.8	—	30.5	30.9	6.6
28. "Losing advance- ment"	38	4	56	—	1.8	17.9	33.9	16.1	21.4	1.8	3.6	1.8	1.8	—	29.5	30.6	7.8
29. "Sexual self-con- sciousness"	51	1	46	—	23.9	32.6	6.5	17.4	10.9	6.5	2.2	—	—	—	23.9	25.8	7.6
30. "Religious need"	37	1	60	—	1.7	8.3	11.7	26.7	15.0	18.3	13.3	1.7	3.3	—	35.5	35.7	8.9
31. "Desire escape en- vironment"	35	—	63	—	4.8	15.9	14.3	25.4	23.8	11.1	3.2	1.6	—	—	32.8	32.0	7.8
32. "Solitary drinking"	8	3	87	—	4.6	13.8	18.4	31.0	14.9	11.5	4.6	1.1	—	—	32.3	31.2	7.5
33. "Protecting supply"	20	1	77	—	5.2	5.2	23.4	24.7	23.4	10.4	6.5	1.3	—	—	33.4	32.5	7.6
34. "Admit to self inability to control"	—	—	98	—	—	6.1	6.1	22.4	23.5	20.4	11.2	7.1	1.0	2.0	38.4	38.1	8.7
35. "Admit to others in- ability to control"	7	—	91	—	—	5.5	5.5	13.2	25.3	26.4	13.2	5.5	3.3	2.2	40.0	39.5	8.5
36. "Reach lowest point"	1	—	97	—	—	1.0	4.1	16.5	24.7	29.9	11.3	4.1	6.2	2.1	39.7	40.7	7.8

of 23.7 years. The mean age, in this case, was pulled up through a few extreme ages and thus the median is more characteristic of this distribution.

A simple datum, namely the number of men reporting an event or trait (including those who did not recall their ages at the time of the event) is rather informative as to the commonness of its occurrence among alcoholic of the types represented in this survey. In some instances a small number of answers to a question may not reflect the true incidence of the event or trait under consideration but may give rise to reflections on some possible weakness of the questionnaire. In the course of the analysis these points will receive due consideration.

The Grapevine questionnaire contains material which dispels some current ideas about alcoholics and answers some questions which have been in the minds of many students of alcoholism. This incidental information will be dealt with briefly before entering on the analysis of the phases of alcoholism.

Age at Fully Established Alcoholism

It is a common statement that as a rule alcoholism in men is developed between the ages of 45 and 55 years. Such a statement is based on statistics of admissions to hospitals. Only mental hospitals keep records on first admissions and readmissions, but general hospitals do not make this distinction.

The mental hospitals reliably state that the average age of men admitted for the first time for an alcoholic mental disorder is around 45 years. From this average, which is reliable in reference to psychotic alcoholics, conclusions have been made as to nonpsychotic alcoholics. But not more than approximately 10 per cent of all alcoholics develop alcoholic psychoses and these 10 per cent form a highly specific stratum of the alcoholic population. Besides, it is not taken into consideration that the age at the time of first admission to a mental hospital reflects only the time the alcoholic psychosis became full blown but that the man could have been confirmed alcoholic years before the onset of the psychosis. The impression concerning the age of alcoholics as obtained from mental-hospital statistics is reinforced by the admission statistics of general hospitals. Reports based on records of such large institutions as the Bellevue Hospital of New York City or the Boston City Hospital show an average age of 43 to 45 years for men admitted because of some alcoholic disease. Such averages do not relate to "first admissions," but they are derived from data pertaining to men admitted from one to any number of times. Obviously this average, based on entirely heterogeneous data, does not permit of inferences relative to the age at which full-fledged alcoholism is reached.

The Grapevine questionnaire furnishes data on the first admission for alcoholic diseases. The mean age of those 60 men who had been hospitalized was 36.8 years at the time of their first hospitalization. Fully 38 per cent of the 60 men were less than 35 years old at the time of their first hospitalization and only 15 per cent were above the age of 45. The first hospitalization

because of alcoholism does not necessarily denote full-fledged alcoholism, but in the view of these observations a cautious revision of estimates relating to the ages of alcoholics is called for.

Another estimate of the age at fully established alcoholism may be obtained from the data pertaining to the last item of the questionnaire. This relates to the time when the alcoholic believes himself to have reached the "lowest point," or as A.A. members say, "hit bottom." The age for this event was recorded by all but one of the 98 men. The mean age was 40.7 years, and the median age was 39.7 years. The latter statistic shows that 50 per cent of the men had reached their "lowest point" before the age of 40. On scanning the frequency distribution of ages pertaining to this event it is seen that the "lowest point" was reached by nearly 22 per cent of the men before the age of 35, and nearly 25 per cent were in the age class of 35 to 39 years. Thus even the average age of 40.7 years at the time of reaching the "lowest point," does not adequately characterize the age at fully established alcoholism.

The question could be raised whether some of the A.A. members answering the questionnaire underestimated their ages at "lowest point." In answer to this question the frequency of distribution of the difference between age at "lowest point" and "present age" is shown in Figure 1. "Present age" is the age at the time of answering the questionnaire, that is, at a time when the alcoholic

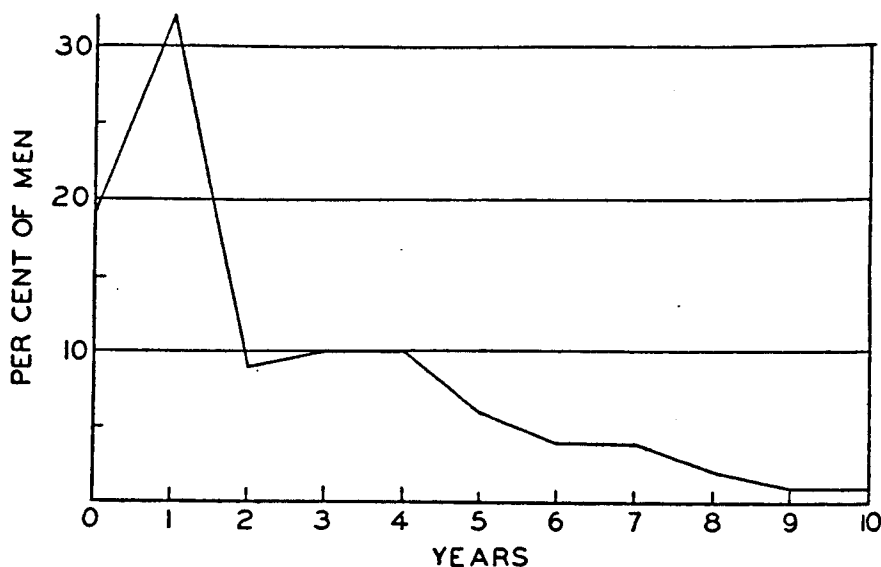


Figure 1. Frequency distribution of difference between age at "lowest point" and "present age."

was already in A.A. and thus past the "lowest point." It is seen from the frequency of distribution that exactly 50 per cent of the men were only a maximum of 1 year, and another 36 per cent not more than 5 years, past the "lowest point." These 86 per cent could hardly have underestimated their ages at the time of "lowest point." It could be suspected that the remaining 14 per cent, who were from 6 to 17 years past the "lowest point," furnished the incidence in the age classes 20-24 years and 25-29 years. Such is not the case. The one man in the 20-24 year age class was 24 at the time of answering the questionnaire, and of the four men whose "lowest point" fell into the 25-29 age class two men were 1 year, and the other two men 4 and 7 years, respectively, past the "lowest point" at the time of answering the questionnaire. Thus there is reasonable assurance that the distribution of ages at "lowest point" is not biased by underestimates.

Age Characteristics of Incipient Alcoholism

The number of men who may have started excessive drinking after the age of 30 was considerably smaller than would be expected on the grounds of common belief. While the questionnaire does not give data on the time heavy drinking began, the absence of all drinking behaviors (except first intoxication) and reactions before the 35th year is presumptive evidence that heavy drinking did not start before their 35th year.

Of greatest interest is the high incidence of youthful ages in events which denote the onset of alcoholism. It is seen from Table 1, for instance, that 29 per cent of the men had "blackouts" (amnesia for the happenings at the time of drinking) before 20 years of age. Before reaching their 25th year "blackouts" had occurred in 57 per cent of the men. If the "blackouts" do not occur only once or twice but rather frequently, they may be indicative either of some prealcoholic psychopathology or of pathology following frequent gross alcoholic excess.

"Loss of control" in the drinking situation, the factor which starts the process of alcoholism, occurred in 20 per cent of the men before the age of 20 years and in 39 per cent before the age of 25 years.

Such gross forms of inebriate behavior as "benders" and solitary drinking showed an incidence of approximately 20 and 17 per cent, respectively, below the age of 25 years.*

That these habits were of a considerable degree at the stated early ages is suggested by the fact that at the same ages a certain proportion of the men showed signs of social disintegration as reflected in "anti-social" behavior and loss of friends. Fully 30 per cent of the men who reported their ages for the specific event,

* Of the 98 men 9 did not report "benders" and 8 did not report solitary drinking, while 3 stated, without mentioning age, that they had "always been solitary drinkers." The percentages given here are based on the number of men who reported their ages for the beginning of the specific behavior.

or 20 per cent of the total sample, reported loss of friends because of drinking before the 24th year of age, "antisocial behavior" occurred below that age in 28 per cent of those who reported their ages for the beginning of that behavior, or in 17 per cent of the total sample.

These facts, particularly the early incidence of "loss of control," indicate that the inception of alcoholism may take place in perhaps one-third of the alcoholics between the ages of 17 and 21 years. All of this suggests that much could be done in intercepting incipient alcoholism in places where youths of these ages live in groups, for instance, in colleges. Detection of the onset of alcoholism and its interception is much more feasible at a time when more or less close group living prevails than at times when domicile becomes less delimited and mode of life becomes more individualized. A survey of drinking habits and the incidence of incipient alcoholism in colleges seems fully justified by the data of the Grapevine questionnaire.

Indications of Prealcoholic Maladjustment

An estimate may be derived from the data on the minimum incidence of prealcoholic maladjustments and perhaps neuropathology through the incidence of gross drinking behaviors and reactions to drinking at extremely youthful ages. The occurrence of "blackouts" at ages between 15 and 17 years, even though it may be known whether they occurred only once or several times, leads one to suspect that some form of prealcoholic psychopathology must have been present. And if the "blackouts" appeared at these ages in conjunction with other gross forms of drinking behavior which otherwise develop only after many years of excessive drinking, one can hardly go amiss with the assumption that these boys were psychological deviants even before they became acquainted with liquor.

The occurrence of "extravagant behavior," "daytime drunks," "midweek drunks," "losing jobs because of drunkenness" and "sneaking drinks" at ages between 15 and 17 years is regarded in this study as indicative of prealcoholic psychopathology. Getting drunk in the middle of the day is a behavior which, as a rule, occurs only after fairly long excess has demoralized the drinker. If a young boy, who could hardly have been drinking excessively for any length of time, shows this gross infraction of social taboos it may be taken for granted that not alcoholic excess made him irresponsible but that his irresponsibility led to excess. This holds also for the other behaviors mentioned as indicators of early major psychopathology.

There were 22 men among the 98 alcoholics in this study who, between the ages of 15 and 17 years, had either "blackouts" and at least two other of the gross drinking behaviors referred to above, or no "blackouts" but at least three other signs of early psychopathology. These 22 men will be referred to in the analysis as the prealcoholic deviants. There may have been a considerably greater number of men with some prealcoholic psychopathology in this sample, but in the absence of other types of data on which a

tentative diagnosis could be based their numbers could not be estimated. Thus the estimate of a 22 per cent incidence of prealcoholic psychopathology among the men in this study represents a minimum estimate.

Data on the Care of Alcoholism

Some incidental information on the care of alcoholism is contained in the data of this survey. There are some statistics hitherto not available; for instance, the proportion of alcoholics seeking psychiatric advice and of alcoholics seen by private practitioners. The question as to the proportion of alcoholics not hospitalized has also been in the minds of students of alcoholism.

It was mentioned before that 62 per cent of the men in this survey were hospitalized because of some alcoholic disease. This leaves 38 per cent not hospitalized. Whether this may be accepted as a general estimate of the proportion of alcoholics who never reach a hospital, or whether it applies only to those who at some time join Alcoholics Anonymous, cannot be decided. It must be considered that at least some of the men who had never been hospitalized for an alcoholic disease might have reached the hospital sooner or later if they had not joined Alcoholics Anonymous. The nonhospitalized men averaged 40.6 years at the time they joined Alcoholics Anonymous. At least one-third of these men would otherwise have been hospitalized after that age, leaving the proportion of nonhospitalized alcoholics at a maximum of 25 per cent. On the other hand the alcoholic who joins Alcoholics Anonymous has had, at any time before joining, in spite of all disintegrative processes, more ties with family and friends than, for instance, the type of alcoholic derelict who turns up at Salvation Army posts. The latter type has a much smaller chance to be taken to a hospital by friends or relatives; he reaches the hospital perhaps only if and when he has delirium tremens. The rate of nonhospitalization among this type of alcoholic may be considerably greater than among the types represented in Alcoholics Anonymous. In the entire alcoholic population the proportion of those who are never hospitalized for an alcoholic disease may be somewhere between 25 and 40 per cent. The question of the proportion of alcoholics never hospitalized merits a thorough survey, for there is hardly an alcoholic who, at one time or another, does not develop physical complications requiring medical attention. While the general hospital does not provide treatment of the alcoholic behavior, the medical care which it affords is an essential part in the entire program of rehabilitation of inebriates.

The questionnaire gives information also on the proportion of alcoholics seeking psychiatric and medical advice and the age distribution at the time of first interviews. These data pertain strictly to the kind of population from which this sample has been drawn and cannot be applied to alcoholics in general.

In the present survey 54 per cent of the men had consulted psychiatrists and nearly 82 per cent had consulted general practitioners. The fact that the proportion of the men who had

sought psychiatric advice was considerably smaller than those who sought medical advice would suggest that the alcoholic is more inclined to admit that his drinking may impair his bodily health than that his drinking behavior may have originated in psychological deviations or may have led to them. This suggestion may be valid to some extent but it does not fully explain the discrepancy between two proportions. There enters here the question of availability of psychiatric service. In metropolitan areas psychiatrists are easier to find than in small towns and in the latter the significance of psychiatric service has been less well published. The economic status of the alcoholic also would be a factor in his choice between the family doctor and a specialist.

Since the questionnaire does not reveal the locations of the men or their economic status, the sample cannot be analyzed according to these categories. But there is one important fact which emanates from the analysis of the age distributions at the time of first consultations. Fifteen men were in their twenties when they first consulted physicians (that is, approximately 19 per cent of those reporting this event) and, equally, 15 men were in their twenties when they first visited a psychiatrist (28 per cent of the men reporting this event); but these two events, with a few exceptions, did not occur in the same young men. In this sample, consultation of physicians by men in their twenties took place on the average 13.5 years ago (i.e., before the date of the questionnaire) while it was on the average only 7.4 years ago that men in their twenties consulted psychiatrists. This difference strongly reflects the advancing education of the public to the recognition of the psychiatric aspects of living. Without the consideration of the calendar year in which the event took place the occurrence or nonoccurrence of psychiatric consultations at youthful ages cannot be regarded as an indication of the presence or absence of early maladjustments. And, as mentioned before, the factors of location and economic status must also be considered.

In this first section of the analysis only a few aspects of the questionnaire have been presented, and only those which could be discussed profitably in connection with the analysis of the phases of the drinking history. Other high lights of the data of Table 1 are more or less closely related to the discussion of "phases" and will be duly considered in that connection.

THE ANALYSIS of PHASES

Relevance of the Questionnaire Items

The various behaviors listed in Table 1 fall into several categories. There are items which have been selected evidently to denote forms of full-blown alcoholic behavior, such as No.10, "midweek drunks"; No.11, "daytime drunks"; No.12, "morning drink"; No.13, "benders"; and No.32, "solitary drinking." Some items, particularly Nos.2 and 3, "blackouts" and "sneaking drinks," are presumably regarded as prodromal symptoms. Other items purport to show that the excessive habits have become established, as reflected in the struggles against them, notably Nos.6 and 7 which

relate to the attempts to control drinking either by "changing the drinking pattern" or by "going on the wagon." Several items serve the purpose of characterizing the degree of excessive drinking through the social consequences, such as questions 26 and 27 relating to loss of jobs and working time, question 25 relating to losing friends, etc. A group of questions gives evidence of the onset of physical changes incumbent upon excessive drinking. These include No.20, "onset of tremors"; No.21, "taking sedatives" and Nos. 22 and 24 pertaining to medical care required because of alcoholic diseases. An important complex of questions relates to the psychological sequelae of excessive drinking, as No.14, "developing indefinable fears"; No.15, experiencing "persistent remorse"; No.16, developing "unreasonable resentments"; and No.30, "attempt to find comfort in religion."

In many of the questionnaire items the relevance is self-evident; in others it must be investigated; and in some instances, while the relevance of the intent of the question must be admitted, it is not evident whether the execution of the question sufficiently safeguards the relevance. The analysis of relevance is part of the task of establishing the phases of alcoholism, but more prominently of the attempt to determine the requirements of a revised questionnaire.

The basis for establishing the relevance or significance of some of the behaviors listed in the questionnaire is not always as safe as could be desired. First, a survey of drinking behaviors among alcoholics requires comparative data pertaining to moderate drinkers of the same age range and of similar social and economic backgrounds as the alcoholics in the survey. Control data are required only for a few items of the questionnaire, as most of the behaviors are obviously specific to alcoholics only. There are included in the survey, however, a few drinking behaviors and reactions which may occur in moderate drinkers too. Unless the frequency and intensity of these few behaviors among moderate drinkers are known, the relevance of these specific behaviors to the drinking history of alcoholics cannot well be determined. Such control material is lacking in the present survey. The editors of the Grapevine are not in a position to secure such material but it may be obtained in cooperation with some other organization. It happens that a member of the staff of the Laboratory of Applied Physiology, Dr. Anne Roe, informally interviewed a group of 31 scientists on a few aspects of their drinking habits. None of these men was an excessive drinker.* These interviews contain some comparative material which will be consulted occasionally. The small size of the control sample obviously limits its usefulness.

* Of the 31 men, one was a total abstainer. Of the remaining 30, some were rather moderate drinkers and others steady social drinkers, but none of them drank to an extent that would interfere with his work or health. The average age of these men was near to 40 years.

Another difficulty arises from insufficient definition of some of the questions and this leaves one in doubt as to the precise meaning of the answers. One would think that the terms "week-end drunks," "mod-week drunks," "daytime drunks," would not require definition or examples, yet the data suggests that there may have been some confusion on this score. Questions relating to the occurrence of fears and resentments need considerable elaboration in order to secure fairly complete answers. It seems probable that many of the men did not report "resentments" because they would not recognize certain of their reactions as expressing resentment, although in the psychologist's mind there would be no doubt about the meaning of these reactions. Sufficient examples, or perhaps indirect questions, may elicit adequate replies. The same remarks apply to the items on "antisocial behavior," "fears" and "religious need." The matter of formulation of questions will be taken up in detail whenever the analysis indicates the need for it.

The order of the questionnaire items is also a source of possible error. The best procedure is to leave the order of questions to chance. Any systematic sequence of questions may suggest the trend of the answers. The designers of the Grapevine questionnaire evidently proceeded in groups of items according to a preconceived or unconsciously dictated chronology. Fortunately that chronology was frequently interrupted by items which emerged perhaps as "after-thoughts." From the variation of the replies it would seem that the order of the items did not bias the results of this survey to any appreciable degree. In a revised questionnaire it would be desirable, however, to randomize the questions.

Lastly, but most importantly, the precise meaning of the data pertaining to some questions cannot be determined because their full meaning could be seen only in the light of some other questions which were not included in the questionnaire.

The lack of some simple background questions makes itself particularly felt. Thus there are no data on occupation, marital status, geographic location, and some characteristics of the community in which the alcoholic lived. These questions may seem to lead merely to routine labels. But these labels reflect certain attributes which could not be obtained through direct questioning. Some possibly highly important drinking behaviors as well as psychological reactions were also omitted although they could be ascertained through simple, direct questions. The omitted questions which are essential to an effective analysis of the data constitute quite a list. They will not be enumerated at this juncture but they will be dealt with as their lack becomes apparent in connection with the analysis of the survey material. In conclusion of the study, however, a tentative questionnaire will be submitted for future consideration.

Phases and Their Manifestations

Abnormal behaviors develop either in slow or rapid transitions from forms which in a given culture are designated as normal, i.e., accepted behaviors. The transitions are always present although occasionally they may be so rapid or so camouflaged that the

abnormal behavior gives the impression of sudden emergence. Such an impression may be due also to a lack of knowledge of the signs which indicate the process of transition. Since many or most of the processes leading to abnormal behaviors are reversible, and since, at least theoretically, it is easier to arrest these processes at their early than at their late stages, the study of the stages and their signs is no idle pursuit.

Only a sound-film camera which would penetrate even the unconscious could give an idea of the continuity of the processes leading to abnormalities. The fragmentary information produced by a questionnaire is extremely far removed from the continuous record made by that hypothetical camera. Nevertheless, such information may be of considerable value, particularly if its fragmentary nature is fully realized and the conclusions are kept within the limitations of the material. The questionnaire method, and even refined measurements and experiments, yield only isolated points situated on a continuous line. Occasionally there is an indication of the way in which these points may be connected. If these points and vague outlines are essentials of the process they may perform a useful function, but only so long as they are regarded as symbols of a process and not as the process itself. The relation of the symbols to the actual process is comparable to the schematic representation of a house and its relation to the house. The schematic representation serves as an orientation about the house but one cannot put furniture into the schematic representation and live in it.

The Grapevine questionnaire items which deal with the process of alcoholism begin at a point at which that process has been in the making for a considerable time. This is not by way of criticism, for even a schematic description of the entire process would involve points beginning at the birth of the individual. The tracing of changes in drinking behaviors and the attendant changes in emotional life and social relations deals only with a later section of the process of alcoholism, but it is quite justified to deal with it separately. The possibility of connecting the prealcoholic development with the drinking history should, however, be kept in mind. The difficulty of such a combination is that the prealcoholic history is reliably obtained only by psychiatrists and psychologists, while Alcoholics Anonymous is the best source for drinking histories on a large scale.

Even as a description of a part of the process of alcoholism the drinking histories under consideration begin too abruptly. The transition from the culturally accepted drinking behaviors to the first manifestations of what may be called at least exaggerated forms cannot be followed in these histories. Not every culturally deviant drinking behavior or reaction to alcoholic beverages denotes alcoholism. But great frequency and clustering of such behaviors may constitute the initiation of the process of alcoholism. As they stand, the drinking histories of the Grapevine shed little light on a possible preparatory phase of alcoholism, but they suggest a crucial or basic phase which may be valid for alcoholism in general.

Phases of psychological and social processes are abstractions which are arrived at through the persistence of some dominant

event or events over a period of time which frequently is of uncertain duration. The phase is regarded as completed when other events become more dominant. The events which characterize a phase, in other words, the elements of a phase, need not, and usually do not, become extinct in the subsequent phases.

A phase may be designated as the basic or crucial phase of a psychological or social process if it furnishes a sufficient condition for a practically unique development of that process. There are certain behaviors which are necessary prerequisites for the process of alcoholism yet are not sufficient behaviors for bring it about. Thus the use of alcoholic beverages is a necessary condition for alcoholism, yet only a small percentage of the users of such beverages become alcoholics.

Basic phase does not mean that it is not preceded by other behaviors relevant to the process. As a matter of fact the basic phase is itself the result of a development, but in contrast to antecedent behaviors, which may be of a preparatory nature, it is a critical development which limits the possible forms of future developments to a minimum.

Among the behaviors preceding the basic phase may be some which through their frequency and intensity indicate the imminent development of the basic phase. These behaviors, if less frequent and intense, may be of practically no significance, and even their great frequency and intensity indicate only that under given conditions the probability for the occurrence of the basic phase is greater than for its nonoccurrence. The recognition of such forerunners or prodromal symptoms is of great importance in the prevention of disorders of the individual and of society.

Between the initiating phase and the terminal phase of the process there may be behavioral developments which overlap to a degree that makes it impossible to determine the sequence of developments, or there may be a number of more or less clear-cut intermediate phases. When these more or less distinguishable intermediate phases are present there are usually present also some diffuse behaviors which may develop within any of the phases.

Behaviors may be regarded as denoting an intermediate phase if they occur predominantly after the basic phase, with only a small incidence of their occurrence before that phase. A second intermediate phase would have to show this property with reference to the first intermediate phase, and so forth. The intermediate phases must have, also, a definite relation to the terminal phase, that is, the manifestations of an intermediate phase should develop only in relatively rare instances in the course of the end phase.

Phases are not static; behavioral developments take place within them, so to speak, preparing the ground for the next phase. Some of these diffuse behaviors may denote individual phases in contrast to behaviors which characterize the phases in whole groups of individuals. It will be seen that certain clear-cut phases of drinking behavior are less predictive of the end phase than the appearance of certain diffuse behaviors.

The sequence of phases holds for the majority of individuals but not for every individual. The generalizations derived from the behavior of the majority gain in significance if the deviations of the minority can be reasonably explained. The feasibility of such

explanations depends upon the range of the recorded behaviors and the availability of background data.

As mentioned before phases can be distinguished only through their manifestations. Some of the manifestations may be more and others less characteristic of the phase. If, in the following discussion, phases are denoted by certain behaviors, that does not imply that they are regarded as the most characteristic elements of the phase but rather that in the present survey they are the only indicators of the development. Furthermore, the description of phases in this analysis refers only to phases which can be established from the Grapevine questionnaire and suggests neither that there are no other phases nor even that there are no more important ones.

The Determination of the Sequence of Events

The sequence of events must be determined individual by individual in order to find the proportion of men in whom event A occurred earlier than event B, in whom B occurred earlier than A and in whom B and A occurred at the same time. A comparison of the mean ages at the two events cannot answer the question of sequence satisfactorily. An example will illustrate this clearly.

Figure 2 shows the age distribution of 80 men at the time they first went "on the water wagon." Their mean age at that event was 30.7 years. The same figure shows also the age distribution of 73 men at the time they first tried to control excessive drinking by "changing the pattern of drinking." The mean age of the men at this event was 32.7 years. The difference between the two mean ages is statistically significant, i.e., it should not be attributed to chance variation. Thus one would say that the attempt to control drinking through "changing the pattern" belongs to a later phase of

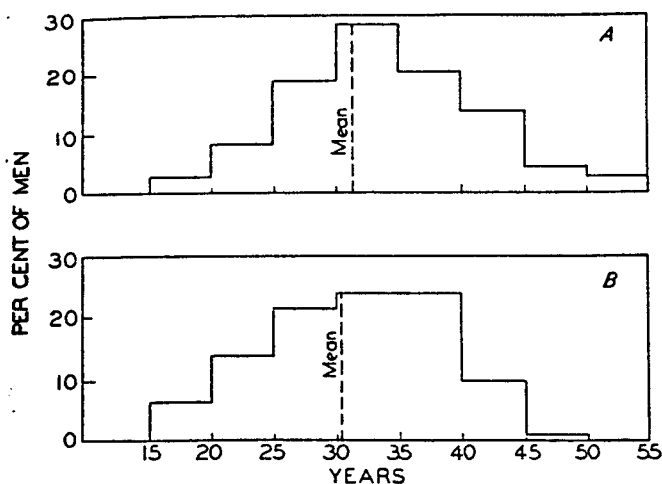


Figure 2. Age distribution of 80 men at the time they first "went on the wagon" (A) and of 73 men at the time of first effort to control excessive drinking by "changing the patterns of drinking" (B).

the drinking history than the phase which "going on the water wagon" belongs. That this is an unwarranted conclusion is seen on comparison of the data of those 63 men who reported both these events. The elimination of 17 men who reported only one of the two events changes the mean ages at either event quite negligibly. In this series of 63 men the mean age at "going on the wagon" was 30.8 years and at "changing pattern" 32.5 years, and the difference of 1.7 years is still statistically significant.* Thus even in this series the mere comparison of means would suggest that the two events may belong to two different phases. This conclusion is immediately invalidated when the differences between the ages at the two events are scanned individual by individual and arranged in a frequency distribution as shown in Figure 3. From this distribution it is seen that in 38 per cent of the 63 men both events took place at the same age, in 35 per cent "going off the wagon" occurred before "changing patterns," and in 27 per cent the

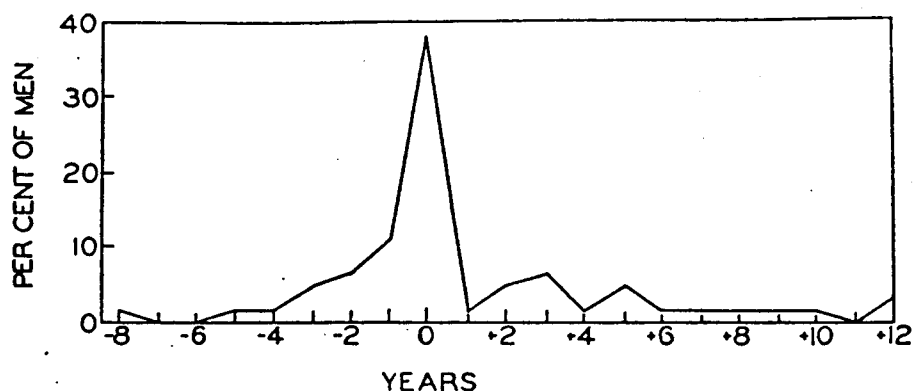


Figure 3. Difference between mean ages at time of "going on the water wagon" and time of "changing pattern of drinking."

latter event preceded the former. There are, thus, no grounds for assigning the two events to different phases. Nevertheless, as indicated by the statistical test, the difference between the mean ages is significant, but in a different sense. The men in whom "going on the wagon" occurred before "changing pattern" were, on the average, fully 7 years older at the latter event than the former, but the men in whom "going on the wagon" occurred later were only 2.4 years older at that event than at the time of "changing pattern." This is an age trend which is not attributable

* $t=2.47$ and for 62 degrees of freedom $.02 > P_t > .01$. Whenever tests of significance of the difference of means are carried out in this analysis, the t test for paired differences is applied. First, since in all determinations of sequence of events the individual differences must be computed, the data for the t test are conveniently available for computation. Second, all the variables of this study are more or less intercorrelated and thus testing the difference of the means through use of the standard errors of the means would involve the knowledge of the coefficient of correlation. The t test for paired differences takes account of the correlation without involving the coefficient of correlation.

to chance, yet has no bearing on the sequence of events. The age trend has certain relevance to the entire complex of questions dealt with here and will be touched upon later.

It is frequently necessary to relate a given event first to one and then to another event and lastly to both events simultaneously. Since for each event the number of reports differ, the percentages characterizing the sequence of two events may differ slightly according to whether two or three events are being compared at the same time. The greater the number of behaviors tested jointly, the smaller the number of men who can be included in the analysis, and thus it is entirely impractical to analyze all the 36 behaviors simultaneously.* In a sample of a few thousand the men reporting all of the events would still be considerable and could be used for a separate analysis, while in the men who did not report all of the events an analysis could be carried out on the significance of the absence of one or the other event. In the present survey the absence of an event in individual drinking histories cannot be taken as an indication of different drinker types, since in many of the questionnaire items insufficient formulation of the question may be responsible for the apparent absence of an event. The present analysis, with the exception of one or two events, must disregard the possible significance of the absence of certain events in some of the men and deal with sequences as if they applied to the whole sample. This leaves the description of sequences at a tentative level but may nevertheless be applicable to a fair majority of alcoholics.

Recourse was taken to correlation analysis as a means for the tentative evaluation of certain relationships. The ages at all the events of the drinking history were intercorrelated, as may be expected when events tend to occur in an approximate sequence. Nevertheless, the ages at certain events were much more highly correlated with the ages at some given events than with ages at other events, and from these differences, with due cautions, certain conclusions may be derived. Even the lowest of the correlation coefficients in this study are statistically significant, i.e., should not be attributed to chance.** Any elaborate correlation analysis, such as partial and multiple correlations, could not be carried out in this study because of the smallness of the sample and the fact that the various coefficients were obtained on samples of different sizes.

*The analysis of variance and covariance would be the ideal technique for at least an important aspect of the phase analysis. However, the unequal number of readings for different variables excludes those features of the analysis of variance which are of the greatest value to the phase analysis, such as the determination of trend homogeneity or heterogeneity.

** The significance of correlation coefficients was determined in this analysis through Fisher's z transformation and the standard error of z. By this criterion probabilities of less than .01 attached even to the lowest coefficients of correlation.

The Basic Phase of Alcoholism

The earliest datum pertaining to the drinking history in the Grapevine questionnaire is the age at the "first drunk." Obviously this is not the basic phase in the development of alcoholism. First, perhaps the majority of moderate drinkers have been at least slightly intoxicated on some occasion. Second, the age at first intoxication does not indicate that regular drinking had started at that age, as years may have gone by without even another drink. Third, at the time of the "first drunk" 72 per cent of the men in this survey were below the age of 20 years and thus the variation of ages at this event cannot account for the wide variation of ages at other events.

The fact that the mean age at first intoxication in this sample was 18.8 years is striking. One would surmise that such a great incidence of early first intoxication might be a group characteristic of men who become alcoholics. This is an instance of need for control data. In the absence of any standard control material recourse may be taken to Dr. Roe's small sample of moderately drinking scientists. Of these moderate drinkers 20 per cent reported they had never been intoxicated. But those who had been intoxicated averaged 19 years at the first intoxication, and in over 50 per cent of them this event took place below the age of 20 years. The occurrence of intoxication at a youthful age would thus not appear to be a prognostic datum for the individual, nor would a high incidence of youthful ages at that event seem to be a group characteristic of alcoholics. In view of the small size of the control sample this is hardly more than a suggestion. By far more sampling among moderate drinkers of the same age and social background as the alcoholics is necessary to answer this question adequately. At any event it seems that frequently the first intoxication is experienced on the first occasion of drinking and that the age at this event is of no particular predictive value for future behaviors. Thus some more significant early drinking behaviors must be sought.

There is a gap in the information between the age at first intoxication and the age at the appearance of gross forms of drinking behavior. The questionnaire contains no item pertaining to age at the beginning of frequent use of alcoholic beverages, nor to age when frequent intoxication began to occur. While such data would not furnish the basic or initial phase they would greatly facilitate the interpretation of certain drinking behaviors which in this survey are not sufficiently delimited, and they would suggest the transitions from simple drinking behaviors to gross forms of drinking.

Information is also lacking on some drinking behaviors which possibly could represent even the basic phase or perhaps later phases, but in any event are essential features of the drinking history. Thus there are no questions relating to age at change in either psychological or gastric tolerance to alcohol and the concomitant changes in drinking habits. Supplementarily, the age at change in nutritional habits could shed some light on critical points in the drinking history.

"Loss of Control" and "Week-end Drunks"

Next to the mean age at "first drunk" are three items with mean ages above 25 years but below 26 years. These are the first occurrence of "blackouts," starting to "sneak drinks" and beginning to drink in order to "lessen self-consciousness concerning sex." None of these events can serve to denote the basic phase of alcoholism.

The question relating to self-consciousness in sexual matters was answered by less than half of the men. This is the type of question to which satisfactory answers cannot be obtained directly but only through indirect questions, as ideas of sex inferiority are for the most part not overt. The question may be relevant, as undoubtedly the motivation of drinking has some relation to the development of alcoholism. The number of answers is too small to be useful, especially since the number would dwindle on relating this event to some other event and since the absence of the answer could not safely be regarded as an indication of the absence of this characteristic.

A "blackout" is not a drinking behavior but a reaction to drinking. It is a significant reaction and will be duly considered in the course of the analysis, but as an isolated event it is insufficient for the characterization of the basic phase. If "blackouts" run consistently together with other events, that group of events may characterize the basic phase.

According to the mean ages listed in Table 1 the next events in the drinking histories are "loss of control," "week-end drunks" and "Extravagant behavior" with mean ages of 27.6, 27.2 and 27.6 years respectively. It should be recalled that the ages in all instances refer to the first occurrence of the event.

The development of extravagant behavior, which the questionnaire restricts to financial behavior, may reflect the impact of the drinking excess on the personality and thus may be the element of a phase, but it is not an element which could suggest the direction in which future drinking behaviors may proceed. The position of "extravagant behaviors" among other behaviors, however, will be examined.

"Loss of control," as defined by the questionnaire, means that when the drinker is in a drinking situation he cannot stop at one or two drinks, but usually ends up drunk. But it does not mean that he has no control over whether or not he will drink at all. That is, "loss of control" does not denote full-fledged alcoholism, the state in which the drinker is induced by an irresistible need for intoxication to terminate a condition of sobriety.

The occurrence of "loss of control" in the drinking situation may be sufficient condition for the development of alcoholism. The drinker who loses control over the drinking situation will be more or less intoxicated on every drinking occasion, and if the occasions are frequent he will gradually lose control not only within the drinking situation but also over the occasions for drinking. At the beginning of "loss of control" the drinker could choose not to drink at all, but he cannot choose to be a moderate drinker. In this connection it may be mentioned that all of the 98

men in this sample reported "loss of control" (3 could not recall their ages at the time of occurrence), but none of the moderate drinkers of Dr. Roe's sample had experienced "loss of control," although several had experienced "blackouts."

The basic nature of "loss of control" may have to be limited to the sample under consideration. Of all events recorded on the questionnaire, "loss of control" is the earliest which furnishes a sufficient condition for the development of alcoholism. A survey covering a greater variety of drinking behaviors may reveal an earlier sufficient condition. It is impossible, for instance, that "loss of control" is preceded by a considerable increase or a considerable decrease of alcohol tolerance. It is just as possible that the tolerance phenomena developed after the "loss of control." In the absence of data on these points the beginning of "loss of control" is tentatively designated as the basic phase of alcoholism. Its utility as a point of orientation will be tested in this analysis.

The indulgence in "week-end drunks" seems to signify to the designers of the questionnaire the first step in excessive drinking. Not more than 75 per cent of the alcoholics in this survey reported persistent "week-end drunks" although "midweek drunks" were reported by 80 per cent and "daytime drunks" by 87 per cent of the men.

The average age of the 74 men at the time they began to go on "week-end drunks" was 27.2 years. This is close to the average age at the time of beginning to lose control in the drinking situation, namely, 27.6 years. Without further examination one would be inclined to assume that "loss of control" develops either shortly after or in the course of week-end drinking bouts. When the data are scanned man by man, it is found that 27 men began losing control on the average 4 years after starting "week-end drunks" and that, on the other hand, 26 men had lost control on the average 5.7 years before going on week-end bouts. The remaining 21 men reported the two behaviors as occurring at the same age. Twenty-four men did not report the occurrence of "week-end drunks" (of these, 3 men had not reported their ages at time of "loss of control"). Of all the 95 men who reported their ages at the occurrence of "loss of control," 27 per cent had lost control prior to starting "week-end drunks" and 22 per cent never had "week-end drunks." Thus a total of 49 per cent had developed "loss of control" in no connection with "week-end drunks." In comparison, a total of 51 per cent had developed "loss of control" either at the beginning or in the course of a longer period of "week-end drunks." The relation between the two events is not clear at this juncture. It cannot even be said that there is no relation between them.

It should be possible, however, to determine the significance of "week-end drunks" more precisely and more usefully. A point to be considered is that in some cultural groups "week-end drunks" are part of a social behavior pattern. In such groups the "week-end drunks" are the common experience of many men over a certain age, let us say 20 years, who have a steady income. If some of the alcoholics in this survey came from communities in which week-end drinking is the pattern, this behavior will have occurred early, most likely before "loss of control" comes about. It is

nevertheless possible that the "loss of control" may be related to these week-end experiences. On the other hand, in groups where the week-end drinking pattern is absent, it may be the "loss of control" which leads to the individual deviation of "week-end drunks." If the questionnaire had extended the inquiry to nationality, size of community in which the alcoholic was raised, social background as reflected in the occupation of the father, and prevalence of wet or dry attitude in the home community, there would be a basis for assigning the variations in the occurrence of week-end drinking and thus determining its significance in the drinking history. The additional questions suggested here would shed light not only on the week-end behavior but also on several other items of the questionnaire.

Nevertheless, the data of this survey suggest an explanation of the discrepant relations between the beginning of "loss of control" and "week-end drunks." All of the 22 prealcoholic deviants in this sample and 12 of the 21 men who apparently did not start excessive drinking before their thirties or forties are included among the 47 men in whom "loss of control" preceded "week-end drunks" or who did not report the occurrence of "week-end drunks" at all. This leaves 13 discrepancies unaccounted for by recognizable drinker types. In the course of the analysis it will be seen that nearly all of the discrepancies in the sequence of events are produced by the prealcoholic deviants and the men who started excessive drinking at a relatively late period of life. The sensitive deviants seem to require less drastic experiences for the development of strong reactions. Among the men who began excessive drinking relatively late there may have been some individuals who got their start through a strong stress situation and who then began drinking with such abandon that they skipped some of the usual stages.

It appears from the data that in 14 of the 47 men who developed "loss of control" in no connection with week-end drinking the basic phase was preceded by solitary drinking, "benders," or both, although these are drinking behaviors which in the great majority of alcoholics develop at much later stages of the drinking history. All of these 14 reversals of sequence which made up for the absence of late occurrence of week-end drinking occurred among the 22 early psychopaths and the 12 men with "late starts." Nevertheless, this leaves 20 men in these two drinker groups, plus 13 men who cannot be labelled - a total of 34 men - in whom neither "week-end drunks," nor "midweek drunks," nor "solitary drinking" nor "benders" preceded the "loss of control." But since that phase must have developed in the course of some form of excessive drinking, it would appear that the questionnaire does not cover such behaviors as getting mildly drunk every day without engaging for some time in the more conspicuous forms of excessive drinking.

It may be that in the presence of prealcoholic psychopathology and strong stresses at later ages, "loss of control" is developed in the course of the less conspicuous forms of prealcoholic excess, while in the absence of such precipitating factors as early psychopathology and late stress situations, "loss of control" may frequently develop in the course of midweek drunks" cannot be regarded either as representing a basic phase or as a reliable

prodromal symptom of it, but rather as one of the possible and plausible occasions for the development of the basic phase.

A Second Point of Orientation

A second point of orientation, i.e., a tentative intermediate phase, will be introduced now and the other events will be related to the basic phase and the tentative second phase. This does not reflect the order in which the analysis proceeded, but it is a departure which will facilitate the presentation of the complex data.

After a sifting of the material, the first occurrences of three major drinking behaviors suggested themselves as possible indicators of a second phase in the drinking history. These were "midweek drunks," with an average age of 30.4 years, "daytime drunks," at an average age of 31 years, and "benders" averaging 31.8 years at their onset.

The first occurrence of at least two of these behaviors may indicate the beginning of the phase in which a compulsion to drink becomes established. For "benders" the questionnaire gives the following example: "Staying drunk for more than a day without regard for your work or your family or anything else." "Midweek drunks" and "Daytime drunks" and "benders," unless on the occasion of a festival, are extreme deviations from the accepted drinking behavior in any American cultural group. Such utter disregard of responsibility and standards may be seen in psychopathic personalities at any time. But when such behavior appears only in the course of several years of excessive drinking, it must be assumed that the drinker has lost his ability to control the occasions of drinking. Thus either or both of these behaviors could represent the phase of establishment of the compulsion.

"Midweek drunks" do not constitute such strong departures from standards, at least the designers of the questionnaire apparently meant to designate a less excessive deviation. The questionnaire deals with this question separately from "daytime drunks" and "benders" and thus implies that the "midweek drunk" takes place on weekdays, not during daytime but only after working hours, and furthermore does not involve the following day, except perhaps for a "hang-over." Such behavior would be more deviant than the widely practiced "week-end drunks" but would not involve the degree of irresponsibility reflected in the other two drinking behaviors. Whether or not this was the intent of the question, the procedure of the questionnaire implies it. Evidently some of the men assumed this intent and others did not see the implication. Some inconsistent statements of age reflect the confusion caused by the absence of definitions or examples in connection with the questions relating to these three behaviors. This matter must be discussed before the behavior representing an intermediate phase can be decided upon.

The sequence of the forms of drinking as obtained from the questionnaire are shown in Table 2. Although 94 of the 98 men experienced at least one of these behaviors at an earlier or later time of their drinking histories (not always before "loss of control"), only 72 men reported the occurrence of all three behaviors.

TABLE 2.—*Order of Occurrence of "Midweek Drunks," "Daytime Drunks" and "Benders" in 72 Men Reporting Age at Onset of the Three Drinking Behaviors*

<i>Order of Occurrence</i>	<i>Per Cent of Men Reporting</i>
All three behaviors occurring at same age	42
"Benders" later than the other two behaviors	28
"Benders" preceding the other two behaviors	15
"Benders" following "midweek drunks" but preceding "daytime drunks"	3
"Benders" preceding "midweek drunks" but following "daytime drunks"	4
"Benders" following "midweek drunks" but occurring at the same age as "daytime drunks"	8
Total	100

The inconsistencies are seen in the third, fourth and fifth items of the table, which total 22 per cent of the reports. Since "benders" involve intoxication in the daytime, their being reported before "daytime drunks" suggests the confusion caused by not stating the differentiating conditions which the questionnaire tacitly stipulates.

The overlapping of the three behaviors as seen in the first row of the table may mean that all three behaviors actually developed at the same age, which is quite possible. It may denote, however, that at least some of the men who experienced "benders" dutifully reported also "midweek drunks" and "daytime drunks," as the latter two contain certain characteristics of the former behavior. The same remarks apply to the two overlapping behaviors as recorded in the last item of the table.

Furthermore, the number of men reporting any one of the three drinking behaviors must be considered. "Benders" are reported by 89 men, while 79 men reported "midweek drunks" (1 did not state his age) and 80 men reported "daytime drunks." It may be recalled here that only 74 men reported "week-end drunks." Non-reports may mean the absence of those behaviors but in at least some instances they may reflect the outcome of individual interpretations necessitated by different yet related questions being presented without differentiating criteria. Quite possibly some of the men whose drinking pattern involved practically daily intoxication of a lesser degree felt that they could not describe their behavior in these terms. Obviously, it is cogent to make distinctions among these drinking behaviors, but it cannot be taken for granted that the distinctions are implicit in the terms and that therefore no definitions and examples are required. As a matter of fact when all four behaviors (including week-end drinking) are considered together the terms lose much of their simplicity.

One is left with so many haunting suspicions, that in spite of the potential significance of "midweek drunks" and "daytime drunks" there is hardly any choice but to disregard the data pertaining to them and to retain "benders" as the only one of these three behaviors which was fairly well defined and which had the largest number of reports. Furthermore, "benders" as a behavior are more expressive of compulsive drinking than "daytime drunks," which are of short duration. Assuming that the answers pertaining to the "midweek drunks" cover the question as it is meant, this datum may be found to be an indication of the gradual progression of "loss of control" within the drinking situation toward inability to control the occasion of drinking.

If "benders represent an intermediate phase they must be clearly distinguishable in their order of occurrence from the basic phase, or rather from its manifestations designated as "loss of control." Table 3 shows the frequency distribution of differences between the ages at the onset of "loss of control" and at the onset of "benders." There were 87 men who reported their ages at both events. A minus difference denotes that "benders" had their onset before "loss of control."

TABLE 3.—*Frequency Distribution of 87 Differences in Ages at Onset of "Loss of Control" and Onset of "Benders"*

Note: Zero differences are shown separately, the minus and plus differences in 5-year intervals.

<i>Difference in Years</i>	<i>Per Cent of Men Reporting</i>
-1 to -5	8
0	20
1 to 5	40
6 to 10	22
11 to 15	7
Over 15	3
Total	100

In summary, of the men who reported their ages at both events, not more than 8 per cent had "benders" occurring before "loss of control" was established, 20 per cent had the onset of both behaviors within the same year of age, and 72 per cent developed "benders" after several years of uncontrolled drinking.

The range of time elapsing between the two events is rather wide. The extreme deviation of the seven men (8 per cent) who had "benders" before "loss of control" may be attributed to the presence of prealcoholic psychopathy, as five of the men fell into that classification. The anomaly is numerically small and its incidence is satisfactorily explained. The 20-per-cent incidence of both events at the same age (zero differences) is made up of six men with prealcoholic psychopathy and eight men who had "late starts." Furthermore, the ages were stated to the nearest year only, and a zero does not denote absolute simultaneity of the events but may imply a difference of a few months.

The two events may be safely regarded as representing two different phases in the drinking history. Extremely rapid development occurs in men with a psychopathic constitution and men who were exposed to some late trauma ("late starters"). The fact that in the remaining 72 per cent of the men the time elapsing between the two events varies from 1 year to well over 15 years indicates that other factors besides psychopathy and traumata modify the duration of the transition from the basic phase to the phase of the beginning of compulsion.

On the whole, for these 87 men, the transition from "loss of control" to the onset of "benders" took 4.2 years. But this statement does not characterize the duration of the process adequately because it refers to a heterogeneous group. A question of interest is the average duration of this process for the majority of alcoholics who are free, at least, of gross psychopathies. Since the men with negative and zero differences were almost entirely made up of the psychopaths and "late starters," the men showing the plus differences, or 72 per cent of the sample, represent the more prevalent group of alcoholics. For these the average time elapsing between the two phases was 6.5 years. The largest representation, 40 per cent, was in the group embracing differences of 1 to 5 years.

The correlation coefficient denoting the degree of relations between age at onset of "loss of control" and age at onset of "benders" is .80. Such a coefficient is generally spoken of as a "high correlation," but it shows that while age at the onset of "loss of control" is one of the more important factors in determining the age onset of "benders," it is still only one among many other factors. Figure 4 presents the correlation of the two events. A correlation coefficient of .80 means that the knowledge of one event permits an estimate of the other event with great reservation only.

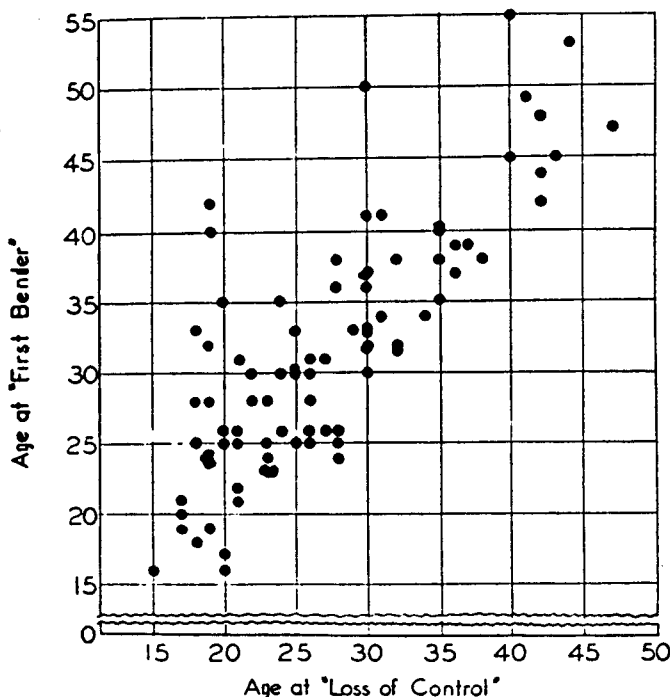


FIGURE 4. Correlation between age at onset of "benders" and age at onset of "loss of control."

What these other factors are cannot be derived from the data of this questionnaire, but it is reasonable to surmise that, aside from gross psychopathy, factors of personality organization, degrees of educational assets, the economic condition of the drinker, and the degree of his social assets would be among the factors which may modify the duration of the development from one phase to a more advanced phase. Full information on these factors could be obtained only from a psychiatric analysis and a thorough social history. This cannot be contemplated in an Alcoholics Anonymous survey but a few simple items added to the questionnaire would furnish sufficient information to permit an estimation of why some excessive drinkers go downhill at a fast rate while others show considerable resistance to the process of alcoholism.

Such additional questions would relate to the marital status of the drinker, his occupation, change of jobs, and years of education. The marital status is relevant because of some psychological and social factors which it implies. If, for instance, a man who starts drinking at the age of 30 is unmarried at that time, the indication is that he lacked social integration even before he took recourse to excessive drinking. With such a lack of social integration little resistance to the process of alcoholism may be expected.* Marriage, separation and divorce in their time relations to the drinking history are highly revealing. Some assets or debits in the occupational and educational fields may modify the effects of factors reflected in the marital status. If information on these matters is obtained through the addition of some seemingly routine items of the questionnaire, it will be possible to analyze the data pertaining to phases by marital, occupational and educational categories. Such an analysis requires a much larger sample than the present one, as in subdividing the sample it is prerequisite that each subsample should have sufficient numerical representation to permit of reasonably safe inferences.

Certain drinking behaviors and reactions to drinking, or rather the time of their onset as recorded on the questionnaire, indicate to some extent the degree of physical and psychological resistance to the process of alcoholism. Their relation to "loss of control" and "benders" will be examined. First, however, "bender" must be seen in their relation to the end point of the process which in this survey is denoted by the age at which the drinker reaches the "lowest point." In the section headed *Phases and Their Manifestations* some definite conditions have been stipulated concerning the relation of an intermediate phase not only to the basic phase but also to the end phase.

*Compare Bacon, S.D. Inebriety, Social Integration, and Marriage. New Haven; Quarterly Journal of Studies on Alcohol, 1945. And Jellinek, E.M. Notes on the first half-year's experience at the Yale Plan Clinics. Quarterly Journal of Studies on Alcohol, Vol. 5: 279-302, 1944.

The age at the time of reaching the "lowest point" will serve to designate the terminal phase. Table 4 shows the relation of onset of "loss of control" and onset of "benders" to the terminal phase.

TABLE 4.—*Time Relations of Onset of "Loss of Control" (95 Men) and Onset of "Benders" (89 Men) to the Terminal Phase*

	Onset of "Loss of Control" (Per Cent of Men Reporting Ages at This Event)	Onset of "Benders" (Per Cent of Men Reporting Ages at This Event)
1-5 years after "lowest point"	—	2
Same year as "lowest point"	—	5
1-5 years before "lowest point"	16	42
6-10 years before "lowest point"	28	16
11-15 years before "lowest point"	27	22
16-20 years before "lowest point"	13	3
21-25 years before "lowest point"	10	4
More than 25 years before "lowest point"	6	6
Totals	100	100

Inasmuch as the onset of "loss of control" happened without exception before the "lowest point" was reached, it is an entirely clear-cut phase of the drinking history. In the case of the onset of "benders," 7 per cent of the men reported this event as occurring at the same time or a few years after they had reached what they regarded as the "lowest point." The incidence of 93 per cent of the onsets before the terminal phase still leaves "benders" as a clear-cut phase in relation to the terminal phase. The odd occurrence of "benders" at the time of, or after, the "lowest point" may be due to individual conceptions of the terminal phase will be discussed later.

If one disregards the extreme negative and positive deviations, the range of time elapsing between the onset of "benders" and the "lowest point" is still of considerable magnitude, as in the great majority of the men, namely 80 per cent, this development took from 1 to 15 years. The process of alcoholism is seen to be highly variable from individual to individual. Nevertheless, the incidence of 42 per cent of the durations in the class of 1 to 5 years shows that the process between this intermediary phase and the terminal phase is a rather short one in a large proportion of alcoholics.

The correlation between the ages at these two events is only .47 and the correlation between the ages at "loss of control" and ages at "lowest point" is of the same order. These correlations are significant in the sense that they cannot be attributed to chance, i.e., if other samples of 100 men from the membership of Alcoholics Anonymous were drawn, small but perceptible correlations may be expected again. On the other hand, individual characteristics and circumstances modify the duration of the developments between these two phases and the terminal phase to such an extent that the ages at the end phase cannot be predicted from the knowledge of the ages

at either the basic or the first intermediate phase. An analysis of the sources of the variation in time between the different phases would be of prognostic importance.

The positions of the basic phase denoted by "loss of control" and the intermediate or acute compulsive phase represented by the first occurrence of "benders" are now sufficiently characterized in order to relate the other events of the drinking history to them.

Prodromal Symptoms

There may be some behaviors which foreshadow the development of the basic phase. "blackouts" and "sneaking drinks" have been mentioned before as possible prodromal symptoms of alcoholism. These two behaviors will be scanned now in their relations to "loss of control" as representing the basic phase and "benders" as denoting the first intermediate phase.

A blackout signifies amnesia limited to the events attending the occasion on which the intoxication occurred. The questionnaire gives the following example for "blackouts": "Wake up in the morning after a party with no idea where you had been or what you had done after a certain point." This reaction to alcoholic intoxication does not imply "passing out," although the word "blackout" suggests it. It seems that A.A. members attach quite some significance to this datum as prognostic of developing alcoholism; they may refer to a person as a "candidate" because he already had "pulled a blank" (a variant for "blackout"). Nearly every A.A. has experienced this reaction and has heard it mentioned by nearly every newcomer to the group. It is taken for granted by them that it is a significant reaction. It may be, at least in some more definite form. Even a moderate drinker, who may have been drunk only once, may have experienced amnesia for that event.* This is one of the behaviors for which control material must be supplied before the item could be used with any degree of relevance. Dr. Roe's small sample of moderate drinkers contains some information on this point. Of the 30 men in that sample, 9, i.e., 30 per cent, reported that they had experienced "blackouts," but not on more than two occasions. Based on such a small sample it would be unreasonable to assert that "blackouts" occur in approximately 30 per cent of moderate drinkers, but it may be safely assumed that this reaction is experienced at least once by a fair proportion of them. True, there is no assurance that none of these men will become alcoholics, but at the average age of 40 years they showed no indications of such a development. For instance, none of them had lost control over the drinking situation, a behavior which occurred among the questionnaire subjects at the average age of 27.6 years, with nearly 40 per cent of them reporting it below the age of 25 years.

* A teetotaler of my acquaintance, who tasted liquor only once in his life, experienced a "blackout" on that occasion.

Among the alcoholics in the present survey "blackouts" were reported by 90 per cent of the men, i.e., the incidence of this reaction may be at least three times greater than among moderate drinkers. This suggests that "blackouts," if perhaps individually of minor significance, may be a group characteristic of alcoholics. Nevertheless, if the "blackout" reaction were more precisely defined it might be seen to be of individual significance, too.

The questionnaire asks for a statement of the age when the first "blackout" occurred. Perhaps another question, the age when *frequent* "blackouts" occurred, would be more relevant. A frequent occurrence of this reaction would not be compatible with the definition of the moderate drinker or any category other than outright excessive drinkers. Furthermore, when the psychiatrist speaks of alcoholic amnesia for the events at the time of intoxication* he means a typically recurrent behavior which leaves the alcoholic in a state of painful bewilderment. If the question were limited to a certain degree of amnesia, and if it were to include frequency, this datum would gain in significance.

Even so, some connection with other information is required in order to determine the meaning of the "blackout" as an indicator. It could be an indicator of several conditions. If it occurs early in the drinking history it may be evidence of early habitual heavy drinking or, in the absence of that, it may indicate some neurological weakness, or it may suggest psychopathy. If, on the other hand, the beginning of persistent "blackouts" is at a later stage of the drinking history one could infer either a robust nervous constitution or that the otherwise habitual drinking has advanced to an excessive stage rather late. Such distinctions could be made only if the age at onset of persistent "blackouts" could be related to the age at the time regular, practically daily drinking, although not drunkenness, began. The Grapevine questionnaire does not furnish such a datum; it gives only the age at first intoxication, which is not a meaningful datum, and then proceeds to ages at extreme drinking behaviors. If, through supplementary questions, the age at persistent "blackouts" could be used as an index of robustness, or of low resistance, or if one could conclude from it the late onset of truly heavy drinking, it might contribute toward explaining the wide variation in the duration of the process of alcoholism and the development of full-blown alcoholism and of discrepancies in the phases of the drinking history. It would be possible, for instance, to analyze age at the time of "reaching lowest point" according to individuals with early steady drinking but late "blackouts," preceding the steady drinking stage or starting simultaneously, and so forth. In the present survey the "blackout" reaction as an indicator of prealcoholic psychopathy must be limited to its occurrence at ages between 15 and 17 years in conjunction with other behaviors which, at these early ages,

* A German psychiatrist aptly called it the alcoholics palimpsest, referring to the ancient manuscript tablets containing one manuscript superimposed over another incompletely erased one.

would occur only in psychopathic individuals. The first occurrence of "blackouts" at other ages cannot be interpreted as to its full meaning with the limited data which this survey furnishes.

The other behavior under consideration, namely "sneaking drinks," is less conspicuous but may be, nevertheless, a significant datum in the drinking history. It may indicate a stage at which alcohol begins to play a definite role in the life of a drinker. Here, again, knowledge of the occurrence of such a behavior among moderate drinkers is required in order to arrive at a definite conclusion relative to its significance. Dr. Roe's informal study of moderate drinkers did not include this question.

The order of occurrence of "blackouts" and "sneaking drinks" will be examined first in relation to "loss of control" separately, and then jointly with "benders," in order to establish the position of the former two behaviors more precisely. The relations of the two presumptive prodromal behaviors to the basic phase are shown in Table 5.

TABLE 5.—*Order of Occurrence of "Blackouts" (86 Men) and "Sneaking Drinks" (87 Men) in Relation to "Loss of Control"*

	Onset of "Blackouts" (Per Cent of Men)	Onset of "Sneaking Drinks" (Per Cent of Men)
Before onset of "loss of control"	58	41
At onset of "loss of control"	19	36
After onset of "loss of control"	23	23
Totals	<hr/> 100	<hr/> 100

The tabulated percentages suggest that the first "blackouts" occur in the majority of alcoholics before the "loss of control." The incidence of the beginning of "blackouts" at the time of the onset of "loss of control" does not imply strict simultaneity but only that both events occurred in the same year. Thus even in the category designated as "at same time" there may have been some instances of "blackouts" preceding and some instances of "blackouts" following the onset of "loss of control" by a few months. On the whole, the onset of the "blackout" reaction appears to belong to a development which precedes the basic phase. It is perhaps an element of an entire phase which could be designated as the preparatory or prodromal phase of alcoholism. But if a well-defined phase of that nature exists, "blackouts" are perhaps not the most characteristic element of it, since in a fair proportion of instances their first appearance is after the beginning of the basic phase.

"Sneaking drinks" may belong to the same presumptive phase as "blackouts." But "sneaking drinks" may be a later development of that phase since in 36 per cent of the men it occurred in close proximity to the onset of "loss of control," while "blackouts" occurred in 19 per cent of the men at that particular time. The differences between the relative occurrences of the two prodromal

behaviors before and at the time of "loss of control" were greater than the discrepancies which may be expected by chance in samples of this size.*

The aspect of the sequence of this two behaviors is seen more clearly when they are related to each other instead of to a third event. In 58 per cent of a sample of 87 men "blackouts" occurred before, in 19 per cent at approximately the same time, and in 23 per cent after the beginning of "sneaking drinks."**

In Table 6 the position of occurrences of the onsets of "blackouts" and "sneaking drinks" are more definitely established through relating them to the basic phase as well as to the first intermediate phase.

TABLE 6.—*Order of Occurrence of Onsets of "Blackouts" (78 Men) and "Sneaking Drinks" in Relation to "Loss of Control" (Denoted as A) and "Benders" (Denoted as B)*

	Onset of "Blackouts" (Per Cent of Men)	Onset of "Sneaking Drinks" (Per Cent of Men)
Before the onset of A and B	53	42
At the onset of A but before B	17	28
After onset of A but before B	12	8
After onset of A but at onset of B	6	5
After onset of A as well as B	6	11
Other orders of occurrence*	6	6
Totals	100	100

*The "other orders" are: Before A but after B; at onset of A but after B; at onset of A as well as B. These orders imply that B happened later than A or at the same time. These are rare and anomalous orders. The combination of these three orders into one category explains to a large extent the discrepancies in percentages seen in comparison of Tables 6 and 5. The fact that the samples in this twofold relationship are smaller than the single relationships also contributes to discrepancies in percentages, but only to a negligible degree.

It is seen that "blackouts" extended into the intermediate phase ("benders") only rarely, and "sneaking drinks" only somewhat more frequently. The position of the two presumptive prodromal behaviors is rather well delimited. This is also seen in the correlations of these two behaviors with the basic phase and the first intermediate phase. The correlations of "blackouts" and "sneaking drinks" on the one side with "loss of control" on the

* χ^2 as determined from the absolute frequencies is 7.07, and with 2 degrees of freedom $.05 > P > .02$.

** If there were no systematic trend in the occurrences of these two behaviors the three alternative occurrences would deviate from a one-third representation in each category by chance deviations only. On testing the observed percentages against such a hypothetical distribution a χ^2 of 13.64 is obtained, for which P is nearly .001. Thus the observed percentages deviate with high significance from the hypothetical distribution of "no trend."

other side were .65 and .68, respectively, while with "benders" the correlations were .54 and .56.

"Blackouts" and "sneaking drinks" suggest definitely the existence of a preparatory or prodromal phase of alcoholism which probably has more characteristic and, therefore, more definitely prognostic elements than these two behaviors. Because of the importance of definite prognostic symptoms of alcoholism, this at present poorly defined preparatory phase should be explored. The requirements for this purpose are a knowledge of the time when drinking increases in frequency and amounts, the time when changes in tolerance occur, indicators of importance of alcohol other than "sneaking drinks," and the frequency and degree of intoxication. It is not suggested that these are the elements of the prodromal phase, but they must be known in order to make a definition of the prodromal phase feasible.

The tentative prodromal symptoms derived from this survey suggest that in the preparatory phase marked reactions to drinking occur, possibly due to increased excess, and that in the course of this excess liquor achieves an importance which it does not have for the average drinker. However, in order to predict more definitely the development of the basic phase as represented by "loss of control," a more detailed knowledge of the preparatory phase is required.

Elements of the First Two Phases

The major drinking behaviors and reactions, other than the two tentative prodromal behaviors, will be examined in their relation to "loss of control" and "benders." The object of this part of the analysis is to suggest the elements of the basic phase and of the first intermediate phase and segregate and other clear-cut phases for which data are available.

The questionnaire items "seeking medical advice," "seeking psychiatric advice," "hospitalization," "losing friends," "sexual self-consciousness" and "indifference to quality," and the three items relating to jobs and "realizing family disapproval of drinking," will not be considered in the analysis. The reason for this omission will be stated briefly.

While the ages when medical and psychiatric advice were first sought could indicate the beginning of physical and psychological sequelae of drinking, it has been seen that there is a historical trend present which reflects the education of the public on such matters to a degree which would invalidate conclusions relating to the presence or absence of physical or psychological disturbances at various ages. Hospitalization and the age at its first occurrence depend too much upon whether or not the alcoholic has relatives and friends who look after him. This is not to imply that these items should not be considered in future questionnaires. The age at which the drinker loses a friend is descriptive of the time when drinking begins to affect the general conduct markedly. But the data contain some better indicators of that stage; moreover, there are indications that this question may not have been answered completely. The age at which the drinker begins to feel the

disapproval of his drinking by the family is potentially a useful datum. In this survey it cannot be utilized to any advantage because it would have to be known what the family's general attitude toward drinking was. In a family of abstainers there would be little tolerance for even moderate drinking. Family disapproval at an early age of the drinker may thus not always reflect heavy drinking at that age. This suggests additional items for a revised questionnaire. The unsuitability of the item relating to drinking because of sexual self-consciousness has been discussed before. The data on job tenure seem to be of little use. Not more than 57 per cent of the men reported having lost a job because of alcoholism. That is quite possible, but one would have to know the number of men who never had jobs, or who were self-employed, and generally the nature of their occupation. Such information is required not only for the evaluation of loss of jobs but also in connection with some other behaviors.

Another behavior which cannot be used to any advantage in this analysis is "indifference to quality." The alcoholic whose drinking goal is intoxication may become less and less concerned about the quality of the beverage as long as it produces the desired effect. Instead of the customary beverages, some alcohol-containing fluid may be used which is not intended for internal use. Bay rum, shellac, rubbing alcohol and "canned heat" play a role in alcoholic yarns. The beginning of such indifference is a manifestation of greatly advanced drinking experience and should therefore be a significant datum in the drinking history. Unconcern about the brand he is drinking or whether he is drinking fortified wine instead of whisky has less significance for the course of alcoholism than an individual's readiness to drink nonbeverage alcohol in lieu of the customary beverages. The questionnaire item referring to "indifference to quality" does not distinguish between these degrees of indifference and thus its utility in this analysis is rather doubtful. As may be seen from column 5 of Table 7, the onset of "indifference to quality" did not concentrate particularly at specific points in the drinking history, except that a larger percentage occurred after the onset of "benders" than at other fixed points. It is possible that indifference to brands is reflected in the earlier instances, and the occasional drinking of nonbeverage alcohol in the later ones. Since indifference to brands does not necessarily signify compulsive drinking, while the use of nonbeverage alcohol does, the uncertainty of this item does not recommend it for further use in the present analysis. It may be mentioned that alcoholics in this sample (disregard the 17 per cent in whom it occurred before "loss of control") developed "indifference to quality" on the average 5.5 years after the onset of "loss of control."

The significance of "week-end drunks," "midweek drunks" and "daytime drunks" has been discussed in great detail and these behaviors require no further consideration. "Week-end drunks" were found to be behaviors neither denoting nor constituting an element of any phase but rather occasions, among many others, for the development of "loss of control." On the other hand, the questions relating to "midweek drunks" and "daytime drunks" appeared to be insufficiently formulated and the information which these two items

TABLE 7.—*Order of Occurrence of Onsets of 13 Major Drinking Behaviors and Reactions in Relation to "Loss of Control" (Denoted as A) and "Benders" (Denoted as B)*

Note: The column numbers denote the behaviors as follows: 1=extravagant behavior; 2=rationalizing; 3=morning drink; 4=solitary drinking; 5=antisocial behavior; 6=water wagon; 7=changing pattern; 8=remorse; 9=protecting supply; 10=tremors; 11=fears; 12=resentments; 13=geographic escape.

Number of Men*	1	2	3	4	5	6	7	8	9	10	11	12	13
	69	75	82	78	55	72	65	81	75	80	65	63	55
PERCENTAGE OF MEN IN THE VARIOUS ORDERS OF OCCURRENCE													
Before the onsets of A and B	25	7	13	13	12	15	6	10	7	4	3	6	2
At the onset of A but before B	15	23	12	10	10	7	6	4	9	9	3	5	2
After onset of A but before B	25	27	27	24	18	17	29	19	16	15	20	14	16
After onset of A but at onset of B	8	11	22	21	12	11	15	16	20	21	17	14	24
After onsets of A as well as B	19	16	10	27	39	44	34	43	38	44	48	57	49
Other orders of occurrence	8	16	16	5	9	6	10	8	10	7	9	4	7
Totals	100	100	100	100	100	100	100	100	100	100	100	100	100

*"Number of Men" refers to the number of men who reported the item under consideration as well as "loss of control" and "benders" together with their ages at the first occurrence of these events.

could have offered was sufficiently represented by the onset of "benders."

To short-cut the presentation of the analysis, 13 major drinking behaviors are presented in Table 7 in their joint relations to "loss of control" and "benders."

The last four items of Table 7, namely, the onsets of "tremors," "indefinable fears," "unreasonable resentments" and "escape from environment as a solution of the drinking problem" occur prevalently after the onset of "benders" and these four behaviors may represent a distinct development in the compulsive phase even though they may not form a separate third phase. The onsets of "protecting supply" and "persistent remorse" may be more closely associated with the former four items than with the other items of the table. These six reactions to excessive drinking will be examined later as a group, and for the time being the analysis of sequences will be limited to the first seven items of the table.

"Extravagant Behavior"

The earliest effect of excessive drinking on conduct, as far as it can be determined from this survey, seems to manifest itself in extravagant behavior in money matters. Eighty of the 98 men reported this behavior, but ages for the onset of it in relation to both "loss of control" and "benders" were available for only 69 men. Even before the onset of "loss of control" this reaction had developed in 17 men, i.e., 25 per cent of this subsample, and only 5 of these are accounted for by prealcoholic psychopaths and men with "late starts." Thus a genuine change in conduct is seen here at a fairly early stage of the drinking history. The largess of treating, tipping and of purchasing unnecessary and expensive objects is an exultant expression of the overcoming of inferiority feelings through intoxication. At the same time the lavish spending may contain also an element of unconscious self-punishment, as in the case of the compulsive gambler. This early change of conduct, at least in its outward appearance, is in an extroversive direction, in contrast to later conduct changes which reflect a tendency toward isolation. This conduct may be regarded as an element of the basic phase, although 19 per cent of it occurred after the onset of the compulsive phase.

"Rationalizing" Excessive Drinking

Perhaps belonging even more definitely to the basic phase is the development of a need for the rationalization of the alcoholic excess. The alcoholic must convince himself that he is able to control his drinking and that he becomes intoxicated only when he has a "good reason" for it. This tendency rarely developed before the "loss of control" and only 16 per cent of the beginnings of this tendency occurred as late as the onset of "benders."

The need for rationalization implies that the alcoholic at least unconsciously admits the deviant nature of his behavior and that he feels guilty about it. Guilt feelings of other origins may become connected with it. The rationalizations may develop into a

system embracing every aspect of conduct and become the source of strange behavior manifestations. While the rationalization of the drinking behavior develops in the basic phase it persists throughout the drinking career and progressively increases in its unreasonableness, as will be seen in the analysis of the third phase.

"Morning Drink"

In a way the morning drink is an affirmation of the rationalizations of drinking, as it proves to the alcoholic that drinking in his case is actually a necessity: he cannot go through the motions of everyday life without the "eye opener." This relatedness of the two behaviors finds evidence in a correlation of >79. The general belief that the "morning drink" is the earmark of the true alcoholic is borne out by the data of this survey: it was reported by 91 per cent of the men. The beginnings of this drinking behavior occur largely (62 per cent) in the course of the phase represented by "loss of control," and it may be said that it develops at the latest at the onset of "benders" (22 per cent), as only 10 per cent developed it after the onset of "benders" while 16 per cent are anomalous occurrences lumped under the heading "other orders of occurrence." As characteristic as the "morning drink" is of the alcoholic, it is only a behavior within a phase and does not epitomize a phase. This is clearly seen in Table 8 where the occurrences of the onsets of a few important behaviors is shown in relation to "morning drink" and compared with the sequences in relation to the basic phase established here, namely, "loss of control."

TABLE 8.—*Order of Occurrence of Onsets of "Solitary Drinking," "Water Wagon" and "Benders" Separately in Relation to Onsets of "Morning Drink" and "Loss of Control"*

	SOLITARY	WAGON	BENDERS
	<i>Per Cent of Men in the Three</i>		
	<i>Orders of Occurrence</i>		
Before onset of "morning drink"	28	30	11
At the time of onset of "morning drink"	28	13	39
After the onset of "morning drink"	44	57	50
Totals	100	100	100
Before onset of "loss of control"	14	18	8
At the time of onset of "loss of control"	16	13	20
After the onset of "loss of control"	70	69	72
Totals	100	100	100

Obviously the onset of "morning drink" is an event among other events of a phase rather than the beginning of a phase, while "loss of control" starts out as a rather clear-cut phase.

"Solitary Drinking"

A drinking behavior which has always and everywhere been regarded as the gravest form of inebriety is "solitary drinking." This view reflects the role of alcoholic beverages in all those cultures in which it is used, namely, as a part of social ceremonial or as an adjunct to social gaiety. The "solitary drinking" proves that the drinker is using the beverage for a purpose for which it is culturally not intended.

The data of the Grapevine survey shows that sooner or later nearly every alcoholic becomes a solitary drinker. Ninety per cent of the men reported this behavior. The remarkable aspect of the onset of "solitary drinking" is that it does not occur around a fixed point in the drinking history but that it occurs, as stated previously, "sooner or later." Except for "antisocial acts," "solitary drinking" showed considerably less clustering around any point than the other behaviors. Its onset occurred in 47 per cent of the men before, and in 48 per cent either at or after, the onset of "benders"; in the remaining 5 per cent its onset occurred at indeterminate points. In some instances (13 per cent) "solitary drinking" started even before the onset of "loss of control." Thus some of these alcoholics practically started their drinking career by "solitary drinking." Most drinkers, however, started as social drinkers and turned to solitary habits at various stages of their drinking histories. The stage at which the onset of this drinking behavior occurs may be more indicative of changes in the general conduct than some of the specific behavioral changes recorded on the questionnaire. The early occurrence of "solitary drinking," particularly before the basic phase, may signify that the drinker started out as a "lone wolf," perhaps was the personality type that is often spoken of as a schizoid personality. Later occurrences of this behavior may denote the point at which the drinker either was ostracized by his social group or when he began to suspect his fellows of regarding him as an inferior. This may be the manifestation of a superimposed tendency toward isolation resulting from the stresses of excess and the attendant social involvements.

There is some evidence in support of this assumption, inasmuch as the onset of "solitary drinking" shows higher correlations with the onsets of "unreasonable resentments" (.72) and "antisocial behavior" (.73) than with any other behavior. If "solitary drinking" is an expression of a trend toward social isolationism, it may denote that the entire conduct changed in this direction. The later occurrence of such conduct would indicate greater resistance of the drinker to the stresses of alcoholism, and the position of this behavior in the drinking history may be of prognostic value in the therapy of alcoholism. These suggestions cannot be validated without additional evidence, such as age at marriage or separation or divorce, age at the beginning of domestic friction, and some other characteristics.

Generally, the onset of "solitary drinking" is an important event, but it does not represent a phase in the history of alcoholics as a group, such as is represented by the onsets of "loss of control" and "benders."

The correlation between the latter two behaviors, which are widely separated in their onsets, is .80. "solitary drinking," however, which is not separated distinctly in time from either of these behaviors, correlates with them to the degrees of .65 and .68 only. Nor can "solitary drinking" be taken to constitute an element of the syndrome of any of the group phases. The onset of this behavior may be, however, an individual phase whose nature, at present, must be left to surmise.

"Antisocial Acts"

In view of the great importance of conduct changes brought about by excessive drinking, it is unfortunate that the question relating to the onset of "antisocial acts" was insufficiently formulated. This characteristic was reported by only 60 per cent of the men. The heading "antisocial acts" may have suggested, to some of the men, criminal acts, and may therefore have been rejected as not applying to themselves. The questionnaire gives only one example for this behavior: "Pick a fight with a stranger in a saloon for no justifiable reason." This example narrows the range of the category entitled "antisocial acts," presumably much more than was intended by the designers of the survey. Apparently a category of aggressive behaviors of a wide variety was meant, with the exclusion of outright crimes. But such a category is difficult to delimit. Most of the aggressive behaviors may be crimes technically, although popularly the layman would not be inclined to regard them as such even though he may insist on the punishment of these acts. Such behaviors may be regarded by the layman as "malicious" rather than criminal. The word "malicious" does not suggest in everyday language such extreme violence as murder, nor does it suggest burglary, but it does not exclude punishable acts. The term "malicious behavior" would cover the example of the questionnaire as well as such acts as smashing windows, mischievous damage to parked cars, damaging hydrants or street lights, and also "practical jokes" which may cause serious apprehension to the victim. If five of six appropriate examples are stated, the range covered by the heading may be fully understood by the interviewees. In the present survey some men may have taken the term "antisocial acts" to mean what it was intended to mean, and others not. The absence of reports by 40 per cent of the men is perhaps due to misunderstanding.

The consistency of correlations of the onset of "antisocial acts" with other conduct changes and with drinking behaviors suggests that the onset of "antisocial acts" is a significant event in the drinking history. Because of this apparent significance it will be assumed in the present analysis that nonreporting of the behavior by 40 per cent of the men may be attributed to insufficient formulation. The sequences and correlations observed in the 60 per cent who reported the behavior will be treated tentatively as characterizing the entire group. Only a large-scale survey based on more definitely formulated items can decide whether or not this assumption is valid. For the purpose of this analysis

the designation "antisocial acts" or "antisocial behavior" will be retained.

The 12 per cent incidence of onset of "antisocial acts" before the onset of the basic phase ("loss of control") is entirely covered by the prealcoholic deviants. In these men this behavior was not brought about by excessive drinking. Of greater interest is the occurrence of "antisocial behavior" as a consequence of excess. Thus it is seen that but for the 12 per cent who had this trait irrespective of excessive drinking, "antisocial behavior" developed in not more than 28 per cent of the men before the onset of the compulsive phase ("benders"). In 12 per cent the onsets of "antisocial acts" and "benders" occurred in the same year, and in 39 per cent the former followed the latter by shorter or longer periods. The remaining 9 per cent were anomalous cases of "other orders." On the average, not counting the prealcoholic deviants, the development of "antisocial behavior" began 5.4 years after the onset of "loss of control" and at or about the time of onset of "benders." Speaking in terms of the basic phase and the intermediate compulsive phase, the development of "antisocial behavior" cannot be assigned definitely to either phase; it spreads over both, with some preponderance toward the intermediate phase. The onset of "antisocial behavior" is, in this respect, of the same nature as "solitary drinking"; and these two behaviors show a correlation of .73, which is not due to the correlation of these two behaviors, with the basic phase and the intermediate phase. "Antisocial behavior" and "solitary drinking" are symptoms of a fundamental change toward social isolationism. But the malicious behavior designated in this survey as "antisocial acts" is a more marked manifestation of that trend than "solitary drinking." There is some indication that "antisocial behavior" is a slightly later development than "solitary drinking," but on the whole the two behaviors seem to form a diffuse syndrome rather than an ordered sequence of events. In 13 per cent of the men the onsets of the two behaviors occurred at the same age, in 49 per cent the onset of "antisocial acts" followed the onset of "solitary drinking" on the average by 5.0 years, and in 38 per cent it preceded it on the average by 5.8 years.

The onset of "antisocial acts" shows a higher correlation with the onset of "rationalizing," namely .81, than with any of the other behavioral changes. In 16 per cent of the onset ages the two behaviors coincide, while in 54 per cent the onset of "antisocial acts" follows the onsets of "rationalizing." The correlation thus does not indicate simultaneity but rather a tendency toward a constant time interval between the two events. The mean onset ages of these two behaviors suggest that this interval may be of the order of 2 years. This does not imply that the process of rationalization generates "antisocial behavior" but rather that both behaviors represent progressive stages of the downward course. These two behaviors, it will be seen, are fundamental conduct changes and although they may not have the same origins, as time progresses they may fuse into a system. The significance of these suggestions rests on the assumption that the behaviors designated here as "antisocial" are more common among alcoholics than is indicated by the questionnaire.

Forms of Drinking Controls

That the alcoholic at least temporarily realizes that his drinking behavior is deviant and risky is reflected in his attempts to control his drinking even before or at the time he "loses control" over the drinking situation. Generally, however, these attempts occur more frequently in the compulsive phase (benders"). The control behaviors may not always signify that the drinker realizes his danger, but sometimes they may be the outcome of pressure by the family, friends or employer. The intrusion of such outside factors may increase the variation of the onset ages of these behaviors to some extent.

The "water wagon" is popularly the best-known attempt at controlling excessive drinking. "Going on the water wagon" is a straightforward method, but the aim may be less straightforward. Sometimes the "water wagon" represents an attempt to break entirely with drinking; frequently, however, a time limit is set for a "dry period" in the hope that temporary abstinence will permit of physical recovery and will make it possible to regain control over the drinking situation. It would be hard to say which of these aims reveals more optimism on the part of the alcoholic.

Another form of drinking control is "changing the pattern of drinking," as, for instance, deciding never to drink before dinner, or to drink only at home, or only in company, or only beverages of low alcohol content. This attempt at control shows less insight than "going on the water wagon," particularly when this control behavior occurs before trying the "water wagon." When "changing patterns" is attempted only after the "water wagon" has failed, it represents a last desperate and unreasonable try. Both these sequences are represented in the present survey (see page 48). It is of some significance that when "water wagon" was the first attempt at controlling drinking some 7 years elapsed before the drinker took recourse to "changing pattern," but when the first attempt at controlling drinking was "changing pattern," the alternative method, "water wagon," was tried after an average of approximately 2 1/2 years.

The precedence of "changing pattern" indicates a greater importance of liquor to the drinker than is indicated by the "water wagon." Accordingly "changing pattern" occurred before "loss of control" in only 6 per cent of the men, while "water wagon" occurred in 15 per cent at that early stage of the drinking history. When "change in drinking pattern" follows "water wagon" by several years, it reveals a process of deterioration. "Changing pattern" is perhaps less subject to outside influences than "going on the wagon." Because of this, and particularly because the early occurrence of "changing pattern" reveals an early strong grip of alcohol on the drinker, and because its later occurrence indicates loss of resistance, it is a more significant behavior than attempts to control drinking by "going on the wagon." The greater significance of "changing pattern" is evidenced by the fact that it correlates with other significant behaviors to a considerably greater degree than does "water wagon." The nature of "changing pattern" as an indicator of an early strong degree of alcoholism

and, on the other hand, of deterioration, is seen in the fact that, of all behaviors, it has by far the greatest correlation with the "lowest point" in the drinking history, although the two events are well separated in time (see Figure 5).

The position of "changing pattern" among behavior correlations with "lowest point" is a rather conspicuous. Of all the behaviors recorded in this survey it is definitely the strongest indicator of the downward course of the alcoholic. The inclusion of more items in a future questionnaire may reveal more potent indicators. It must be noted also that the attempt to control drinking through "changing pattern" was not reported by all men; 75 out of the 98 interviewees reported it. This percentage is of sufficient magnitude to qualify this behavior as a majority characteristic. The incidence may be even higher, as the limited example given in the questionnaire may have failed to remember behaviors which fall into this category.

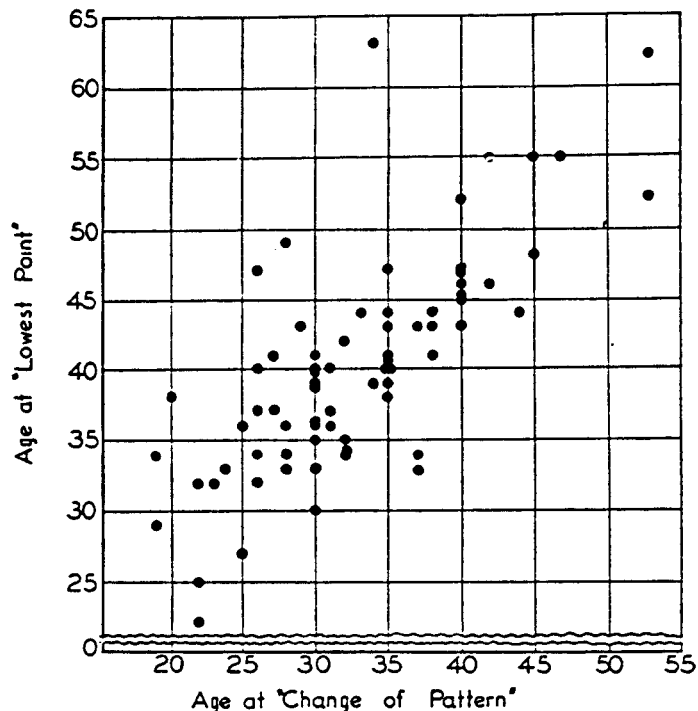


FIGURE 5. Correlation between age at "lowest point" and at onset of "changing pattern of drinking."

In relation to other behavioral changes, "changing pattern" shows the highest correlation with "rationalizing" (.77), and its correlation with "antisocial acts" is .71. In Table 9 the orders of occurrence of the onset of "changing pattern" are shown in relation to the onsets of "rationalizing" and "antisocial acts," and these orders shed some light on the nature of the correlations.

The fact that only 14 per cent of the onsets of "changing pattern" occurred before the onsets of "rationalizing," and that in 33 per cent the onsets were approximately simultaneous, would indicate that the correlation coefficient gives evidence of the two behaviors being symptoms of a syndrome. The percentage shown in the orders of occurrence of "changing pattern" and "antisocial acts," on the other hand, indicate that the correlation coefficient

expresses a tendency toward an ordered sequence in time rather than syndrome relatedness. This is quite within reason, as the attempt to control drinking through "changing pattern" is in itself a form of rationalization of the reasons for drinking and is only an extension of that process. On the other hand, the onset of "changing pattern" is also an indicator of the downward course, as is the onset of "antisocial acts," but "changing pattern" is the expression of a more advanced stage as shown by the correlations of these behaviors with the "lowest point."

TABLE 9.—Orders of Occurrence of "Changing Pattern" in Relation to "Rationalizing" and "Antisocial Acts"

	Percentage of Onsets of "Changing Pattern"			TOTAL
	OCCURRING BEFORE	OCCURRING AT THE TIME OF	OCCURRING AFTER	
Onset of "rationalizing"	14	33	53	100
Onset of "antisocial acts"	38	4	58	100

Parenthetically, it may be remarked that a revised questionnaire should be established also the time when controlling drinking either through "water wagon" or "changing pattern" is no longer attempted, as this would indicate that the struggle against the compulsion has been abandoned. This would establish a stage in the drinking history which is not covered by the present Grapevine questionnaire.

Intercorrelations

The analysis of the sequence of events, as shown in Table 7, indicate that three behaviors of the drinking history were assignable to the basic phase of "loss of control," two behaviors seemed to overlap with the basic phase and the acute compulsive phase of "benders," and two other behaviors could be assigned to the latter phase. The intercorrelations of these behaviors have been alluded to, but will now be examined more closely.

An analysis of the coefficients of correlation obtaining among these behaviors is hampered by the small size of the sample and even more by the fact that the various correlations have been determined on a varying number of individuals. These limitation preclude any elaborate correlation analysis, such as partial and multiple correlations as well as the exact determination of syndromes. While all of the correlation coefficients in this study are statistically significant, not all of the differences among the coefficients attain to statistical significance. If some of the smaller differences among the coefficients of correlation, as observed here, should be maintained in samples of 1,000 to 2,000 individuals they would be of great statistical reliability. As the present analysis is entirely tentative and its main object is to indicate the type of information that may arise from a large-scale study based on an adequate questionnaire, it seems justified to

carry out the analysis as though most of the correlational differences were of the statistical validity.

The intercorrelations of the behaviors of the basic phase, the acute compulsive phase and the two behaviors which cannot be assigned to either phase are shown in Table 10.

TABLE 10.—*Intercorrelations of the First Seven Behaviors of Table 7*

	CORRELATION COEFFICIENTS						
	"Extravagant Behavior"	"Rationalizing Excessive Drinking"	"Morning Drink"	"Solitary Drinking"	"Antisocial Acts"	"Water Wagon"	"Changing Drinking Pattern"
"Extravagant behavior"	xxx	.69	.72	.50	.67	.64	.57
"Rationalizing excessive drinking"	.69	xxx	.73	.76	.81	.59	.77
"Morning drink"	.72	.73	xxx	.58	.68	.59	.48
"Solitary drinking"	.50	.71	.58	xxx	.73	.62	.76
"Antisocial acts"	.67	.81	.68	.73	xxx	.54	.71
"Water wagon"	.64	.59	.59	.62	.54	xxx	.70
"Changing drinking pattern"	.57	.77	.48	.76	.71	.70	xxx

"Extravagant behavior" and "morning drink" have fair correlations with each other and with "rationalizing excessive drinking," i.e., with the behaviors originating in the basic phase. With other behaviors "extravagant behavior" and "morning drink" have correlations of only a smaller degree which are probably largely reflections of the correlation of .81 obtaining between "rationalizing excessive drinking" and "antisocial acts."

The two behaviors of the acute compulsive phase, namely, "water wagon" and "changing drinking pattern" have a correlation of .70, but with all other behaviors "water wagon" shows correlation of .54 to .64 only and these may be indirect correlations through the relation of these behaviors with "changing drinking pattern."

Of the basic phase behaviors, "rationalizing excessive drinking" shows rather fair correlations with the two behaviors which do not belong to any phase, namely, with "solitary drinking" .71, and with "antisocial acts" .81; it also correlates .77 with "changing pattern," which is widely separated from it in time and belongs to the acute compulsive phase.

On the other hand, "changing pattern" also correlates with "solitary drinking" .76 and with "antisocial acts" .71.

Thus one behavior of the basic phase ("rationalizing excessive drinking") and one behavior of the acute compulsive phase ("changing drinking pattern") form a definite correlation with the two behaviors which are not assignable to either phase. This is shown in Table 12.

This pattern represents two systems of the drinking history, namely, the rationalization process and the social-isolationism tendency which, as will be seen, show definite correlations with later developments in the drinking history.

TABLE 11.—*Correlation Grouping According to the First Two Phases of the Drinking History*

	BASIC PHASE		
	"Extravagant Behavior"	"Rationalizing Excessive Drinking"	"Morning Drink"
"Extravagant behavior"	xxx	.69	.72
"Rationalizing excessive drinking"	.69	xxx	.73
"Morning drink"	.72	.73	xxx
NOT ASSIGNABLE TO PHASES			
"Solitary Drinking" vs.			
"Antisocial Acts"			.73
ACUTE COMPULSIVE PHASE			
"Water Wagon" vs.			
"Changing Drinking Pattern"			.70

TABLE 12.—*Main Correlational Pattern of the First Two Phases*

	CORRELATION COEFFICIENTS			
	"Rationalizing Excessive Drinking"	"Solitary Drinking"	"Antisocial Acts"	"Changing Drinking Pattern"
"Rationalizing excessive drinking"	xxx	.71	.81	.77
"Solitary drinking"	.71	xxx	.73	.76
"Antisocial acts"	.81	.73	xxx	.71
"Changing drinking pattern"	.77	.76	.71	xxx

It would appear characteristic as they may be of the basic phase, are not structural behaviors, and the same is true of "going on the water wagon" which is a characteristic of the acute compulsive phase. That "extravagant behavior" does not correlate with any behaviors except those arising in the same period reflects the fact that it is the only extroversive behavioral change in the entire drinking history. The "morning drink" does not seem to constitute a major element of the two systems represented in Table 12, but it is nevertheless not an unimportant drinking behavior. It seems to denote the transition from "loss of control" to the compulsive stage, as it correlates .86 with "benders," which represents the acute compulsive phase, and this in spite of the fact that the onset of "morning drink" is generally in the basic phase and thus precedes "benders." The onset of "morning drink" is the strongest predictive factor of the compulsive stage.

"Going on the water wagon" seems to have the least bearing on other behaviors and this perhaps reflects that often the decision to resort to the "water wagon" does not come directly from the drinker

but is made under outside pressure. This may be seen from the correlation of .72 which obtains between the age at beginning of "water wagon" and the age at which family disapproval becomes manifest.

Consideration of a Chronic Stage of the Compulsive Phase

In the discussion of Table 7 it was mentioned that the onsets of behaviors listed in the last four columns or even the last six columns may form the elements of a distinct development in the compulsive phase. These behaviors are: "persistent remorse," "protecting supply," "tremors," "indefinable fears," "unreasonable resentments," and "desire to escape from environment as a solution of the drinking problem" which, for brevity's sake, will be designated here as "geographic escape."

But for "protecting supply" these are not drinking behaviors but rather psychological and perhaps neurological (tremors) changes connected with excessive drinking, although they are not specific to alcoholism. Even "protecting supply" is not a drinking behavior in the sense that "loss of control," "morning drink," "water wagon" and "benders" are. Each of these six behaviors will be discussed briefly before examining whether or not they form a significant syndrome.

"Persistent Remorse"

Anyone who knows alcoholics knows also that the grief which they cause their families and friends and the trouble they may cause strangers do not spring from callousness. Alcoholics reproach themselves for their conduct, and frequently the guilt generated by it drives them to further drinking. Remorse may arise at first only occasionally, later develop into "persistent remorse," and then give rise to emotional and conduct changes. It is this "persistent remorse" to which the Grapevine questionnaire refers and which was reported by 91 per cent of the men. A strong guilt feeling may develop in connection with breaking the social taboo on intoxication even in the absence of any harm to others but, generally, persistent guilt will come about only after the family and friends of the alcoholic have suffered through his conduct. This is reflected in the fact that only 10 per cent of onsets of "persistent remorse" occurred before the onset of "loss of control," i.e., before intoxication had become more the rule than the exception. Furthermore, "persistent remorse" has a correlation of .75 with "disapproval by family" and a correlation of .78 with going on the "water wagon" which is often the result of pressure by the family. When "benders" have their onset at the age of 20 years the onset of "persistent remorse" will come about, on the average, 5 years later; when the age at onset of "benders" is 25, "persistent remorse" will follow, on the average, in only 3 years; at the age of 30 only 1 year will elapse between "benders" and "persistent remorse"; and if the onset of "benders" is as late as the 35th year of age, it will have been *preceded* by "persistent remorse" on the average by 1 year. The latter instance would

indicate that at such late onsets of "benders" sufficient damaging drinking behavior had occurred before the occurrence of "benders" to give rise to "persistent remorse."

"Protecting Supply"

The hidden liquor supply of the alcoholic has become a standby of alcoholic stories. The alcoholic whose conduct shows a progressive lack of concern with the future becomes provident in one respect; if he can help it he will not expose himself to the risk of being caught without liquor. Ingenuity and persistence go into securing and guarding the supply. The contrast between the improvident general conduct of the alcoholic on the one side and his concern with future liquor supplies on the other side reveals the paramount importance which liquor achieves in his life and the anxiety over the idea of being without it. There may be also an element of suspicion involved, namely that the world wants to deprive him of the only means that makes life tolerable. The "onset" age of protecting supply has the third highest correlation with the "lowest point" (Table 17) and is thus an indicator of the alcoholic's downward progress.

This conduct develops largely after the acute compulsive phase has been reached unless that phase, represented by "benders," has its onset after the 30th year of age. From Table 7 it is seen that 20 per cent of the alcoholics had their onsets of "benders" and "protecting supply" at the same time. Of these 20 per cent, fully two-thirds were over 30 years of age at the onset of "benders." If "benders" occurred at the age of 20 the onset of "protecting supply" was seen on the average 4 years later, while if "benders" developed only at the age of 40, "protecting supply" had developed on an average 1 1/2 years earlier. These are average trends with considerable individual deviation. As averages these trends are rather reliable, but they do not predict the development for a given individual with any degree of accuracy. For alcoholics as a group, however, these averages are descriptive.

"Protecting supply" was reported by 78 per cent of the men in this survey. This may be regarded as the minimum incidence of this behavior, since the example given for it in the questionnaire may have limited the answers of some of the men.

"Tremors"

The shaky hands and trembling lips of the alcoholic when he is not steadied by alcohol are practically proverbial. In the present survey "tremors" were reported by 91 per cent of the men. These "tremors" are taken by many observers as evidence of neurological impairment through alcohol. No doubt there are such instances. But the "tremor" is also a common form of fear reactions. Quite outside of the pathological range, "tremors" are seen in normal persons under conditions of temporary fear, anxiety and suppressed aggression.

On the average, "tremors" have their onset in the alcoholic at

a time when he displays signs of anxiety such as "protecting supply" and "fears," as may be seen from Table 13.

time when he displays signs of anxiety such as "protecting supply" and "fears," as may be seen from Table 13.

TABLE 13.—Order of Onset of "Tremors" in Relation to Onsets of "Protecting Supply" and "Fears"

	Percentage of Onsets of "Tremors"		
	OCCURRING BEFORE	OCCURRING AT THE TIME OF	OCCURRING AFTER
Onset of "protecting supply"	28	37	35
Onset of "fears"	30	35	35

Instances in which the onset of "tremors" is simultaneous with the onsets of "protecting supply" and "fears" constitute more than one third of all the onsets. Only a few other behaviors in this survey tend towards such a high degree of simultaneous onsets. Furthermore, men starting excessive drinking in their thirties or forties developed "tremors" after a rather short time and even before the onset of "benders." These men, as has been suggested before, started their drinking probably under the impact of strong stress, and the early appearance of "tremors" as an anxiety manifestation would be quite in keeping with this assumption. It does not seem justified to accept "tremors" as *prima facie* evidence of neurological impairment. It is probable that some men in this survey had neurologically determined "tremors," but it is not possible to identify them. Questions relating to the occurrence of convulsions and age at their onset might be useful in establishing whether or not any neurological impairment may be assumed.

"Indefinable Fears"

In the course of years the alcoholic causes grief, humiliation, economic loss and sometimes bodily damage to members of his family, and to friends as well as strangers. First he feels only a genuine remorse and when he does not succeed in making up for the damage, as he intended to, there creeps up on him a fear of retribution. What he is expecting is perhaps a calamity that he cannot name; it is not any definite punishment, but rather a vague feeling that his alcoholic escape cannot go on much longer. And there may be, also, a haunting feeling that alcohol may let him down, that it will not continue to give him the relief he used to obtain from it. The guilt arising from overt, reprehensible behavior, and any guilt attaching to covert, unconscious processes of the past, mutually reinforce and magnify each other. Although some alcoholics, prior to their alcoholic periods, may not have had more guilt, anxieties and fears than the average individual, their drinking experiences tend to generate fears which may greatly affect all aspects of their conduct and thus give the appearance of a neurosis.

The question relating to these "indefinable fears" was answered by 74 per cent of the men. It may be doubted that in this instance complete answers can be elicited by direct question. The fears may sometimes not be recognized as such by the alcoholic, although they may be reflected in some of his actions. It is not suggested that indirect questions be inserted in the questionnaire but rather that considerable incompleteness of answers relating to this item must be expected when the questionnaire method is used.

In alcoholics who came to the acute compulsive phase, i.e., "benders," as early as their 20th year, "indefinable fears" developed on the average by their 23d year. On the other hand, if the acute compulsive phase had its onset at the age of 35 the "fears" tended to develop in the same year.

"Unreasonable Resentments"

On the one-side, the alcoholic subjects himself to severe self-reproach and self-punishment, and, on the other side, through his rationalizations, he reassures himself that he is blameless. Unreasonably resentful behavior is a sign that the rationalizations do not afford the expected comfort. As the ordinary rationalizations fail to exculpate the alcoholic he transfers punishment from himself to his social environment but through that he may, as Bergler suggested,* provoke punishment by the social environment and thus obtain new and plausible grounds for continuing his alcoholic behavior. In this survey 70 per cent of the men reported "unreasonable resentments." The same difficulties arise in eliciting reports on this behavior as in the case of "fears."

There is a tendency towards simultaneous onsets of "unreasonable resentments" and "indefinable fears," but, as will be seen, the resentments seem to be more closely related to the rationalization system. Generally the development of "unreasonable resentments" is a longer process than the development of "remorse," "tremors" and "fears"; this is seen particularly in the instance of men with the onset of "benders" in their thirties.

"Geographic Escape"

A form of rationalization that seems to appear late in the drinking history is the alcoholic's idea that living in some other town would probably solve his problems. This, too, is a sign that the ordinary rationalizations are failing. It seems, however, that "geographic escape" is not such an essential characteristic as, for instance, "antisocial acts," "changing the drinking pattern" or "unreasonable resentments." On the whole the designers of the Grapevine questionnaire directed their questions at behaviors expressing essential developments in the process of alcoholism. "Geographic escape," however, is a rather minor manifestation of some essential element. Only 63 per cent of the men reported this

* Bergler, E. Contributions to the psychogenesis of alcohol addiction. Quart. J. Stud. Alc. 5:434-450, 1944.

behavior and this can scarcely be attributed to insufficient formulation of the question but reflects, perhaps, the approximate frequency of this trait.

TABLE 14.—*Intercorrelations of the Last Six Behaviors Listed in Table 7*

	CORRELATION COEFFICIENTS					
	"Remorse"	"Protecting Supply"	"Tremors"	"Fears"	"Resentments"	"Geographic Escape"
"Remorse"	xxx	.61	.76	.75	.69	.58
"Protecting supply"	.61	xxx	.80	.83	.69	.55
"Tremors"	.76	.80	xxx	.86	.67	.60
"Fears"	.75	.83	.86	xxx	.90	.62
"Resentments"	.69	.69	.67	.90	xxx	.62
"Geographic escape"	.58	.55	.60	.62	.62	xxx

The discussion of the relations will be facilitated through a presentation of the correlations of these six late behaviors with those four earlier behaviors which formed the main correlational pattern pertaining to the first two phases. This is seen in Table 15.

The most striking feature of Table 14 is the low correlations shown by the onset of "geographic escape" with the onset of any other behavior in that group. While this trait arises approximately at the time of the other five traits listed in Table 14, it shows higher correlations with any of the onsets of the four traits from earlier phases, as may be seen from Table 15. Even these latter correlations are not high except for the fair correlation of .78 with the onset of "rationalizing excessive drinking," which it follows on the average by 3 years. As noted before, "geographic escape" seems to be only a minor trait. It appears to be one of the late manifestations of rationalization through which it attains to some middling indirect correlations with other behaviors. Furthermore, in this survey it did not seem to be a characteristic common behavior of alcoholics. Thus this behavior cannot be regarded as an element of a syndrome characteristic of a stage within a phase, but rather as a late development of the "main pattern" of the first two phases. As it seems to be a minor and not common trait its inclusion in the "main pattern" of the first two phases is not suggested. The repetition of this question in a revised questionnaire is advisable, however, in order to test the above assumptions.

A comparison of Tables 14 and 15 shows that but for "indefinable fears" the trait designated as "unreasonable resentments" correlates more markedly and consistently with the earlier traits of the first two phases than with the traits to which it is considerably nearer in time. The high correlation of .90 with "fears" is, perhaps, largely a time correlation, as 40 per cent of the onsets of these two behaviors coincide in time.

TABLE 15.—*Correlations of Six Late Behaviors with Four Earlier Behaviors*

	CORRELATION COEFFICIENTS			
	"Rationalizing"	"Solitary Drinking"	"Antisocial Acts"	"Changing Drinking Pattern"
"Remorse"	.53	.48	.50	.63
"Protecting supply"	.66	.82	.72	.78
"Tremors"	.61	.70	.65	.65
"Fears"	.69	.63	.70	.84
"Resentments"	.70	.72	.72	.80
"Geographic escape"	.78	.68	.68	.66

Simultaneity may signify essential relatedness but it may be due to the parallel development of two trends. That the latter may be the case is suggested by higher correlations with traits of the rationalizing and social-isolationism systems than with other traits. It is of interest that "unreasonable resentments," in relation to the earlier traits, show the highest correlation with "changing the drinking pattern," which represents a most unreasonable attempt at controlling excessive drinking. Both behaviors are indicators of diminishing insight and diminishing self-control; and although removed by several years from the "lowest point," they are most prognostic of it. It seems to be indicated to assign "unreasonable resentments" to the main correlational pattern in which it intercorrelates consistently with the elements of the rationalization system as well as with the elements of the system of social isolationism. The "main correlational pattern" in this last revision thus consists of : "rationalizing excessive drinking," "solitary drinking," "antisocial acts," "changing the drinking pattern" and "unreasonable resentments." Because of its relative unimportance "geographic escape" is not included in the "main pattern" to which it genetically belongs.

A third feature of the two tables is that "persistent remorse" shows inconsistent correlations with the other five behaviors listed in Table 14 and consistently poor correlations with the four earlier behaviors listed in Table 15. That the correlations of "remorse" with elements of the system of rationalizing and isolationism are low is as might be expected. The correlations with "tremors" and "fears" might suggest a syndrome but for the low correlation with "protecting supply" with which the other two behaviors are strongly correlated. It is remarkable that "persistent remorse" correlates .78 with "going on the water wagon" which shows the lowest correlations with other behaviors except "family disapproval," with which its correlation is .72. Also, "family disapproval" correlates .75 with "persistent remorse." This suggests that "persistent remorse" and "water wagon" represent behavioral changes which do not originate in any of the main

systems of the process of alcoholism but in a conflicting tendency to comply with social pressures. Possibly other responses of compliance occur to alcoholics but these are the only ones suggested by the present survey.

This leaves three strongly intercorrelated behaviors as a possible syndrome representing a definite stage or development of a phase. This is seen in the grouping of correlations presented in Table 16.

Clinically this syndrome is meaningful, as these three basic behaviors are all expressions of anxiety but, nevertheless, not just different names for the same phenomenon. As a syndrome the onsets of these behaviors may mark the chronic stage of the compulsive phase in the way that "benders" mark its acute stage.

TABLE 16.—*Correlations Suggesting a Tentative Syndrome*

CORRELATION COEFFICIENTS			
	<i>"Protecting Supply"</i>	<i>"Tremors"</i>	<i>"Fears"</i>
"Protecting supply"	xxx	.80	.83
"Tremors"	.80	xxx	.86
"Fears"	.83	.86	xxx

This syndrome gives evidence that as the compulsive phase continues the personality of the alcoholic undergoes a process of disorganization. Apparently the struggle to control drinking ebbs off and, instead, all effort centres on maintaining the alcoholic existence. All anxiety, too, shifts in the main to this paramount interest. At this point the behavior of the alcoholic appears obsessive rather than compulsive. All these behavioral changes emphasize the alcoholic egocentricity which Tiebout has described as the essential development in the process of alcoholism.*

The anxiety syndrome is probably broader than is suggested by this survey. A revised questionnaire should test whether or not the widely observed jealousy of the alcoholic and diminishing sex potency are developments of this same period.

The Terminal Phase

After the onsets of behaviors constituting the anxiety syndrome there elapsed, on the average, some 3 years before any other behaviors or events of the drinking history occurred. This gap may be due to an artifact of the present questionnaire.

Around the average ages of 35 or 36, but with a wide variation, occurred the first incidence of "seeking medical advice" and the first hospitalizations for an alcoholic disorder. These events may denote that the chronic stage of the compulsive

*Tiebout, H.M. The syndrome of alcohol addiction. *Quart. J. Stud. Alc.* 5: 535-546, 1945.

phase had begun to involve physical changes in the drinkers. Certain weaknesses in the answers relating to these two behaviors (as discussed on pages 43-4) make it inadvisable to go into further detail. The same applies also to "seeking psychiatric advice," which also occurred at this time.

"Attempting to find comfort in religion" occurs for the first time on the average around the 36th year. This characteristic was reported by 61 per cent of the men and there are strong indications that the answers to this question were biased through indoctrination with the Alcoholics Anonymous ideology, as in about 20 per cent of those who reported "religious need" its onset age coincided with "present age." Relevant consideration of this characteristic can be undertaken only in a future survey. As the need for religious consolation seems to be a latter development of the chronic phase, at least in a considerable proportion of the alcoholics, it may denote that the rationalization system begins to break down and not afford sufficient support.

This leaves, for the description of the terminal phase, only three items of the questionnaire, namely, "admitting to self that drinking was beyond control," "Admitting to anyone else that drinking was beyond control," and "reaching the lowest point." The latter datum presumptively denotes the end of the alcoholic process, at least as far as the downward trend is concerned. But it is entirely justifiable to regard joining Alcoholics Anonymous or seeking any therapy of the compulsive drinking as a new phase of the process. Any progress in recovery, as well as "slips," may be viewed, too, in terms of the alcoholic process. Thus the entire life of the alcoholic from the time of "losing control" may be taken as a function of his alcoholic experience irrespective of whether he persists in his drinking behavior or rids himself of it.

For all practical purposes, this theoretical standpoint notwithstanding, it is in order to speak of the "lowest point" as the terminal phase of the drinking history. But the "lowest point" is not a clear-cut event as are, for instance, the onsets of "unreasonable resentments," "protecting supply" and other behaviors of the drinking history. Different experiences are felt by different persons as the "worst thing" that could have happened to them. Some alcoholics think they did not reach the "lowest point" until they were literally picked out of the gutter with a fractured skull. To others, confinement in jail may signify the "lowest point," although the arrest may have been a chance occurrence at a time when the deterioration had not gone so far as with the man in the gutter. To some men the time their children were exposed to some slight deprivation may appear in retrospect as the "lowest point." The evaluations of the "lowest point" are made in retrospect and may be greatly modified by later experiences, and in the case of members of Alcoholics Anonymous, as in this survey, may be influenced by the length of time they spent in the atmosphere of that group. Nevertheless, the subjective judgment on "lowest point" is acceptable if there is some means to account for the possible influence which the time elapsed since recovery may have had on this judgment. It is also desirable to obtain from the interviewee a description of what he regards as his "lowest point." The statements of age relating to the occurrence of the "lowest point"

may be less reliable than the rest of the data. But the correlations of ages at this event with ages at the onset of some of the much earlier events indicate that the bias was perhaps not of a disturbing degree. These correlations are shown in Table 17.

TABLE 17.—*Correlations of Ages at Onsets of Various Behaviors with Ages at Onset of "Lowest Point"*

<i>Behavior Correlated with "Lowest Point"</i>	<i>Correlation Coefficient</i>
"Changing pattern"	.76
"Resentments"	.69
"Protecting supply"	.67
"Antisocial acts"	.62
"Fears"	.62
"Solitary drinking"	.55
"Geographic escape"	.54
"Tremors"	.53
"Rationalizing"	.51
"Remorse"	.47
"Benders"	.47
"Loss of control"	.45
"Water wagon"	.43
"Indifference to quality"	.38
"Extravagant behavior"	.38
"Morning drink"	.35

It is significant that such a manifestation of the rationalization system as "changing the pattern of drinking" has a higher correlation with the "lowest point" than "fears," which mark the chronic stage. Since on the average "changing pattern" precedes the "lowest point" by approximately 9 years, it may be regarded as the earliest indicator of the deterioration process. In the system of social isolationism, "unreasonable resentments" are most indicative of the downward process. "Solitary drinking," as shown before, does not occur at any fixed point of the drinking history but "sooner or later" and, consequently, there is a poor correlation between the onset ages of this behavior and of "lowest point." "Protecting supply" may be the strongest indicator of the anxiety syndrome, although in this small sample its superiority over "fears" cannot be determined.

*The questionnaire contains no question on the age of joining A.A. or the length of membership. From the differences between age at "lowest point" and "present age" (Figure 1) it can be inferred that about 50 per cent of the interviewees could not have been in A.A. more than one year, as their ages at "lowest point" and their "present ages" coincided. But in the remaining 50 per cent not even a guess can be made as to length of membership in that group.

On the average, the 98 men reached their "lowest point" at the age of 41 years, i.e., approximately 14 years after the onset of "loss of control." As will be seen later, the average duration for the entire group has limited descriptive value, since there are factors which modify this duration by at least 9 and up to 18 years.

The "lowest point" marks the completion of the terminal phase but does not represent the entire phase. The terminal phase begins probably with "admitting to self that drinking was beyond control." (For the sake of brevity this characteristic will be referred to as "admitting to self.") It was reported by all of the 98 men. Obviously this 100-per cent incidence relates only to certain types of alcoholics, largely those types who are attracted by Alcoholics Anonymous.

"Admitting to self that drinking was beyond control," which on the average occurred at the age of 38, or 11 years after "losing control," signifies the bankruptcy of the rationalization system. Alcoholics Anonymous are right in attributing great significance to this self-admission, because as long as the rationalization system affords sufficient support the drinker cannot sincerely feel that he has a disease which requires treatment. It may also be surmised that in the type of alcoholic derelict seen, for instance, at Salvation Army posts, the rationalization system works indefinitely because his intellectual and social assets are insufficient to put it to the test. In other alcoholic derelicts the rationalization system may have broken down but they may have slipped to a social level on which the rationalization is no longer required. Furthermore, there may be alcoholics who, because of a lack of intelligence or because of a psychopathic personality, never needed a system of rationalizations.

The age at the time of "admitting to self" occurs correlates with the most important earlier behaviors as shown in Table 18.

TABLE 18.—*Correlations of Age at "Admitting to Self that Drinking Was Beyond Control" with Onset Ages of Selected Earlier Behaviors*

<i>Behavior Correlated with</i>	<i>Correlation Coefficient</i>
"Admitting to Self"	
"Protecting supply"	.75
"Changing pattern"	.73
"Religious need"	.73
"Antisocial acts"	.72
"Resentments"	.70
"Fears"	.69
"Solitary drinking"	.64
"Remorse"	.61

That "admitting to self" is a more definite event than "lowest point" is evidenced by the fact that it correlated to a degree of .70 or higher with five earlier behaviors, while "lowest point" showed only one correlation above .70.

The fair correlations with "religious need" and "changing pattern" support the interpretation that "admitting to self" represents the failure of the rationalization system. It is also of interest that while "lowest point" showed a correlation of only .47 with the onset of "persistent remorse," the latter behavior correlated .61 with "admitting to self."* The strains of "persistent remorse" on the rationalization system may contribute toward the weakening of the latter. It may be recalled that while "remorse" showed low correlations with the behaviors of the "main correlational pattern," its correlation with "changing pattern," the strongest expression of the rationalization system, was .63 (see Table 14).

The "lowest point" had the strongest correlation with "admitting to self," .84, but since on the average only 2 years elapsed between the two events, the predictive value of "admitting to self" is of no practical importance. Its significance is its expression of the failure of rationalizations. As a prognostic datum in therapy, therefore, it may be of great importance. A relatively early failure of the rationalization system may mean that the system never became deeply rooted and may be replaced fairly easily in the course of therapy without great danger of it cropping up again.

"Admitting to self" appears to be an important datum and "admitting to another one" may be just as important but it cannot be used to any advantage in this analysis, since it seems that it may have coincided with the first A.A. contact and may not have been spontaneous.

Over-all Picture of the Drinking History

Factors which precede drinking experiences by many years enter into the process of alcoholism. There is no one form or degree of these factors, nor any combination of them, which leads with relentless necessity to alcoholism. But the probability of becoming an alcoholic is smaller or greater according to the assets and liabilities of the total heredity of the individual; the conditioning of his responses at an early age; his educational assets; his social experiences in general, and his occupational and marital experiences in particular, as well as the pattern of living in his cultural group.

How the individual will respond to his drinking experiences will depend to a great extent upon these factors. In this sense the drinking experiences give only a specific form to a process which

* The difference is statistically not reliable in samples of this size, but as explained before, the assumption is made that at least such differences as observed here would occur in large samples.

starts before drinking. These prealcoholic developments were not touched upon in the Grapevine survey, which was limited to the drinking histories of members of Alcoholics Anonymous.

The questionnaire revealed little of the first drinking experiences or what may be called the accepted social forms of drinking. So much is evident, however, that few men, about 10 per cent of the 98 interviewees, began with solitary drinking. These early solitary drinkers had traits which indicated that they were psychological deviants before they started drinking. They showed exaggerated reactions to alcohol and behaved in a bizarre manner at such youthful ages as 15 to 17 years. No doubt they were "lone wolves" from the very beginning, perhaps shy, perhaps suspicious of others. Some students of alcoholism may be inclined to call them schizoid personalities. Another 10 per cent of the men displayed signs of prealcoholic psychological deviations but started their drinking in the company of others. The later development of their drinking history, however, differed from the majority.

The occasions on which 90 per cent of the men acquired their excessive habits were perhaps "liquor parties" and gatherings at taverns and "week-end drunks" which are quite common in some social groups. There are no data on parties and on drinking in taverns, but the histories show that 74 per cent of the men used to go on "week-end drunks." Only half of these 74 per cent of the men used to go on "week-end drunks." Only half of these 74 per cent got started on their alcoholic course at "week-end drunks"; the other half had developed the first forms of alcoholism before that.

Quite early, on the average of 25 years, the interviewees showed signs that their drinking had been excessive for some time and that they had been strongly affected by the excess. They began to have "blackouts," that is, they had memory blanks or, as the questionnaire puts it, "Wake up in the morning after a party with no idea where you had been or what you had done after a certain point." These bewildering "blackouts" were reported by 90 per cent of the men and their first occurrence was placed predominantly at a time when these men were not yet alcoholics. Nearly 40 per cent had their first "blackouts" before their 25th year, and 16 per cent even before their 20th year. Among moderate drinkers, too, there are some men, probably not more than 30 per cent, who have experienced one or two "blackouts" in their lives. Since among alcoholics the incidence of the reaction was three times as great, and since its first occurrence was noted before they had become alcoholics, the "blackout" may be regarded as an omen of alcoholism in the offing.

At the time of the "blackouts," or somewhat later, there appeared a behavior which indicates that liquor had attained to a greater importance for these men than for the average drinker, namely, they began to "sneak drinks." They would avail themselves of occasions to have - unseen by others - a few more drinks than the other members of the party.

Possibly there is a whole group of drinking behaviors and reactions of such ominous portent as "blackouts" and "sneaking drinks" at a time preceding true alcoholism. There may be an entire preparatory phase of alcoholism. A knowledge of the characteristics of that phase would aid in detecting the potential alcoholic, and

if the signs were widely known many a "candidate" might become aware of his danger.

On the average some 2 years after the first appearance of "blackouts" the interviewees found that they were practically always drinking more than they had intended. They may have wanted only a couple of drinks but "wound up cockeyed," that is, they lost control over drinking. This event marks the basic or crucial phase of alcoholism. At the beginning of that phase the drinker is not dependent upon alcohol; he is not driven to drinking, but when he drinks he cannot stop. This fact sets the definite course for alcoholism, unless external circumstances or a flash of insight stops the drinker before he has convinced himself through spurious arguments that he can control his drinking and that drinking is the right medicine for him. Before the rationalizations are established the drinker could stop without difficulty, but since his drinking has not caused him any real trouble at this point and since he is not aware of the future probable course of events, he sees no reason for stopping.

For the group as a whole, rationalization of the excessive drinking started on the average approximately 2 years after the onset of "loss of control." The alcoholic must convince himself that he is able to control his drinking and that the fact that he got drunk on practically every occasion was not because of lack of control but because he had, on each of these occasions, good reason to get drunk. He is convinced that unless he has a reason he will not get drunk.

In this survey the rationalizing of the excessive drinking seemed to be the beginning of a system of rationalizations which later tended to furnish excuses for the whole conduct of the alcoholic, as there was a strong correlation between this early form of rationalization and the much later onset of unreasonably resentful behavior.

About 1 year after the beginning of the rationalization system, that is, at the average age of 30 years, the men started taking a drink the first thing in the morning as a kind of self-prescribed medicine, in order to "get themselves going." From the age at which a man took his first morning drink, it was possible to predict fairly well how long it would take him to begin going on "benders." Thus taking morning drinks may be a premonition of the drinking developing into a compulsion. When a drinker for the first time takes a morning drink in order to be able to face the day he gives evidence that he is attributing great powers to alcohol and that he is beginning to depend on it. Furthermore, in this survey "morning drinks" showed a fair correlation with "rationalizing," which suggests that these drinkers may have been convincing themselves that for them alcohol was a necessity and not a willful choice.

According to the age at which morning drinking began, "benders" followed on the average 1, 2 or 3 years later. A man who stays drunk for days without regard to family, work and other duties commits such a gross violation of all cultural standards that his action cannot be a matter of choice unless he has a psychopathic constitution. If men and women who have not previously displayed any gross psychopathy come to such a behavior as

"benders" in the course of their drinking, it must be assumed that a psychopathologic process of compulsion has been induced in them through their drinking habits. Because of this complication of "benders" their onset has been designated in this analysis as marking the beginning, or the acute stage, of the compulsive phase of alcoholism.

The data of the Grapevine survey suggest that the development of certain behaviors may be definitely assigned to the basic phase and of others to the compulsive phase. But there are two behaviors, namely "solitary drinking" and "antisocial acts," which belong to neither phase but whose onsets were found to spread over both phases. These two behaviors are the first manifestations of the system of social isolation which operates in conjunction with the rationalizing system. Certain social experiences incumbent upon excessive drinking, such as losing friends or losing jobs or advancement, were felt by some of the interviewees at an early stage and by others at much later stages. From the survey it appeared that the development of social isolationism generally followed chronologically the first occurrence of those social experiences. It may be assumed, however, that later the social isolationism gave rise to the same kind of social experiences from which it originally received its impetus.

In 90 per cent of the interviewees, solitary drinking was not an initial behavior but developed after shorter or longer periods of social drinking. Thus a trend toward social isolationism, as reflected in this behavior, is a true conduct change incumbent upon alcoholism. The irresponsible behavior of the excessive drinker evokes rebuffs and ultimately rejection by his group, and he is thus driven into isolation. Alcoholics sometimes suspect rejection before it actually occurs and they may isolate themselves without any manifest cause.

The solitary drinking leads the alcoholic to brooding, to the creation of pseudoproblems, and to a centring of all thoughts on himself. In this condition the infantile egocentricity is reawakened and reinforced.

What the Grapevine questionnaire calls "antisocial acts," i.e., aggressive, often malicious behavior, developed in the interviewees in close connection with solitary drinking. The two behaviors were strongly correlated with each other and formed a correlational pattern with "rationalizing excessive drinking." The aggressive behavior of the alcoholic is to some extent a compensation for the humiliations which he actually suffers or only imagines. To some extent, however, the aggressions represented a deflection of the self-reproach and self-punishment in which the alcoholic indulges, but of which he must also rid himself.

While the trend toward social isolationism, as expressed in "solitary drinking" and "antisocial acts," was seen in this survey as different individuals at different phases of their drinking histories, there were some behaviors which could be definitely assigned to the acute stage of the compulsive phase. At the time of the onset of "benders," or soon after, there appeared attempts to control the excessive drinking. The well-known means of control, the "water wagon," was rather strongly correlated with "realizing disapproval by the family" and thus seemed to represent to some

part compliance with social pressure. But "going on the water wagon" was also correlated with "persistent remorse" and may have been in part a voluntary "making up for wrongs." Neither "persistent remorse" nor "going on the water wagon" fitted into the correlational pattern of the rationalization system and the social-isolation system, but seemed to form a separate system of "social compliance" which perhaps has other manifestations not revealed by this survey.

Another form of the control of drinking, namely "changing the pattern of drinking," was also reported by the interviewees. This behavior is more significant than "going on the water wagon," for it is not determined by extraneous circumstances and, moreover, it reveals much of the alcoholic thinking and feeling. The spontaneous decision to control drinking is evidence that the alcoholic has at least a transitory realization of his danger. On the other hand, such means of control as not drinking before a certain hour of the day or drinking only certain types of alcoholic beverages show that the rationalizations of the alcoholic have progressed to a most unreasonable stage. These conclusions are based on correlations seen in the Grapevine survey. "Changing the pattern of drinking" was correlated with "rationalizing excessive drinking" to a greater degree than with any other behavior, and of all the questionnaire items it yielded the best prediction of the age at "reaching lowest point."

On the average some 2 years after the onset of "benders" the interviewees began to react in an unreasonably resentful way to anything that did not agree entirely with their wishes. Such behavior is an expression of exaggerated self-importance, but it also indicates the rejection of any overt remorse which may have been felt for some time and, consequently, it is also a deflection of self-punishment to punishment of the environment. "Unreasonable resentments" correlated to a greater degree with earlier behaviors of the rationalizing system and the social-isolationism system than with some behaviors which had their onsets at approximately the same time as the resentments made their appearance.

Three of these later behaviors, namely, "protecting supply," "tremors" and "indefinable fears," formed a separate correlational pattern. These behaviors are all expressions of deep anxieties which may have arisen to some extent from the physical stresses of excessive drinking and perhaps to a greater extent from the guilt feelings attaching to the harmful conduct of the alcoholic. These extreme anxieties, which find a physical expression in "tremors," give a renewed and unceasing incentive to the seeking of intoxication. It may be said that the onset of the anxiety syndrome marks the beginning of the chronic stage of the compulsive phase. The thought and effort that the alcoholic at that time puts into protecting his supply of liquor indicate that intoxication tends to become a goal rather than a means of relief. This conduct also shows the utter rejection of all responsibility and the complete dominance of the egocentric system.

The chronic stage showed physical involvements on the average after another 3 years of excessive drinking, for it was then that the interviewees began to seek medical assistance and found

themselves for the first time in the hospital because of some alcoholic bodily disorder.

The physical involvements of alcoholism may shake the confidence of the alcoholic in his system of rationalization. In the Grapevine survey some of the men showed for the first time a need for the consolations of religion at the time when the bodily consequences of alcoholism manifested themselves. The development of this need suggests that the rationalizations begin to fail in according sufficient comfort.

On the average 2 years more sufficed to bring about the bankruptcy of the rationalization system. This was evidenced by the fact that at that time the interviewees admitted to themselves that they were unable to control their drinking, that they "were licked." What each individual regarded as his "lowest point" was reached on the average 2 years later, and about half of the interviewees joined Alcoholics Anonymous within a year after that event.

The failing of the rationalization system as expressed in the self-admission of failure to control drinking is a stage which may be characteristic only of those alcoholics who either join Alcoholics Anonymous or voluntarily submit to some form of therapy. The failure of the rationalization system seems to be the indispensable condition for successful therapy. It is possible that the failure of the rationalization system need not be entirely a spontaneous development but that skilful handling may precipitate the failure and make the alcoholic amenable to therapy.

The trends described here are gross average trends shown by the data of this survey. There was wide variation in the passage of time between any two events of the drinking history, and the order of events was not always the same for all individuals. The deviations from the grand averages, however, were not haphazard but to a considerable extent were governed by the ages at which the interviewees started their excessive drinking. According to whether the men arrived at the basic phase of alcoholism at ages 20, 25, 30 or 35, the time that elapsed between the prodromal symptoms and the "lowest point" varied from 12 to 18 years, as may be seen from Table 19. This table shows, too, that certain reversals in the order of events also depend upon the ages at the onset of the basic phase.

The trends shown in this table give an extremely smooth appearance, as the "averages" shown there emanate from prediction formulae based on the correlations found in this survey. The predictions apply to group averages only, and not to individuals.

One important feature of Table 19 is that on the average the men who "lost control" at the age of 20 began rationalizing their drinking behavior 3 years later, while men who "lost control" at the age of 35 began their rationalizations on the average in the same year. This suggests that young drinkers, with little life experience behind them, have no need for rationalizations until perhaps the social consequences of their conduct put before them the alternatives of either stopping their excesses or convincing themselves of the justification of their behavior. On the other hand, men who start their excessive drinking at a more mature age - perhaps under the impact of some great stress - cannot, apparently,

go on with their deviant behaviors unless they immediately find some plausible excuse for them.

TABLE 19.—*Predicted Mean Ages at Onsets of Selected Significant Behaviors of the Drinking Histories of Men Who Had Lost Control in the Drinking Situation at Ages 20, 25, 30 and 35*

Mean Ages at Onset of "Blackouts"	MEAN AGES IN YEARS AT ONSET OF											
	Age at Onset of "Loss of Control"	"Rationalizing Excessive Drinking"	"Morning Drink"	"Solitary Drinking"	"Antisocial Acts"	"Benders"	"Remorse"	"Protecting Supply"	"Fears"	"Resentments"	"Admit to Self"	"Lowest Point"
20	20	23	24	27	24	25	28	28	28	29	35	38
24	25	27	28	30	29	30	31	31	31	32	37	40
28	30	31	32	33	33	34	33	35	35	35	39	42
32	35	35	36	36	38	39	36	38	38	39	42	44

The table also shows that in the drinkers who "lost control" at 20 years of age the average time between the onset of "rationalizing excessive drinking" and "admitting to self" was 12 years, while in the men who "lost control" at 35 the average was only 7 years. It may be that the rationalization system is able to carry the inexperienced young person for a considerable period while it fails in a relatively short time in drinkers who come to their excessive behavior at more mature ages and whose experience puts their rationalizations to more severe tests.

As to reversals of sequences of behavior, it may be pointed out that in the young alcoholics the trend toward social isolationism as evidenced by "solitary drinking" occurred after the onset of "benders" while in the men who "lost control" in their middle thirties "solitary drinking" started on the average 3 years before they went on "Benders."

Main Implications of the Survey

The most significant suggestion emanating from the Grapevine survey is that, aside from emotional and ideational processes which may have led to alcoholism, there are true changes of attitudes and conducts which are contingent upon the social consequences of the excessive drinking as well as upon its physical stresses. Many of these conduct changes, which develop on the average after 5 to 10 years of excessive drinking, create the appearance of a clinical neurosis. That in a large proportion of alcoholics either only this superimposed "neurotic" behavior exists, or that it prevails over early personality conflicts, is indicated by the great simplicity of means which serve to relieve a large number of alcoholics and to "keep them dry." The possible bearing on therapy of the structures superimposed by the social and physical stresses of excessive drinking demands further investigation.

There is a suggestion that a study of the drinking history may reveal a group of behaviors prognostic of alcoholism in the offing. The knowledge of the prognostic signs and the wide dissemination of such knowledge may constitute a step in the prevention of alcoholism.

Further study of the drinking history may also yield prognostic criteria of therapeutic success, and particularly of adjustment in Alcoholics Anonymous, if the drinking history can be followed by a questionnaire relating to certain events after joining A.A. or after submitting to some form of therapy.

This survey also suggests that in the absence of facilities for delving into the early psychodynamics of the drinker, a set of certain drinking behaviors and reactions at youthful ages may serve for determining the existence of prealcoholic psychopathology.

There is, lastly, the fact that a superficial questionnaire on a sample of 98 men furnished highly suggestive and interesting material. This indicates that a detailed questionnaire given to a large number of A.A. members would be an undertaking well worth the time and effort which it may involve. Because of this indication a revised questionnaire for future use in Alcoholics Anonymous is submitted as an appendix to this study.

APPENDIX

A Tentative Revised Questionnaire Form

The questionnaire submitted here does not aim at the factors which may have led the drinker to alcoholism but at the drinking behaviors through which he passed in the course of his drinking history and at the effect which the excessive drinking had on certain of his social relations and on his attitudes and general conduct. Such "background questions" as proposed here relate largely to the attitudes toward drinking in the parental family and the community in which the drinker was raised. Knowledge of these attitudes might shed some light on why some drinkers take a longer and others a shorter time to reach certain stages of alcoholism. Some questions relating to the social, economic and occupational status of the parents may be helpful in characterizing certain social liabilities of the drinker which may retard or speed the process of alcoholism.

The questionnaire is designed for distribution among members of Alcoholics Anonymous but can be adapted for recovered alcoholics in general. Neither the Grapevine questionnaire nor the present one is suitable for active alcoholics. A period of voluntary abstinence and voluntary submission to some form of therapy must have elapsed in order that the alcoholic should be able to accept and answer the questions.

Separate forms are suggested for men and women in order to avoid awkwardness in the formulation of questions. Only the form proposed for men is shown here.

A.A. QUESTIONNAIRE FOR MEN

1. Present age:
2. Age when you joined A.A.:
- 2a. Location (city and state) of your A.A. group:
3. Name of town in which you were raised:, State:
(Town in which you went to school, not including college)
4.
5.
6.
7. Community attitude toward drinking at the time when your drinking started: (Check one even if Prohibition was in force at that time)
Wet ☐ Dry ☐ Neutral ☐
8. Prohibition in force when drinking started? yes ☐ no ☐
9. Father's occupation:
(Do not give title of position but state occupation in such broad terms as, for instance: watchmaker, self-employed; farm owner; teacher; railroad foreman; minister; proprietor of small, medium or large store; proprietor of small, medium or large enterprise; etc., etc. If father was or is his own employer, please state so.)
10. Father's birthplace:
11. Mother's birthplace:
12. Father's attitude toward drinking (Check the box preceding the description which applies):
1 ☐ Abstainer but not disapproving; 2 ☐ Abstainer and disapproving;
3 ☐ Prohibitionist; 4 ☐ Moderate occasional use of alcoholic beverages;
5 ☐ Moderate regular use of alcoholic beverages; 6 ☐ Occasional intoxication;
7 ☐ Heavy drinker; 8 ☐ Alcoholic.
13. Mother's attitude toward drinking (Check the box preceding the description which applies):
1 ☐ Abstainer but not disapproving; 2 ☐ Abstainer and disapproving;
3 ☐ Prohibitionist; 4 ☐ Moderate occasional use of alcoholic beverages;
5 ☐ Moderate regular use of alcoholic beverages; 6 ☐ Occasional intoxication;
7 ☐ Heavy drinker; 8 ☐ Alcoholic.
14. Friends of the family in the majority (Check more than one if necessary; place checkmarks in boxes before the appropriate items):
1 ☐ were teetotalers; 2 ☐ drank at meals; 3 ☐ had cocktails; 4 ☐ gave liquor parties;
5 ☐ male friends met at public drinking places; 6 ☐ male friends went in for week-end drinking.
15. Your age when your parents, brothers, sisters first reproached you because of your drinking (if this never occurred check the word "never," otherwise state age at time of first occurrence): Age Never ☐
16. If at any time after your school years you were supported by your father, mother, brothers, sisters, other relatives (but not wife or her relatives) state: from age to age Never ☐ (If this never occurred check the word "never," otherwise state age.)
17. Schooling: years. (State number of years of your schooling but not including night school. *Example:* if you completed high school but had no further formal training, write: 12 years; etc.)

18. If you had night courses or specialty courses other than graduate studies, state the courses and your ages at the time of these courses:
 Name of course age
 Name of course age
19. Marriage: If never married check "single" ☐ here; otherwise state age at marriage, etc.:
 Age at first marriage Age at second marriage
 Age at first divorce Age at second divorce
 Age at first separation Age at second separation
 Age when widowed
20. Children: Write in your age at birth of your first, second, third, fourth child, etc.
 1. 2. 3. 4. 5. 6.
21. Wife's attitude toward drinking (Check the box preceding the description which applies):
 1 ☐ Abstainer but not disapproving; 2 ☐ Abstainer and disapproving;
 3 ☐ Prohibitionist; 4 ☐ Moderate occasional use of alcoholic beverages;
 5 ☐ Moderate regular use of alcoholic beverages; 6 ☐ Occasional intoxication;
 7 ☐ Heavy drinker; 8 ☐ Alcoholic.
22. If at any time your wife or her family supported you, state:
 From age to age Never ☐
 (If this never occurred check the word "never," otherwise state age.)
23. If at any time you had to turn over the conduct of your finances to your wife or to the family members, state:
 From age to age Never ☐
 (If this never occurred check the word "never," otherwise state age.)
24. Your age when wife first reproached you because of your drinking:
 Age Never ☐
 (If this never occurred check the word "never," otherwise state age.)
25. Your age when your wife's family reproached you because of your drinking: Age Never ☐
 (If this never occurred check the word "never," otherwise state age.)
26. Your age when wife began to reproach you for humiliating her by your drinking: Age Never ☐
 (If this never occurred check the word "never," otherwise state age.)
27. Your age when wife began to reproach you for neglecting the finances: Age Never ☐
 (If this never occurred check the word "never," otherwise state age.)
28. Your age when wife began to reproach you for neglect of children, bad example, etc.: Age Never ☐
 (If this never occurred check the word "never," otherwise state age.)
29. Your age when wife began to show signs of jealousy: Age Never ☐
 (If this never occurred check the word "never," otherwise state age.)
30. Your age when your wife or other members of your immediate household began changing their habits because of your drinking (*Example:* going out more frequently or going out less frequently; joining clubs; begin inviting people to the house or stop inviting people to the house; begin to take part in civic activities or stop taking part in civic activities, etc.):
 Age Never ☐
 (If this never occurred check the word "never," otherwise state age.)

31. Your occupation when you began drinking, even if not excessively:
 (Same as in case of father's occupation, but if you were a high school or college student, or were in military service, or had not started working at that time, please state so.)
32. Occupations you had during your drinking career, before joining A.A.
 (Denote by a numeral the first, second, etc., occupations followed by you; for instance, "always independent artist"; or 1 journalist, 2 law clerk, 3 mechanic, etc.):
33. State the approximate number of jobs held during the course of your drinking career: No. of jobs
34. Your age when you began losing time because of drinking:
 Age Do not recall age ☐ Never ☐
35. Your age when you first walked out on jobs:
 Age Do not recall age ☐ Never ☐
36. Your age when you first lost job because of drinking:
 Age Do not recall age ☐ Never ☐
37. Your age when you first lost advancement because of drinking:
 Age Do not recall age ☐ Never ☐
38. Your age when you had highest earnings in the course of your drinking career (before joining A.A.):
 Age Do not recall age ☐ Never ☐
39. Your age when you were unemployed for periods of more than 3 months:
 Age Do not recall age ☐ Never ☐

History of Drinking Behaviors

The order of the questions relating to the drinking behaviors has been determined by chance drawings in order not to suggest a sequence of events. [In this sample questionnaire, however, the questions have not been randomized in order to give the reader a better picture of the scope of questions.] In some instances, however, it seemed desirable to let two closely connected questions follow each other. A wide variety of drinking behaviors is listed in recognition of the great individual differences existing among alcoholics. It is not expected that any one person would have experienced all of the drinking behaviors. State your ages for those which describe your case and check "never" if the behavior has never occurred in your experience. Some forms of moderate drinking are listed in order to establish the transition from moderate to excessive drinking. Many of the questions will be illustrated by examples. The number of examples should not suggest that the given examples are the only ones which apply to that question, but rather should suggest to you the *range* of experience applicable to the question.

40. If you were a periodic drinker (getting drunk only at intervals, say of 1, 2, 3 or more months, either not drinking at all in between times or only extremely moderately; but do not put down pay-day drunks as periodic drinking) state:
 Always ☐ Never ☐ Changed from steady drinking to periodic drinking at age

41. If you were a steady drinker state:

Always ☐ Never ☐ Changed from periodic drinking to steady drinking
at age

If you had the experience described below and remember your age at the time it first occurred, please state your age in the first column. If you had this experience but do not remember at what age, please put a checkmark in the "Do not recall age" column. If you did not have this experience, please put a checkmark in the column headed "Never."

	<i>Age</i>	<i>Do Not Recall Age</i>	<i>Never</i>
42. Age at first drink.
43. Age at first drunk.
44. Age when you began to drink at least once a month without getting drunk. (If you never drank as moderately as that, mark in the "never" column.)
45. Age when you began to drink at least once a month, getting drunk some of the time. (If you never drank as moderately as that, mark in the "never" column.)
46. Age when you began drinking at least once a week without getting drunk. (If you never drank as moderately as that, mark in the "never" column.)
47. Age when you began to drink at least once a week, getting drunk some of the time. (If you never drank as moderately as that, mark in the "never" column.)
48. Age when you began drinking more than once a week but not every day, getting drunk only sometimes, and without any difficulties the next day. (If you never drank this way, mark in the "never" column.)
49. Age when you began drinking more than once a week but not every day, getting mildly drunk on most occasions, but not having any difficulties the next day. (If you never drank this way, mark in the "never" column.)
50. Age when you first went on week-end drunks (being drunk most of Saturday and Sunday, but nothing worse than a hang-over on Monday).
51. Age at first occasion of "pulling a blank." (Example: Wake up in the morning after a party with no idea where you had been or what you had done after a certain point.)

	<i>Do Not Recall</i>		
	<i>Age</i>	<i>Age</i>	<i>Never</i>
52. Age when "pulling blanks" began to occur frequently (that is to say, at least 2-3 times out of 10 drunks).
53. Age when you first started sneaking drinks. (<i>Example:</i> Take a quick one in the kitchen without anyone seeing you when pouring drinks for guests.)
54. Age when you began wondering whether there would be enough liquor at a party, or had a few drinks before in order to make sure that you would have enough.
55. Age when you began gulping drinks.
56. Age when you began to refuse to talk about your drinking.
57. Age when you began to feel that you were more efficient after one or two drinks.
58. Age when you began to feel that a drink or two helped you to associate with other people.
59. Age when you began to need more liquor to get the same effect.
60. Age when you began to notice that you got drunk on less liquor.
61. Age when you began to lose control of drinking. (<i>Example:</i> Intend to have only a couple and wind up cockeyed.)
62. Age when you started going on daytime drunks (on other days than Saturday or Sunday, but not being drunk the next day except perhaps for a hang-over).
63. Age when you first felt that your drinking was interfering with your favorite recreations and interests.
64. Age when you began to go on "benders." (<i>Example:</i> Staying drunk for at least 2 days, but not counting Saturday or Sunday, without regard for your work or your family or anything else.)
65. Age when you began taking morning drinks. (<i>Example:</i> Feel the need of and take a drink the first thing in the morning in order to get yourself going, or "for medicinal purposes only.")
66. Age when you began to act in a financially extravagant manner while drinking (buying			

	<i>Age</i>	<i>Do Not Recall Age</i>	<i>Never</i>
unnecessary objects, giving exorbitant tips, cashing checks for more than you need and spending all of it, riding around in taxis for no purpose, making unnecessary long-distance calls, etc.).
67. Age when you started solitary drinking.
68. Age when you began neglecting food (eating only a sandwich, or nibbling pretzels or popcorn instead of the customary meal, or having meals at irregular hours or without relish, losing preference for favorite dishes, well-cooked, well-served meals, etc.).
69. Age when you began to become indifferent toward brands of liquor, or to whether you became drunk on beer, wine or distilled spirits, as long as you got drunk on it (excluding non-beverage alcohol).
70. Age when you began drinking occasionally non-beverage alcohol, such as bay rum, canned heat, shellac, etc., if no better drink was available.
71. Age when you began to think of some formerly well-liked friends as "stuffed shirts."
72. Age when you began walking out on friends.
73. Age when friends began walking out on you because of your drinking.
74. Age when you began to justify to yourself, or to find alibis for, your excessive drinking. (<i>Example:</i> Convincing yourself that you were fully able to control your drinking and that whenever you got drunk it was because of some good reason and not because of lack of control, or that your efficiency required alcohol, or that alcohol was a medicine for your "nervousness," and that there was no better medicine for you, etc., etc.)
75. Age when you began to attempt to control your drinking by going on the wagon.
76. Age when you began to attempt to control your drinking by drinking in a different way than usual, that is, making up certain rules of drinking for yourself. (<i>Example:</i> Deciding not to drink before a certain hour, or to drink			

	<i>Age</i>	<i>Do Not Recall Age</i>	<i>Never</i>
only at home, or to drink only in the presence of friends, or only with meals, or to drink only beer or wine, etc., etc.)
77. Age when during drinking you started acting in an aggressive, belligerent or malicious way or committed acts dangerous to yourself or others. (<i>Example:</i> Smashing hydrants or street lights, picking a fight with a stranger in a tavern for no justifiable reason, damaging parked cars, playing dangerous "practical jokes" on others, etc.)
78. Age when you got into trouble because of drunk driving.
79. Age when you began convincing yourself that any neglect to which you may have exposed your family was justified because your drinking was necessary for you or because "it was coming to them."
80. Age when you began feeling that for your special case your family and the world in general ought to show more consideration.
81. Age when you began suspecting that people were feeling contempt toward you, or in the best case, pity.
82. Age when you began feeling that if people were not "sitting on you" because of your drinking you would be capable of considerable accomplishments.
83. Age when you began to have ideas of jealousy concerning your wife or girl friend.
84. Age when you first began to notice diminishing sex potency.
85. Age when you began suffering from sleeplessness.
86. Age when you began to pity yourself (feeling that everybody was down on you, that you deserved a better fate, that the world didn't give you a chance, etc., etc.)
87. Age when you thought the best solution would be to be dead.
88. Age when you first contemplated suicide.
89. Age when you began thinking that a change of environment would solve your whole prob-			

	<i>Age</i>	<i>Do Not Recall Age</i>	<i>Never</i>
lem. (<i>Example:</i> All would be well if you could only get a job in Chicago, or Weehawken, or if you could have a job where you would work all by yourself, or live in a different climate, etc.)
90. Age when you sought or accepted the services of an intermediary to straighten out matters with your family, friends or employer.
91. Age when you began feeling persistent remorse because of your conduct, not being able to shake off the idea that you made a fool of yourself while drinking or that you have been unjust to your family and friends or had caused them great trouble, etc.
92. Age when you began behaving in an unreasonably resentful manner. (<i>Example:</i> Going into a rage because you couldn't find something you were looking for, or because dinner wasn't ready on time, or because there was too much noise or because you thought people didn't show you sufficient respect; punishing your children without reason or out of proportion to the offense; being unreasonably hard on employees, etc., etc.)
93. Age when you stopped trying to control your drinking through going on the wagon or through other means except in compliance with wishes of your family or friends.
94. Age when you first had a convulsion after a drinking bout.
95. Age when you began to have uncontrollable tremors (that is, jitters, shakes, or whatever you may have called it) after drinking.
96. Age when you began to have feelings of fear without knowing what you were fearing, or fearing that there might be retribution because of your excessive drinking.
97. Age when you began having periods of despondency.
98. Age when you began to adopt a "what's the use" attitude (that is, see no use in trying to control your drinking, in trying to adjust to social requirements, making a living, etc.).

	<i>Age</i>	<i>Do Not Recall Age</i>	<i>Never</i>
99. Age when you began to fear that alcohol might let you down, that is, that you might not get the usual satisfaction from it.
100. Age when you began protecting your supply of liquor (making sure that you would have liquor always handy, making sure that family or friends wouldn't find it and take it from you).
101. Age when you first sought medical advice or aid because of some bodily ailment due to drinking.
102. Age at which you first voluntarily sought psychiatric advice on stopping drinking.
103. Age at which you first sought psychiatric advice because of pressure of family or friends.
104. Age at which you first sought psychiatric advice on "doing something" about your fears, anxieties, etc.
105. Age at which you were first hospitalized because of acute intoxication.
106. Age at which you were first hospitalized because of some bodily ailment due to drinking.
107. Age at which you began to feel a religious need (pray; seek pastor's advice; wish you could be religious; began reading the Bible or religious literature; feel the need of forgiveness). In giving your age at this event take into consideration only religious need developed before any A.A. contact.
108. Age when you began admitting to yourself that your drinking was beyond control and that you were licked (before contact with A.A.).
109. Age when you began to admit to anyone else that your drinking was beyond control (other than to first A.A. contact).
110. Age when you reached what you regard as your lowest point.
111. Describe in broad terms what you regard as your lowest point:
.....
.....