ALCOHOL-RELATED DISABILITIES

Edited by

G. EDWARDS, M.M. GROSS, M. KELLER,
J. MOSER and R. ROOM

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FOREWORD

With advances in control of the major killing diseases has come the realization that vast health problems remain that are far from being solved. These include problems which are mainly physical in nature (such as the communicable diseases), but which also have a psychological or social component. In many areas of the world, such problems appear to increase rapidly with the profound sociocultural changes that accompany technological development. Member States of the World Health Organization are searching for ways to curb these threats to health and to the quality of life.

A case in point is the problem of excessive alcohol consumption, which involves far more than "alcoholism". Certainly the "alcohol dependence syndrome", as described in this publication, can cause untold misery to the individual, who is usually affected by other physical, mental and social disabilities as well. But there are further implications, such as the disruption of the family, the long-term effects on the children, and the burden on the community as the drinker's working efficiency and ability to support himself and his family decrease. Moreover, as emphasized in the report of the WHO Group of Investigators reproduced herein, public health agencies need to be concerned also with problems which may never progress to the dependence syndrome. Nearly every tissue of the body can be damaged by excessive drinking, and heavy users of alcohol have a substantially elevated risk of premature death. The etiological importance of alcohol is clear with respect to deaths from cirrhosis of the liver, accidents and certain cancers.\(^1\) Again, the effects go beyond physical damage to the individual drinker. Consider, for example, the role of alcohol in traffic accidents.

The cost of caring for persons with alcohol-related disabilities is high. In one country, a third of all male patients admitted to the medical departments of general hospitals are found to be "alcoholics". The respective proportion may be much higher in mental hospitals. The payment of unemployment benefits and of premature retirement pensions as a result of incapacity for work due to an alcohol-related disability account in some countries for increasingly heavy social security costs. For instance, in one country, during the period 1967-1971, such cases of invalidity increased fourfold.

The growing concern of governments was reflected in a resolution passed at the Twenty-eighth World Health Assembly in 1975 which, inter alia, requested the Director-General "to direct special attention in the future programme of WHO to the extent and seriousness of the individual, public health and social problems associated with the current use of alcohol in many countries of the world and the trend toward higher levels of consumption".\(^2\) At the Twenty-ninth World Health Assembly in 1976, a resolution called for the application of "existing knowledge in the psychosocial field to improve health care".\(^3\) The present publication provides material that will contribute to meeting both these requests.

It is proposed in the coming years to review existing and envisaged preventive measures and policies concerning alcohol-related problems in various parts of the world. The Organization will also attempt to coordinate research on community response to these problems. For both these projects, the documentation compiled here will provide an important basis. The material has been published in the hope that it will prove valuable to the growing number of investigators and agencies concerned with reducing the occurrence and the impact of alcohol-related disabilities.

T. A. LAMBO
Deputy Director-General
World Health Organization

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Alcoholic beverages have been in use throughout most of the world for millenia. Although only a minority of consumers are adversely affected, heavy consumption may have repercussions on the family and community as well as on the individual.

WHO has long been concerned with the nature of these adverse effects and the means of promoting preventive and treatment measures and policies. Already in 1950, however, a WHO Expert Committee on Mental Health pointed out that "one serious obstacle to international action in this field lies in the lack of a commonly accepted terminology". The Committee immediately embarked on attempts to define the problems. Thanks largely to the efforts of Professor E. M. Jellinek, in his capacity as a WHO consultant, this work was continued through further WHO expert committee meetings and the findings were more widely discussed at regional seminars. A series of WHO expert committees and a Scientific Group concerned with drug dependence discussed the implications of this term, and alcohol dependence was included among the generic types. In considering services for prevention and treatment, a WHO Expert Committee on Mental Health dealt with dependence on both alcohol and other drugs, and a WHO Expert Committee on Drug Dependence gave special consideration to problems concerning the consumption of alcoholic beverages.

As well as its long-term work on the definition of problems related to alcohol consumption, WHO has in recent years become increasingly interested in defining and measuring disability. The reasoning is that concern with disability, rather than with diseases or impairment alone, is likely to focus attention not only on the prevention or limitation of functional incapacity but also on the need to reduce the consequences - physical, psychological and economic - on the individual, the family or immediate surroundings, and society.

A proposal was put forward in 1972 by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) in the USA for a WHO project aimed at securing increased international understanding of, and agreement upon, criteria for identifying and classifying disabilities related to alcohol consumption. In view of all the above considerations, the Organization gladly accepted the proposal and the generous offer of financial and technical assistance.

A WHO Steering Group was established to plan this undertaking, to review the present state of relevant knowledge and to propose additional collaboration. The Group met four times between 1973 and April 1975. Its discussions led first to the preparation, by Professor Gross, of an extensive draft review of the psychobiological aspects of physical dependence related to alcohol consumption. Amendments were made as a result of scrutiny by the Group and an abridged version appears in the present publication. Professor Keller contributed an examination of relevant definitions, which was later expanded into a separate document, reproduced here in full.

It became apparent early on that additional aspects of alcohol-related problems required detailed examination, and position papers were prepared by members of the Steering Group and special consultants. Two of the papers of particular public health interest are included in this publication: one concerning the epidemiological and survey approach, by Mr Room, and the other reviewing screening and early detection instruments, by Dr Murray. Several shorter papers were used to inform subsequent discussions, but are not included here. They dealt with the relevant physical disabilities (Edwards; Robinson) and psychological.

2 Ibid., No. 48, 1952; No. 84, 1954; No. 94, 1955.
5 Ibid., No. 363, 1967.
6 Ibid., No. 551, 1974.
7 The members of the Steering Group were Dr G. Edwards, Professor M. Gross, Professor M. Keller and Mrs J. Moser, who were joined for the fourth meeting by Mr R. Room. They had the collaboration of staff members of NIAAA, including Dr M. Chafetz, Mr J. Deering, Mr T. Hartford and Dr M. Hertzman.
considerations (Barry) a systems approach (Hertzman), relevant mental disabilities (Gross) and social disabilities (Moser). A further sequence of brief papers focused on the practical needs for and utilization of the criteria by the community and by various agencies involved in dealing with alcohol-related disabilities. Abridged versions of two of these papers appear here and provide factual material on relevant legislative and social security provisions in a number of countries (Moser).

All these papers were critically reviewed by the Steering Group and the material was synthesized in a document by Dr Edwards proposing a simple framework for criteria for identifying and classifying disabilities related to alcohol consumption. This was further amended by the Steering Group.

In order to obtain the opinions and reactions of a wider variety of experts from different parts of the world, a WHO Group of Investigators\(^1\) was convened in Geneva from 28 July to 1 August 1975. All the working papers, together with the "framework" document, were submitted to the investigators for consideration prior to the meeting. The Group's final report is published here (p. 5) and has been reproduced in the *Journal of Studies on Alcohol* (September, 1976).

One of the early results of this work has been the acceptance of the term "alcohol dependence syndrome" for the ninth revision of the International Classification of Diseases.\(^2\) A description and outline for the diagnosis of this syndrome are included in the report and a more detailed discussion of the term has now been published.\(^3\) As pointed out in the report, however, other disabilities related to alcohol consumption may never progress to the alcohol dependence syndrome, but are likely to be of greater public health significance because of their wide prevalence and their impact on society.

It becomes apparent that, in attempting to deal more adequately with alcohol-related disabilities, it is not enough to focus attention on treatment of the "alcoholic". Communities will need to look more closely at local drinking patterns and attitudes to drinking, the availability of alcoholic beverages, and the effects on the family and wider society of alcohol consumption. This should lead to an improved understanding of possible preventive and palliative measures. Progress in this direction was made during two WHO interregional activities: a training course (1971) and seminar (1972) with participants from 33 countries.\(^4\) A recent careful analysis\(^5\) of available data indicates that heavy alcohol consumption is related to excess mortality or morbidity and that control of alcohol availability is a public health issue. As in so many fields of public health action, however, political and economic factors intervene. Governments have voiced their concern about rising levels of alcohol consumption and the repercussions on society (see Foreword). It is pointed out in the report of a WHO Expert Committee on Drug Dependence\(^6\) that "In recent years rates of 'excessive' alcohol use and alcohol-related mortality and morbidity have risen sharply in many countries. During the same period the relaxation of alcohol control measures and increased affluence have made it easier for people to obtain alcoholic beverages". At the same time, "The production and distribution of alcoholic beverages involves the livelihood of millions of persons and provides very substantial revenues to governments". In looking for solutions to alcohol-related problems, governments will have to face these dilemmas.

\(^1\)See p. 22 for list of participants.

\(^2\)The ninth revision will appear in 1977, but will not come into force until January 1979.


\(^4\)An account of the seminars, and of definitions in use in various countries, is given in: Moser, J. Problems and programmes related to alcohol and drug dependence in 33 countries, Geneva, World Health Organization, 1974 (WHO Offset Publication No. 6).


REPORT OF A WHO GROUP OF INVESTIGATORS
ON CRITERIA FOR IDENTIFYING
AND CLASSIFYING DISABILITIES RELATED
TO ALCOHOL CONSUMPTION

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1. Introduction

The extent of problems related to alcohol consumption is difficult to gauge, partly because assessments are often hinged on the term "alcoholism", whose definition varies widely. It has, however, been clearly demonstrated that in many areas of the world problems related to heavy consumption of alcohol are serious, widespread and complex. They include physical and mental pathologies, as well as deterioration in interpersonal relations and social functioning, which may lead, for instance, to family breakdown, with repercussions on children, and to reduced productive capacity. An increasing problem is the incidence of accidents - traffic, industrial, domestic - imputed to excessive alcohol consumption. There is a probable association between alcohol consumption and certain types of crime. In a number of countries it appears that the age at which heavy alcohol consumption begins is declining, and that increasing numbers of women are becoming drinkers, sometimes heavy drinkers. Moreover, alcohol-related problems are spreading in some countries that were formerly little affected.

As a public health organization, WHO is concerned with the wide range of problems related to alcohol consumption and particularly with methods of preventing and reducing any resulting disabilities, through appropriate policies and programmes. An important initial step is to attempt to secure increased international understanding of, and agreement upon, the use of terms. It was for this purpose that WHO convened a Group of Investigators on Criteria for Identifying and Classifying Disabilities related to Alcohol Consumption.1

It became apparent that one important disability requiring definition and clarification is the alcohol dependence syndrome: the reality and significance of this syndrome seemed to be well supported by a review of present evidence. The other physical and mental disabilities related to excessive alcohol consumption make up a long list, most of them noted and defined in the leading diagnostic manuals and classifications.2 Social disabilities related to alcohol consumption were not found to be so easily susceptible to listing and definition.

Important developments in clinical understanding of alcohol-related disabilities in recent decades have led to emphasizing the need, where relevant, to identify and treat the underlying dependence syndrome, rather than dealing only with the presenting physical, mental and social disabilities that may cluster around the syndrome. However, many individuals who experience disabilities related to alcohol consumption are not suffering from the dependence syndrome, and will not necessarily progress to that syndrome. The relative importance of syndrome-related disabilities and of disabilities in persons who are not alcohol-dependent will vary from country to country and, indeed, between subgroups within a country.

Throughout their discussions the investigators expressed awareness of the need to take into account interactions between alcohol and other drugs, as pointed out in, e.g., the report of the WHO Expert Committee on Mental Health on services for the prevention and treatment of dependence on alcohol and other drugs.3 The main focus of the 1975 meeting, however, was upon alcohol-related problems, the use of other dependence-producing drugs being considered as only one of a wide range of possible interacting factors.

2. Alcohol-related disabilities

2.1 Concepts

Any attempt to define or assess alcohol-related disabilities is confronted by two basic problems (i) what is a disability? (ii) what is the role of alcohol in causation?

1 A list of participants at the meeting is given in the accompanying annex.
2 These include the Standard Nomenclature of Diseases and Operations (American Medical Association, 1961); the Diagnostic and Statistical Manual (American Psychiatric Association, 1968); and the International Classification of Diseases (WHO, 1965).
A WHO document on rehabilitation of the disabled appeared to offer a definition appropriate to the needs of the Group of Investigators:

"Disability . . . is an existing difficulty in performing one or more activities which, in accordance with the subject's age, sex and normative social role, are generally accepted as essential, basic components of daily living, such as self-care, social relations and economic activity . . . Disability may be short-term, long-term or permanent."

The Group considered that to construct a full list of alcohol-related disabilities under every possible heading would be redundant, for many of the disabilities (resulting from, e.g., a broken leg or a peptic ulcer) are capable of assessment in exactly the same terms as would apply to any non-alcohol-related injury. Each country's and agency's usual conventions should be employed.

As to the second question, the problem of determining the causal role of alcohol, there is often no satisfactory way in which the matter can be dealt with. The assumptions on which such a determination might be based would usually be so dubious that, wherever possible, a search for causes should be avoided. It is not particularly useful for purposes of sickness or accident compensation, for instance, to seek to determine whether an illness or accident is or is not alcohol-related; the fact and extent of the ensuing disabilities rather than their antecedents should be the focus.

It is important, however, to bear in mind that a person may or may not be in a particular "problem drinking" category at different times. As has been noted, in the general population of the United States of America, having any particular drinking problem at one particular time is only a modest predictor of having the same problem at another time. The significance of this observation is that, unless a person can confidently be diagnosed as suffering from the alcohol dependence syndrome, no fixed prediction should be made regarding the person: it is unwise to attach a predictive label such as "problem drinker".

2.2 Alcohol-related disabilities and an alcohol dependence syndrome

The evidence suggests the need to think in terms of a "syndrome", of disabilities related to or coexisting with the syndrome, and of disabilities not necessarily always syndrome-related.

The line of thinking that emerged from the Group of Investigators' discussions is essentially as follows:

(i) A core alcohol dependence syndrome (related to what has sometimes been understood by the term "alcoholism" or, more closely, "alcohol addiction") can be recognized, with subtypes reflecting only the influence of secondary factors on the presentation of this syndrome. The syndrome is multifactorial and exists in degrees.

(ii) Not every individual who experiences impairment or disability related to alcohol consumption will be suffering from alcohol dependence. There is no conceptually satisfactory cut-off point that differentiates persons exhibiting alcohol-related, but not syndrome-related, disabilities from the generality of the population; such a term as "problem drinker" gives only a spurious concreteness.

(iii) The alcohol-related disabilities of any individual are susceptible to the same multifactorial analysis whether that person is or is not alcohol dependent.

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(iv) The complete description of an individual's alcohol-related pathology therefore comprises:

(a) a statement as to whether he is or is not suffering from the dependence syndrome (with added description of degree of dependence and any modification of the picture);

(b) a statement as to kinds and degrees of disability;

(c) a description of important personal and environmental interacting factors which exacerbate or ameliorate the dependence or other alcohol-related disabilities.

This approach emphasizes the concept of the alcohol dependence syndrome as a diagnosable condition of great importance; it rejects the notion that alcohol dependence is a condition with only one presentation whatever the culture; it emphasizes the importance attached to analysis of alcohol-related disability; it emphasizes the need to recognize that not all alcohol-related disability is alcohol-dependence-related; it discards the notion of "problem drinker" as a category with any certain meaning; and it emphasizes the importance of interacting personal and environmental factors.

2.3 Degrees, aggregates, and interactions

The degree of an alcohol-related disability must presumably be assessed in the same terms as would that disability if it were not alcohol-related. So much would probably be readily acceptable with respect to any physical disability, e.g., pancreatitis. Doubts that are partly moralistic, or doubts that might be translated into the language of operant psychology, arise in connexion with social disabilities. Does it make sense to take a nonmoral view of a man's not working because he is drinking? Can society be expected to accept the idea that one should note objectively the fact that the man is not working, and take this as behaviourally equivalent to the conclusion that the man cannot work? Here the importance of the degree of dependence being equivalent to a disabling degree of impairment of personal option comes back into prominent consideration. It is useful for society to be aware that its usual strictures applied to the person with an alcohol dependence syndrome may be counterproductive; its strictures applied with traditional bluntness to the nondependent drinker who will not work have greater possibility of being useful and, in the long term, benign. But it seems practical to conclude that, so far as physical and mental alcohol-related disabilities are concerned, the drinking may be set aside in assessing the degree of disability (except for interaction effects), whereas with social disability it may be important to establish the degree of dependence in order to determine the extent to which the person is to be considered disabled rather than being seen as simply opting for incompetence. The issues are complex, and ultimately become entangled with such age-old and unsolved questions as the nature of free will.

The question of aggregating disabilities has partly been dealt with if the idea of any aggregate category such as "problem drinker" is dismissed. Administratively, the concern may be the extent to which a man is disabled along one particular socially defined dimension (e.g., work capacity, testamentary capacity, criminal responsibility), the likelihood of that disability continuing, and the likelihood of the disability being influenced by any treatment or other administrative response: an agency that has developed the perspective of seeing the individual in his total personal and social setting will certainly wish to relate one disability to another (in their total context), and will aim at understanding the total picture.
3. **Alcohol dependence syndrome**

3.1 **Concepts**

(1) **Semantics**

There can be little doubt that scientifically the most apt designation of the basic condition under discussion is alcohol dependence,\(^1\) and this term usefully emphasizes the fact that what is being dealt with is one of the family of dependence disorders. The term syndrome has the advantage of emphasizing the openness of the position that is being taken: it is implicit only that a number of phenomena tend to cluster with sufficient frequency to constitute a recognizable occurrence. The assertion is not made that all those elements will always be present with the same magnitude or relative magnitudes, nor indeed that all elements need invariably be present. No assumption need at this stage be made as to the causal nexus (the pathology), nor as to which elements are primary and which secondary. Despite the looseness of the syndrome concept as at present articulated, it nevertheless carries very considerable implications. There is the basic question of whether such a clustering does indeed naturally occur, and if that question is answered affirmatively there is a need then further to explore how the syndrome may be recognized and its dimensions measured, and what are the causal processes and the nature of the linkage between the syndrome's different elements. The medical, social and administrative consequences of the syndrome's existence have to be investigated.

The simplest solution might be to use the word **alcoholism** as synonymous with alcohol dependence, as was done by the Criteria Committee of the National Council on Alcoholism (NCA) in the United States of America:

"The committee was unanimous in defining the disease of alcoholism as a pathological dependence on ethanol, as it is classified under Section 303.2 in the Diagnostic and Statistical Manual of Mental Disorders, second edition, of the American Psychiatric Association."\(^2\)

It seems, however, that the term alcoholism has come to be used so loosely that an attempt to restrict its meaning once more to a specific syndrome is likely to be futile.

(2) **Evidence**

The primary question before the Group was whether the syndrome, as such, exists. An extensive array of evidence was reviewed, and discussed by the investigators in the light of their own clinical and research experience. Science is in no position to classify alcohol dependence as a condition of known etiology, established pathology, and determined natural history. But, despite many gaps in knowledge remaining to be filled, the best interpretation of the present evidence is that the alcohol dependence syndrome is a psychobiological reality, not an arbitrary social label.

The decision as to when a syndrome is to be designated a disease is in large measure socially determined and must be congruent with wider cultural interests and habits: the syndrome formulation does not therefore undermine the position of those who have made the disease concept of alcoholism a central tenet of education and health-directed activism. It was noted that there are many conditions classified as diseases which have no known etiology and no ascertained anatomical site, but only behaviourally manifest "pathology" and a variable natural history.

(3) **Implications**

Acceptance of the fact that an alcohol dependence syndrome exists leads to a second question: When a person is diagnosed as exhibiting the syndrome, what is the significance

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for himself and others? The Group, on the basis of its own assessment of the scientific literature, posited that alcohol dependence is of social significance and that, therefore, simple defining criteria intelligible to society are needed, for the following reasons:

(i) In itself the fact of dependence predicates the existence of a profound and central disability.

(ii) The dependence disability implies the probability of a concomitant pattern of drinking behaviour which will bring about a considerable clustering of alcohol-related disabilities.

(iii) The dependence disability implies the probability of a continued or intermittent pattern of drinking behaviour such that over time a considerable summated experience of alcohol-related disabilities will accrue; the fact of dependence says something not only about present state but also about likely prognosis.

(iv) The fact of dependence implies a probably diminished responsiveness of the individual's drinking to the normal processes of informal and formal social control. There is evidence that even dependent drinking is influenced by environmental cues; it is a mistake to accept the over-simple view of dependence as necessarily implying a total lack of responsiveness. What has been referred to as loss of control over drinking would be more aptly termed impaired control. But to a greater or lesser extent, the fact of alcohol dependence suggests that society's normal constraints on the individual who steps out of line will not be effective - he is unlikely more than temporarily to modify his drinking pattern as a result of scolding, dismissal, fine, imprisonment, or having his welfare benefit curtailed or his source of supplies interrupted. The concept of the dependence syndrome suggests that routine societal responses to the alcohol-dependent person, or responses which are directed only at facets of his alcohol-related disabilities rather than at his alcohol dependence, are likely to be insufficient.

(4) Degree of dependence

The expositions of dependence in the prepared reviews were basically in terms of a learned phenomenon. If dependence is a learned behaviour, then it may be expected to exist in various degrees of strength. The idea of degrees was also suggested in the recommendations of the NCA Criteria Committee, which proposed that alcoholism should be designated as "early", "moderately advanced", or "far advanced".

The Group, however, took cautious note of the incompleteness of available evidence. Little is known about how to rate the degrees of a dependence syndrome, the likely distribution of degrees in any dependent population, or whether there is any justification for equating "mild" with "early" or "severe" with "advanced". That dependence exists in degrees does seem probable, however.

(5) "Types of alcoholism"

Various previous efforts to differentiate "types of alcoholism" came under critical discussion, particularly Jellinek's five-part typology; the notion that dependence may be typologized is also inherent in the report of the NCA Criteria Committee, which refers to "Alcoholism: intermittent use, recurrent use, steady use". The latter approach has the advantage that it offers descriptions of patterns without accidentally implying that a variety of very distinct alcoholism entities or "species" exist. The 1960 Jellinek classification, whatever its original intention, has often been interpreted to mean that several distinct and contrasted "species" exist - especially gamma alcoholism (loss of control or inability to stop) and delta alcoholism (inability to abstain). Jellinek's analysis was attractive in so far as it invited attention to cultural differences: for instance, Jellinek could be interpreted as carrying the important message that what the French call alcoholism is not the endemic alcoholism of North America. The Group of Investigators took the view that the observed differences could be better interpreted as culturally, environmentally or personally patterned manifestations of the fundamental alcohol-dependence syndrome.

(6) **Interaction effects: the problem and the administrative demand**

There may be something of a contradiction between the needs of administrative convenience (the setting up of simple rules and classifications), and the habitual manner in which clinicians approach the individual case in terms of an intuitive interactive analysis. Administrative convenience would suggest that one should assess disability in the individual in terms of (a) the alcohol dependence syndrome and (b) other disabilities. Those other disabilities may themselves be consequences of drinking (alcohol-related disabilities), or they may be independent (ancillary), or they may predate (underlie) the drinking. The administrative model is of parallel columns to be dotted up. The reality may be much more in the form of a spiral effect, with the dependence exacerbating "other disability", which in turn exacerbates the dependence.

For instance, clinical experience suggests that, so far as the natural history of alcohol dependence and its response to treatment are concerned, there are important interaction effects with emotional problems or mental pathologies. It would be virtually impossible to say anything about the degree of disability likely to result from the individual's alcohol dependence, if data were available only on the drinking behaviour and the direct symptomatology of dependence; it would be equivalent to attempting to solve a puzzle with some of the clues missing. A report for a court's guidance, or an assessment of health insurance, or information regarding welfare status, could hardly provide a useful statement about a person's alcohol dependence unless the interactive effect of emotional problems or mental pathology were taken into account. In assessing alcohol-related disability, one is never dealing with a condition existing in a vacuum but with a disability produced by interaction with a unique person: that person's mental pathology or mental health provide essential components of the interacting uniqueness.

The generalization extends to physical and to social disabilities. Depression may lead to excessive drinking, which may exacerbate the depression; excessive drinking may impose social isolation, which may lead to more drinking; heavy alcohol intake may cause painful gout, which may induce more alcohol intake; any disorder or event that interferes with ability to work may lead to heavy drinking, which can result in further impairment of working capacity. Thus a classificatory system that allows only psychiatric diagnosis, or only physical diagnosis, or both, but makes no provision for what might be called "social diagnosis", is inadequate to describe and classify disabilities related to alcohol consumption. The provisional conclusion drawn from this discussion was that any general framework, while retaining its essential simplicity, should invite awareness of interaction effects.

(7) **Specific implications of interactional features**

(i) **Diagnosis.** The alcohol dependence syndrome is so highly influenced in its manifestations by secondary factors that interactive factors in all aspects of the individual's life must be considered in diagnosing the syndrome and identifying and understanding the many possible variants in its presentation.

(ii) **Signal functions.** The presence of alcohol-related disabilities other than the dependence syndrome should generate and periodically regenerate an evaluation for evidence of the possible presence of the alcohol dependence syndrome. Conversely, the individual with the alcohol dependence syndrome should be evaluated initially and periodically for the presence or subsequent development of other alcohol-related disabilities.

(iii) **Treatment.** The interactional perspective emphasizes the importance of a multidisciplinary team approach. Not only is the dependence syndrome likely to generate multiple disabilities in the psychological, physical and social spheres, but a corrective influence on any part of the interactive system may have far-reaching beneficial effect.

The totality of the patient's functioning and improvements should be considered in any assessment of his response to treatment.
3.2 Criteria for diagnosis

The broad guidelines for criteria for the diagnosis of the alcohol dependence syndrome were seen to be as follows:

(i) Diagnosis should be based upon a careful evaluation of evidence of (a) altered behavioural state; (b) altered subjective state; and (c) altered psychobiological state.

(ii) Consideration should be given to the signs and symptoms of the syndrome in terms not only of whether or not they have occurred but also of whether they have occurred with sufficient severity and frequency to warrant the diagnosis. In all spheres of evaluation evidence suggests that we are dealing with gradients rather than all-or-none alterations and with fluctuating rather than steady-state alterations. The determination of degree of severity of the syndrome would then be based upon degree of the above-mentioned alterations as well as their frequency, duration and pattern. It seems premature to propose cut-off points and more reasonable to suggest that a clinical judgement be made. The physician should also make the assessment of a possible prodromal condition.

(iii) Consideration should be given to the personal and environmental interacting factors.

(iv) Consideration of the individual in terms of his cultural context should enable the examiner to avoid identifying as deviant those features which differ from the examiner's culture but are culturally appropriate for the individual being examined.

(1) Altered behavioural state

There is an alteration in the individual's drinking behaviour. This element in the dependence triad is difficult to categorize because of the complex nature of anyone's alcohol intake. The following aspects of the alteration may, however, often be recognizable:

(i) The individual's drinking may arouse suspicion because it is no longer in accord with cultural expectations, in terms not only of quantity drunk but of the timing and occasions of drinking. Throughout their discussions the Group of Investigators placed emphasis on the need for assessing the individual's behaviour in his own cultural context, but in this instance a certain caution was recommended. In countries where heavy drinking is culturally acceptable and heavy wine-drinking, for instance, is very much assimilated into the ordinary patterns of life, with relatively few prohibitions on time or occasion, the individual might rather easily progress to dependence without his pattern of drinking appearing obviously abnormal. To that extent the familiar plea for cultural relativism in determining the existence of a drinking problem might sometimes actually retard its recognition.

(ii) It would seem reasonable to propose that if the individual's daily intake of alcohol is in excess of a certain amount he is a candidate for dependence, while if his intake falls below a stated lower limit he cannot be dependent. In practice, however, there are some difficulties in putting this common-sense approach into operation. Statements that may be of great scientific interest at the epidemiological level as indicating degree of risk attaching to different alcohol consumption levels may not be applicable to the conditions of an individual. The individual's bodyweight will, for instance, radically affect the significance of any statement on alcohol intake. Eating habits and the manner in which drinking is spaced (or telescoped) will affect peak alcohol levels attained. The individual may have difficulty in recalling the exact quantities he drinks and his reporting may be unreliable.

(iii) An important behavioural alteration may often be a diminished variability in the individual's drinking behaviour. He drinks every day in rather the same manner, whether it be a week-day or during the week-end, and one week's drinking looks much like another's. The daily pattern he establishes is typically one that ensures the maintenance of a relatively high blood-alcohol level throughout the waking period and the avoidance of
withdrawal. In a culture where drinking is easily accepted, this goal may be achieved without offending any cultural proscriptions, but where the basic cultural pattern is of more spaced drinking (typically perhaps only at the end of the day), the individual who is scheduling his drinking so as to maintain his desired blood-alcohol level may face a difficult daily logistic problem, may easily offend against cultural norms, and may have to drink according to a less set and predictable pattern.

An important aspect of this behavioural alteration is that, as the development of dependence progresses, the individual's drinking repertoire may finally become so limited that he appears to have only two modes of drinking - complete abstinence, and very heavy drinking "round the clock". In fact this is probably never the case, and more careful analysis will show that on occasion he will transiently moderate his drinking, but observation of his drinking behaviour over a period of time suggests that he has great difficulty in holding this middle ground.

(iv) Inherent in much of the above is the notion that besides alteration in overt drinking behaviour, there is observable alteration in the responsiveness of the individual's drinking to what in psychological language would be called "negative reinforcement": he may drink more than the culture approves of, and he may schedule his drinking in a manner that the culture does not sanction. Besides these cultural elements in the resisted negative reinforcement, it may also be manifest that the individual continues to drink in this fashion despite painful direct consequences, such as physical illness, rejection by his family, economic embarrassment, and penal sanctions.

(2) Altered subjective state

The Group of Investigators took the view that, although subjective report is classically difficult to use as a basis for scientific inquiry, what the dependent person tells us of his subjective experience is of such importance that it must not be ignored. The altered subjective experience must be seen as an essential component of the dependence triad, even though it is often difficult to relate this material satisfactorily to the biological level of explanation or to translate it into formal psychological concepts. Within the subjective area the following elements may be recognizable:

(i) Paralleling the behavioural observation that the individual exhibits a diminished repertoire of drinking patterns is his subjective report of an awareness of this difficulty. He resolves to limit his drinking to an acceptable level, makes rules for himself, but sooner or later finds that his drinking is once more back at the same level and conforming to the pattern that he had resolved never again to experience. This element in the subjective report is familiarly subsumed by the phrase "loss of control" or its subjective concomitants, but, as has already been noted "impairment of control" might be a better description.

(ii) Another familiar concept is that of craving, but this convenient term may in fact hide very considerable complexities. The craving may be experienced as a greatly heightened desire for drinking or for the experience of intoxication, or as something of much less intensity. The same individual may experience craving of very different intensity on different occasions: the cues that precipitate craving typically include the experience of intoxication itself, the experience of withdrawal symptoms, and various situational and internal (affective) cues. When the dependent individual has been sober for a period of days he will usually report that he then has no craving (and this often to his surprise), but the craving is more or less easily reinstated if he drinks again or experiences other personally relevant cues.

(iii) What is familiarly described by the phrase "drink centredness" catches up an element in the subjective report which is closely allied to craving, but not identical. The individual reports that images of drinking may repeatedly enter his mind, that planning his drinking has acquired special salience and takes precedence over other goals.
As with the behavioural alterations, it is important to remember that in some socio-cultural situations, where more or less continuous drinking is allowed, the altered subjective state may be difficult to recognize.

(3) Altered psychobiological state

(i) Experience of the signs and symptoms of the withdrawal states. Alcohol withdrawal presents a broad range of possible signs and symptoms, from the relatively trivial to the life-threatening. The order of their occurrence and the way they cluster in any individual's experience is variable: for instance, one person may report severe morning sweats and hardly any tremor, while another person may report severe tremor and hardly any sweats. It is important to remember that each element of the withdrawal state can be experienced with widely varying intensity and frequency.

The following appear to be the commoner elements in withdrawal. There is firstly a group of signs and symptoms of which the patient himself may complain and which he may perhaps experience every morning: tremulousness, sweatiness, pharyngeal sensitivity with retching ("the dry heaves"), and unpleasant affective disturbance (anxiety, depression, irritability). More rarely the condition may progress through a state of clouding of consciousness and subacute hallucinatory experience to fully developed delirium tremens; grand mal seizures are another very serious possible development. There may also be disturbance in a range of physiological indicators which are meaningful to the clinician, e.g., hypertension, change in body temperature, hyperreflexia, and alterations in the electroencephalogram. The listing given here is by no means exhaustive. The symptoms of withdrawal do not require abstinence in order to appear, but can occur during falling blood-alcohol concentrations on days when drinking occurs and may start as early as the second day of an "attack" or "episode" of heavy drinking. Should a similar level of drinking continue over a period of consecutive days, the severity of withdrawal is likely to increase progressively from day to day. The signs and symptoms may be obscured or eliminated by medicaments. Slow tapering off of drinking may prevent their occurrence. During abstinence, signs and symptoms of the acute withdrawal are likely to occur, starting within the first 24 hours, with a variable peak of severity between 24 and 72 hours. There is some evidence that a subacute withdrawal state may then persist longer than has previously been supposed.

(ii) Drinking for relief of withdrawal. Important confirmation that the subject has experienced withdrawal symptoms is his report that such symptoms have been relieved by further drinking. This typically takes the form of "morning drinking" because of withdrawal symptoms coming on after a night's abstinence. The full picture is there when the patient states (a) that he drinks with the intention of relieving withdrawal symptoms, and (b) that such drinking effectively and predictably relieves these symptoms after an interval of 30-60 minutes and with a dose of alcohol (e.g., 50 ml of spirits) which for that individual is fairly well established as sufficient.

(iii) Tolerance. In order for an individual to ingest alcohol in sufficient quantities and for a sufficient duration to attain sufficient blood-alcohol concentrations to induce withdrawal states, high levels of tolerance (i.e., adaptation) are necessary. It is important to emphasize that high levels of tolerance do not necessarily lead to the development of withdrawal, and it is still far from clear why at a certain stage in his drinking history a tolerant individual should start to develop withdrawal symptoms. The clinical assessment of tolerance may be based upon the individual's reporting that a previous level of intake is having less effect, or that he is obviously less affected by the same alcohol intake than social drinkers of his acquaintance - i.e., he is able to "drink others under the table".

The Group of Investigators noted that during recent years there had been advances in understanding the intimate mechanisms of dependence, but considered that the matter should be reviewed here only briefly to provide a general and descriptive outline of the main features of the dependence syndrome. They noted that the mechanism of the most important contribution to tolerance is a neurophysiological adaptation at the synaptic junction. Neurophysiological tolerance of some degree may be transiently
developed by the subject unaccustomed to drinking in response to even one dose of heavy alcohol: whether such acute tolerance is based on exactly the same mechanisms as underlie the high degree of neurophysiological tolerance manifested by the experienced drinker is unclear. Once the individual has developed a high degree of tolerance, then after a period of abstinence the tolerance may be rather quickly reinstated if he drinks again. Increased metabolic clearance of alcohol due to microsomal enzyme induction may underlie a second type of tolerance. A degree of learned adaptation to the state of intoxication (a learned deportment and monitoring of one's own behaviour) might be designated as a third type of tolerance.

It should be noted that tolerance may decrease in the later stages of the dependence, the individual becoming drunk on much less alcohol than would previously have affected him.

3.3 Criteria for recovery

Criteria for recovery from the dependence syndrome may be needed for a variety of administrative reasons. The matter was discussed by the NCA Criteria Committee, which listed the following considerations as bearing on the diagnosis of recovered, arrested, or remitted alcoholism:

Duration of abstinence
Concurrent active treatment programme
Concurrent Alcoholic Anonymous attendance with full participation
Concurrent self-administered and professionally guided deterrent medication
Resumption or continuation of work without absenteeism
No traffic violations
No substitution of other drugs 1

It seems worth while to devote critical attention to discussion of the NCA proposals since the Criteria Committee was quite unusual in having given this particular question detailed consideration, and was largely breaking new ground in seeking to formalize these matters. The preceding list appeals to common sense, but conceptually it does not fully explore some important questions.

Abstinence was seen as "usually more easily measurable, definitive, and generally acceptable than a change from dependency to social drinking"; the significance of different periods of sobriety was not discussed but the general statement was made that "the recovery or remission gains in its validity with a progressively longer time". Other concepts of a quite different order are then introduced into this list; engagement in a treatment programme (three items); work without absenteeism, and avoidance of traffic violations (two social items); and no substitution of other drugs.

The problem might be simplified if the notion of recovery from the alcohol dependence syndrome per se were first separated from all other matters. Attention could then be concentrated on conceptual clarification of what might be meant by recovery from the specific syndrome, noting that "recovery" is used in medical terminology to convey a variety of happenings. Recovery from an attack of asthma is a different concept from recovery from asthma; and for many other conditions (e.g., epilepsy) the same differentiation between recovery from attack and condition would be made. Recovery from the common cold would usually imply expectation of regaining previous health, whereas recovery from stroke would usually not carry this expectation. A second important concept seems therefore to be that recovery exists in degrees. Thus criteria for recovery from the alcohol dependence syndrome might also employ the differentiation between (a) attack and condition, and (b) partial and complete recovery.

Recovery from "the attack" in the alcohol dependence syndrome bears on a question of particular relevance - the duration of the "chronic withdrawal syndrome". But little is

known about the time course of these effects. In practical terms, criteria are needed which give simple guidance as to how long after a drinking bout a patient should be seen as disabled by reason of the dependence itself and therefore—for example—advised not to go to work and to avoid relapse by sheltering in his home, or advised to remain in intensive contact with a counselling agency. Such decisions will clearly be determined by the individual case (and by the duration and intensity of the prior drinking history), but it might be worth giving greater prominence to the concepts (a) of recovery from attack, and (b) of an element in that recovery relating specifically to the dimension of dependence.

As for recovery from a "condition", this again is an area where the importance of an awareness of the considerable gaps in present knowledge must be underlined. Since an adequate conceptualization of the nature of alcohol dependence has still not been achieved, the nature of recovery from that condition is logically very difficult to conceive. If dependence is basically an aberrant learning process, little is known of the "memory curve" for this type of learning-forgetting. If there are biological components such as may underlie the tendency toward rapid reinstatement of tolerance, little is known about the time element in the decay of such a phenomenon. If subacute forms of brain damage are related to the dependence process, it is not known how often such damage is reversible or functionally compensated.

A crucial indicator of recovery from the dependence syndrome is if the person drinks and successfully continues to control his drinking; but how long the control must last is an open question. And if he follows orthodox advice and remains abstinent, the crucial test is not made, and one can never determine whether recovery from the condition has taken place. It might therefore seem simplest to refer to remission of condition, specifying simply the period of time during which the subject has been abstinent or drinking socially. Not to accept even a lengthy period of social drinking as evidence of recovery (as opposed to remission) is conservative but avoids cut-off difficulties. It may, however, be necessary also to speak of "improvement". As there are "degrees" of the syndrome, the condition can get worse (progression of symptoms) or it can get better (without total recovery, regression of symptoms).

As for the other NCA criteria for diagnosing "recovered, arrested or remitted alcoholism", the idea that joining in a treatment programme constitutes a relevant criterion presumably rests on the assumption that engagement in treatment is indicative of good outcome. This may be regarded as a pointer to remission of condition, rather than a measure of remission itself. But—inasmuch as an unknown number of people achieve remission without seeking the aid of a treatment agency, a fair proportion of people who drop out of treatment early or reject Alcoholics Anonymous after a few meetings get better, and quite a number of people who cooperate in every aspect of treatment relapse, one would presumably not wish to assign too much centrality to these criteria. These indicators may have low discriminative powers, even if differences between groups are statistically significant.

The remaining NCA criteria might be considered as a partial listing of indications of amelioration of alcohol-related disabilities, rather than of alcohol dependence itself. Conceptually the matters must be separated. It is possible, for instance, to conceive of remission of dependence with subsequently a sort of "decompensation" and decreased work performance: the person is perhaps more incapacitated now by his phobic anxiety state than by his drinking; or, perhaps, with the need to buy alcohol removed, he does not bother so much about the regularity of his earnings. Conversely, a person may continue to drink dependently but because he has a more understanding employer he now keeps his job and because he has been forced by bankruptcy to give up his car, he no longer commits traffic offences.

All in all, it might be most practical to limit criteria for assessing recovery and remission from both attack and condition strictly to duration of abstinence, making this the criterion for recovery from attack or remission of condition. All other matters would go under the subsequent heading dealing with amelioration in alcohol-related disabilities.

Note: So far as non-dependence-related disabilities are concerned, the best approach may be to determine criteria for recovery for each individual disability in its own terms, as far as possible in the same terms as would be applied if alcohol were not a mediating factor. The emphasis is on recovering from "the attack".
4. Utilization of criteria for alcohol-related disabilities

The Group of Investigators gave careful consideration to the question of how the criteria developed could be used by the community in general and by the various persons and agencies dealing with problems concerning alcohol-related disabilities. Specific attention was paid to the needs of public health authorities; welfare, social security and insurance agencies; correctional and judicial agencies; and health care agencies. In each case the following items were considered: (a) criteria to be employed under the disability and the syndrome headings; (b) identification of the appropriate diagnostic agents for each agency's purposes; and (c) social implications of the proposed criteria, especially for prevention and treatment.

It was not considered feasible at this stage to establish detailed definitions of criteria, but the following outline could be used for guidance and adapted to the requirements of each agency or group.

4.1 Summary of basic concepts

(i) An alcohol-related disability is deemed to exist when there is an impairment in the physical, mental or social functioning of an individual, of such nature that it may be reasonably inferred that alcohol is part of the causal nexus determining that disability. Causal processes are usually complex and involve many interacting variables; attempts to quantify the degree of causality to be assigned to alcohol consumption are seldom useful. Assessment of degree of disability is best made within terms generally employed for that type of disability, without special regard to alcohol as antecedent. Any individual may experience a varied clustering of disabilities, and his total relevant disability experience should be described in the context of his general health and ill-health. Typologies and formal aggregation of alcohol-related disabilities are not of general usefulness.

(ii) The alcohol dependence syndrome is manifested by alterations at the behavioural, subjective, and psychobiological levels with, as a leading symptom, an impaired control over intake of the drug ethyl alcohol. The alcohol dependence syndrome exists in degrees. Its varied manifestations are influenced by modifying personal and environmental factors so as to give many different presentations. The alcohol dependence syndrome may usefully be viewed as one particular variety of alcohol-related disability: it is a disability which predicates the likelihood of drinking behaviour resulting over time in a clustering of other disabilities. The degree of disability in an individual that ensues from his alcohol dependence is determined by the general context of his health and ill-health: processes of interaction have to be gauged. The fact that an individual is alcohol dependent implies a probably impaired responsiveness of his behaviour to social control. Not all people manifesting alcohol-related disabilities are alcohol dependent, but they may be at increased risk of developing alcohol dependence. The role of gross alcohol consumption in increasing the risk should therefore also be considered, especially in the light of its implications for possible social as well as individual preventive measures.

4.2 Utilization of concepts by agencies and the community

(1) The community

The community should be made aware of the existence of an alcohol dependence syndrome, and the role of alcohol consumption in causing or complicating other disabilities. The alcohol dependence syndrome might be defined simply as a disability marked by impaired capacity to control alcohol intake.

Any person experiencing an alcohol-related disability should not try to hide the fact from himself, and anyone who believes that a family member or a friend or colleague has such a disability should feel able to say so. A person who cannot easily deal with the difficulty himself, or who continues to experience alcohol-related disabilities, should seek advice and help from a medical agency or a social agency (which may take the form of a self-help organization such as Alcoholics Anonymous).
(2) Public health authorities

The emphasis here must be more on alcohol-related disabilities than on the syndrome alone, because of the importance of general population data and the special role of public health in prevention, which is concerned with manifestations that precede the syndrome stage or are not related to the syndrome.

Criteria will have to be multiple and explicit, and agreed upon by all agencies and persons that collect the raw data used by the public health agency for monitoring purposes.

Criteria for the diagnosis of cirrhosis may be assumed to be known to the medical profession, but physicians need to be persuaded of the importance of ascertaining the role of alcohol and recording it where appropriate.

Criteria are needed to define how diagnoses are to be routinely entered for hospital case-history records. It is suggested that the following terms should be employed:

(i) Alcohol-related disability (specified)
(ii) Alcohol dependence syndrome.

The use of the "alcohol-related disability" category would invite more frequent diagnosis than the "dependence" category and perhaps lead to more professional awareness of the extent of such disabilities, e.g., with the diagnostic prefix attached to accident-sustained injury, gastrointestinal pathologies, suicide, etc.

Standardization of the manner in which data are collected by social security and welfare agencies is important for public health monitoring.

It will be of considerable public health interest if all drunken-driving data and accident-fatality data can be routinely reported in a standardized manner, giving blood-alcohol levels by age category and type of accident. This kind of information, which has a valuable objectivity, is likely to be increasingly available in many countries.

In some countries surveys of general or special groups may be increasingly employed to obtain information on drinking and related disabilities. The simplest possible criteria that might be used for this purpose should be defined.

There is an urgent need for agreed methods of recording and analysing national alcohol consumption and for epidemiological studies of risks in relation to quantities of alcohol consumed. The Group of Investigators noted the important emphasis that certain studies have given to these questions.

The importance for health and policy considerations in each country of adequate monitoring of the multiple aspects of its alcohol-related disabilities, including social implications, should be emphasized.

(3) Welfare and social security and insurance agencies

An awareness of the whole range of alcohol-related disabilities and how they are to be categorized and dealt with is required, but it is equally important that the above agencies should take full cognizance of the existence and implications of a dependence syndrome.

It would be inappropriate to suggest that medical opinion is needed for the diagnosis of all individual alcohol-related disabilities (except where the condition is obviously medical). For the dependence syndrome, however, agencies should rely as far as possible on informed medical opinion; there is no easy rule of thumb that can be offered as a plain man's guide. It is furthermore a medical responsibility to assess degree of dependence to the extent possible, and to give dependence its interactional context, although the medical worker will often be part of a multidisciplinary team.
The social implications of this conceptual framework may be phrased as follows:

(i) Alcohol-related physical and mental disabilities should, for administrative purposes, be treated objectively and with exactly the same standards as non-alcohol-related disabilities. The administrative response to social disabilities may be influenced by advice as to the degree of the individual's alcohol dependence; such administrative response should in no circumstances curtail the benefits available to the person's family.

(ii) Because of the disability imposed by the fact of his dependence, the person with an alcohol dependence syndrome must be viewed as having a probably diminished responsiveness to ordinary social controls. He should be entitled to full benefits as a sick person within terms usually allowed by his country. He should be fully entitled to all treatment provisions deemed medically necessary, without limit of time except in so far as such limits are generally imposed on sick persons by local provisions.

(4) Correctional and judicial agencies and professions

Emphasis should be given to the general nature of "antisocial behaviour" as a frequent manifestation of alcohol-related disability, while prominence should also be given to the social significance of dependence as implying likely failure of response to ordinary controls.

The fact that a person was intoxicated at the time of committing an offence should be noted, and taken into account when deciding on a suitable disposal. Referral to a helping agency may often comprise all or part of that suitable disposal, especially for less serious offences (e.g., public drunkenness).

The person with an alcohol dependence syndrome must be viewed as having a diminished responsibility through the fact of his intoxication. Referral to a helping agency may therefore in certain circumstances be a particularly appropriate disposition. Judicial authority should seek the advice of medical authority with respect to the diagnosis of alcohol dependence.

Where general provisions exist for involuntary detention of an individual for treatment (certification, etc.), the drinking behaviour underlying manifestations that would cause general provisions to be invoked (e.g., harm to self or others) might in some circumstances be seen as constituting due grounds for applying these provisions to the person with an alcohol dependence syndrome. The application of such provisions must be humane, and people should not be involuntarily detained without assurance of adequate treatment for their disabilities. Compulsory outpatient care or some sort of parole or probation system may provide a useful alternative to institutional care.

(5) Health care agencies and health professions

All health care agencies and health professions need to be aware that there exists a basic disability, the alcohol dependence syndrome, and also a range of alcohol-related disabilities which may precede the establishment of dependence, may accompany it, or may exist without it.

For identification and diagnosis of the alcohol-dependence syndrome, it would be necessary to develop a series of screening devices, applicable to different levels of professional skills and relevant to the specific cultural context. Such devices should if possible be standardized across cultures. This would not only make cross-cultural comparisons possible but enable each group of agencies and professions to apply more readily the experience and knowledge gained by others. For all other alcohol-related disabilities the same criteria should apply as for the same disabilities when not alcohol-related.
In earlier stages, the utilization of other social resources may sometimes be more effective than the mobilization of health resources, whose premature involvement may undermine the alternative measures. Criteria for initiation of intervention may vary according to local attitudes and available social and health resources. Intervention by health resources would be indicated when it becomes evident that firm, humane social measures are insufficient, and development of the dependence syndrome (or its prodromata) would be a prime indication.

The health care providers need criteria and screening methods in order to assess the extensive pathologies that may be associated with the alcohol-dependence syndrome or may exist without it. "Pathologies" is used here in its broadest sense to include social pathologies, psychopathologies, and physical pathologies.

In order to maximize the effectiveness of the health care resources, criteria are needed to identify high-risk individuals and groups. A related issue is the need for objective criteria to identify individuals most likely to respond to health care measures and those least likely to respond.

The care and treatment of those suffering from the alcohol dependence syndrome has so evolved, in many parts of the world, that individuals of varied backgrounds and training are employed in this activity. Thus, physicians, physician-assistants, nurses, psychologists, social workers, paraprofessionals and volunteers have come to work separately or conjointly in providing health care. At all levels it seems essential to provide training in the appropriate skills. Criteria may be required to determine at what stage in the natural history and in the course of the treatment the care of the individual should be delegated to a particular member of the health care team.

Health care providers require criteria for determining when further treatment is not indicated. Criteria are also needed to establish critical treatment goals and optimum intervals for follow-up.

It is important that each country should examine the effectiveness of treatment and other types of intervention. Criteria for this purpose would pertain to both the syndrome and all other alcohol-related disabilities.

5. Research questions relevant to the determination of criteria for alcohol-related disabilities

The study of alcohol-related disabilities (including the dependence syndrome) should be regarded as an urgent research priority. The research will often have to be multidisciplinary, for alcohol problems challenge cosy compartmentalization. The results will ultimately speak not only for improvement in treatment (and diagnosis), for wiser and more economic administrative response to the individual, but also — and very importantly — for improved preventive strategies.

The following list of research questions is not intended to be exhaustive and is especially lacking in specific proposals for basic laboratory investigations. It focuses on matters relevant to criteria for identification and classification.

(i) Design of basic clinical schedules for diagnosis of the alcohol-dependence syndrome and measurement of its dimensions, with establishment of inter-rater reliability and criteria of validity. A diagnostic project to determine the degree of agreement obtained by persons in different countries when rating audio-tapes and video-tapes of the same case using these schedules. High priority should be given to the design and testing of such standardized schedules.

(ii) Design and standardization of schedules for recording individual drinking behaviour and drinking history.
(iii) Design and standardization of schedules for describing a spectrum of individual alcohol intakes and alcohol-related disabilities.

(iv) The use of all the above schedules for the study of populations of identified "alcoholics" taken from different sources within one country and from different countries, with a view to determining (a) the structural relationship between degree of dependence and drinking behaviour, and between drinking history and alcohol-related disabilities; (b) the degree to which such relationships are fundamental and free from individual and cultural influence; and (c) the degree to which they are influenced by identifiable and measurable aspects of the person, his culture and milieu.

(v) Study of the distribution of alcohol-related disabilities within a community, with a view to determining the proportion of such disability which is dependence-related.

(vi) Investigation of the natural history of alcohol dependence and of nondependent drinking associated with disabilities, with particular emphasis on identifying prodromata of the alcohol dependence syndrome and measures of remission.

(vii) Multidisciplinary study of the alcohol dependence syndrome, combining laboratory and field work, with a view to further determining the important psychological, physiological, biochemical and social dimensions for measurement of degree, natural history, and recovery.

(viii) Examination of the "relatedness" process in alcohol-related disabilities, at the statistical level, at the level of causality, and at the level of social assumption.

(ix) Study of the "disability system", i.e., the interactive influences of disabilities and alcohol consumption.

(x) Investigation of the degree of responsiveness to social control (or experimental cue) of persons exhibiting different degrees of alcohol dependence.

(xi) Sociological study of the manner in which drinking and alcohol-related disabilities are conceived and overtly and covertly defined by different communities and agencies, nationally and cross-nationally, and the social consequences and functional significance of such definitions.

(xii) Development of methods for screening and early detection of alcohol-related disabilities, with correlation of questionnaire and laboratory methods. Pilot testing in various countries and various settings of the usefulness and feasibility of such methods.

(xiii) Development of an internationally comparable system for determining and recording rates and patterns of alcohol consumption and their correlation with the occurrence of related disabilities.

(xiv) National and cross-national studies of changes in the composition, distribution and other characteristics of the social agencies and systems for management of alcohol-related disabilities and the alcohol dependence syndrome, and the effects of these changes on the prevalence and composition of the relevant disabilities.

In many of the above studies, although alcohol-related problems would be the focus, it may be found essential to consider the impact of concomitant or previous utilization of other dependence-producing drugs. Studies of alcohol consumption and related disabilities may also usefully be incorporated into more general studies of drug use.
Annex

LIST OF PARTICIPANTS

Members

Miss E. Brooke, Chef du Département de Statistiques médicales, Institut universitaire de Médecine sociale et préventive, Hôpital Sandoz, Lausanne, Switzerland

Dr K. Bruun, Research Director, The Finnish Foundation for Alcohol Studies, Helsinki, Finland

Dr B. Claver, Chef du Service de Neuro-Psychiatrie, Hôpital central, Abidjan, Ivory Coast

Dr C. Edwards, Honorary Director, Addiction Research Unit, Institute of Psychiatry, London, England (Chairman)

Dr W. Feuerlein, Director, Psychiatric Polyclinic, Max Planck Institute of Psychiatry, Munich, Federal Republic of Germany

Dr M. Gross, Professor of Psychiatry, Director, Division of Alcoholism, Department of Psychiatry, Downstate Medical Centre, State University of New York, Brooklyn, United States of America

Professor M. Keller, Editor, Journal of Studies on Alcohol, Rutgers Center of Alcohol Studies, Rutgers University, New Brunswick, New Jersey, United States of America (Rapporteur)

Dr V. Ntsekhe, Consultant Psychiatrist, Chainama Hills Hospital, Lusaka, Zambia

Dr M. Ogata, Associate Professor, Department of Neuropsychiatry, Sapporo Medical College, Sapporo, Japan

Dr G.-L. Péquignot, Chef de la Section de Nutrition, Institut national de la Santé et de la Recherche médicale, Le Vésinet, France

Mr R. Room, Social Research Group, School of Public Health, University of California, Berkeley, United States of America

Representatives of other organizations

Comité national contre l’Alcoolisme, France

Dr J. P. Godard, Délégué général

Haut Comité d’Etude et d’Information sur l’Alcoolisme, France

Mme J. Jacquemin, Assistant Secretary General

International Council on Alcohol and Addictions

Dr P. Schiöler, Chairman, Governmental Commission on the Prevention of Alcoholism and Drug Abuse, Copenhagen, Denmark

National Council on Alcoholism, United States of America

Dr F. A. Seixas, Medical Director

Secretariat

Mrs J. Moser, Scientist, Office of Mental Health, WHO, Geneva, Switzerland (Secretary)

Dr N. Sartorius, Chief, Office of Mental Health, WHO, Geneva, Switzerland

1 Unable to attend: Dr J. Marconi T., Department of Public Health, Mental Health and Psychiatry, Santiago, Chile; Dr I. A. Sytinski, Head, Neurochemistry Laboratory, Professor of Neurochemistry, Leningrad State University, Leningrad, USSR.
A LEXICON OF DISABLEMENTS
RELATED TO ALCOHOL CONSUMPTION

by
Mark KELLER

Editor, Journal of Studies on Alcohol, Rutgers Center of Alcohol Studies,
Rutgers University, New Brunswick, NJ, USA

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1. Introduction

The most recent observations on conceptualizations in relation to problems of alcohol have been made by Selden D. Bacon (1975) in his introductory remarks to a chapter in a book by Filstead et al. Referring to those who currently consider the problems associated with alcohol, Bacon notes that "the participants seem to be talking about different things under the same label and talking about the same things under different labels; they seem to have brought different languages, methodologies and philosophies to bear upon whatever the label might be."

In a somewhat earlier essay, on "Alcohol and Society", another authority of repute in the alcohol problems field, Robert Straus (1973), observes that "the many varieties of pathological drinking and associated problems have been identified by almost as many varieties of descriptive terms," and that "without some agreed-upon behaviorally based definitions, such commonly used terms as 'alcoholism,' or 'problem drinking' or 'addictive drinking' have little value." He calls attention to the phenomenon of a recent enormous increase in the estimated number of "alcoholics" in the United States of America, which obviously represents not a more reliable epidemiology but an arbitrary alteration in the meaning attributed to alcoholic used as a noun.

A few years earlier, at the 28th International Congress on Alcohol and Alcoholism, Niels Christie of Norway and Kettil Bruun of Finland, in a discussion of the conceptual framework of alcohol problems, referred incisively, almost mockingly, to the terminological chaos as giving the impression of a "psychedelic picture." They noted the emotionality which in this field pervades definitions as well as ideas, and the inadequacy and vagueness of the definitions applied to words of fundamental importance, such as dependence, habituation and addiction. While adding their own psychedelic contribution by naming such terms "big fat words," these perceptive sociologists provide an interesting explanatory hypothesis for the viability and survival of terms in a state of imprecision and inconsistency: that they are thus socially functional. Nevertheless, Christie & Bruun (1969) demand a radical reform: they would give up social functionality for intellectual clarity. It is tempting to infer that they are infected with a benign disease - scientism.

Their assignment of functionality as the reason for the survival of ambiguous terminology appears to be supported by the observation of Y. Elkan (1974) that Helmholtz, in his classical work laying the foundation for what was to become the law of the conservation of energy, did not distinguish precisely between the concepts of force and energy as they are now understood; Helmholtz, in fact, did not seem to be aware of any ambiguity in his use of the term Kraft. Commenting on this, T. L. Hankins (1974) notes that the concept of energy was, in 1847, in a state of flux which is "characteristic of the creative stage of conceptualization in science" and that such a state "is valuable precisely because of its indefiniteness." If verily there is value in the indefiniteness, in the inconsistency and ambiguity, with which crucial terms are used in the conceptualization state of scientific endeavours, then Christie and Bruun are right in assigning functionality as the reason for the persistence of the "big fat words" in the arena of alcohol problems. For surely this field is still in its budding stage of conceptualization. But then they may have been premature in demanding an immediate resolution of all the ambiguities. It is a comforting thought that the continuing terminological chaos in the alcohol problems field may be symptomatic of a creative stage.

In 1968, just before the observations of Christie & Bruun were published, Keller, in the introduction to the Dictionary of Words about Alcohol (by Keller & McCormick), discussed the "perplexities of terminology about alcohol," and the problems of definition, in a more tolerant mood. Aware of the difficulties as well as the importance of "the harmonization of facts with words, of reality with expression," he conceded that "the dynamics of language" rests with speakers and writers; "to try to be dictatorial with the meaning of words is to invite new frustration." And referring to the evolutionary nature of language he noted that "If neither heaven nor hell have achieved eternal meaning," surely modification may be expected in the definitions of words such as alcoholism, problem drinker and alcohol addiction.
Nevertheless he urged a disciplined and discriminant use of language - thus: "Not to dignify with alcoholism when we are talking of a common occurrence of drunkenness," and "Not to pussy-foot with problem drinking when we know we are dealing with a disease". With particular concern for the primacy of facts, and "believing not only that the thought generates the word, but also that the word regenerates the thought," he declared the purpose of the above-mentioned Dictionary to be the enablement of "more effective study and use of facts through more precise use of words". The design of the Dictionary, accordingly, was "authoritative though not authoritarian"; a multiplicity of definitions of crucial words and terms was cited, but ambiguous and disharmonious usages were criticized while helpful distinctions were emphasized and given approved preference.

Actually, already 10 years earlier, Keller, in his contribution to a little monograph entitled The Alcohol Language (Keller & Seeley, 1958), had noted how "ambiguous terminology plagues scientific workers". He cited the biblical account of the confounding of languages at the Tower of Babel as evidence of the antiquity of the knowledge that confused definitions could frustrate a common undertaking. He recalled the earlier effort of Bowman & Jellinek (1941) and of the editors of the Quarterly Journal of Studies on Alcohol to sort out just the terms alcoholism and chronic alcoholism. They did not succeed. It is important to remember - and this is the purpose in reciting the preceding history - that their condemnation of the term chronic alcoholism as tautological, Keller's anathematizing it in The Alcohol Language (a monograph that had a considerable distribution over several years), the further deprecation of it in the Keller & McCormick Dictionary, and its banishment more than a quarter of a century ago from the pages of the widely read Journal of Studies on Alcohol have all been relatively ineffectual. To the credit of the American Medical Association Standard Nomenclature of Diseases (AMA-1961), and the American Psychiatric Association Diagnostic and Statistical Manual (APA-1968), the word "chronic" is omitted in their listings. In the ninth revision of the International Classification of Diseases (ICD-9)\(^1\) the preferred term for alcoholism is alcohol dependence syndrome; and alcoholism is logically listed under it as an inclusion term. However, chronic alcoholism is also listed as an inclusion term, presumably in deference to those who use this chronic tautology out of fear that alcoholism alone will be misunderstood as meaning alcohol intoxication. But chronic alcoholism still appears frequently in articles in current medical and other professional and scientific periodicals and books, and is seriously defined in medical dictionaries, and turns up with comical ghostliness in classifications that seem to have intended its burial.\(^2\) This history should be remembered by any committee which would attempt to establish an authoritarian set of definitions. Not even the combined efforts of the World Health Organization and the National Institute on Alcohol Abuse and Alcoholism in the USA can dissuade people from adopting Humpty Dumpty's attitude in Through the Looking Glass: "When I use a word it means just what I choose it to mean."

The following contribution consists of a list of the words and terms relevant to behaviours and effects connected with alcohol ingestion which are presumed to be important for the recognition and diagnosis of individual disabements; and the leading, or authoritative, or widely accepted definitions of those words and terms. An attempt will be made to set

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\(^1\) The ninth revision of the International Classification of Diseases was approved by the Twenty-ninth World Health Assembly in May 1976. It will be published during the course of 1977 but will officially come into force only in January 1979. The eighth revision is therefore still in use (1976) and is expected to be used in a number of countries for many years.

\(^2\) For example, the Disease Index of AMA lists Alcoholism, without the word "chronic", and sends to page 112; there the relevant term is given as Alcohol addiction chronic. It is a task for puzzle-solvers to explain either the underlying idea or the formulation. Chronic alcohol addiction would raise only a nosological question: Is there an acute alcohol addiction - and, if so, why isn't it listed in the classification? But the placement of "chronic" after "Alcohol addiction" adds a note of the comic, almost, and no parallel exists anywhere. Perhaps it is a typographic rather than a nosographic oversight. At any rate the Index makes it obvious that the term stands for alcoholism.
these words in their place within the standard authoritative classifications of disabilities - those of the ICD, the AMA and the APA, as well as to provide an operational definition (or definitions) of each term, from these sources, or from the Dictionary of Words about Alcohol, or newly formulated. This task cannot be undertaken, however, without a preliminary discussion of the nature of the primary disablement recognized as occurring in this connection - the condition called variously alcoholism, alcohol addiction or alcohol dependence, and sometimes problem drinking, or, incomprehensibly, even alcohol abuse. Without agreement on what this primary disablement is, and on whether it falls into the classification of disablements, and, if so, why, we should be dealing only with byproducts and possible prodromal manifestations but missing the essential.

It is convenient in this introductory discussion to refer to the primary disablement generally as alcoholism (except when another term is necessary), with the understanding, however, that alcoholism herein is synonymous with alcohol addiction and with alcohol dependence syndrome, but not with problem drinking or like locutions. That it may be time to relegate alcoholism to obsolescence is noted in the comment on that term in the lexicon below.

Alcoholism is conceived of as an uncontrollable behaviour consisting of the repetitive (but not necessarily constant or regular) ingestion of alcohol-containing beverages to a degree that harms the ingester. It is understood by "uncontrollable" that the ingester at times cannot help his behaviour, and that he is thus disabled from exercising the control that most drinkers usually employ over the occasions and amounts of alcohol intake. It is this disablement, often referred to as loss of control over drinking (Glatt, 1967; Keller, 1972; Ludwig & Wikler, 1974), which presumably justifies classifying alcoholism as a disease in the AMA category of "Personality disorders without clearly defined tangible cause or structural change" (AMA-1961), where it is also called alcohol addiction (with code 000-X641). Presumably, the same basic conception of disablement justifies the inclusion of alcoholism as a disease in the APA Manual (code 303) and in the International Classification of Diseases (ICD-8, code 303 - amended to "alcohol dependence syndrome" in ICD-9).

Whether the behavioural disorder (or personality disorder) here called alcoholism is conceptualized as a drug addiction or dependence syndrome or as a conditioned dysbehaviourism does not seem to matter. It is fundamental that the person who suffers from it, whose verified behaviour warrants a reasonable diagnostic inference that he repetitively ingests alcohol to his own detriment without being able consistently to avoid this action, has a disablement, and that such disablement constitutes a disease or syndrome in accordance with the conceptions of such a condition implicit in the three above-mentioned classifications.

It is a curious recent development that some physicians and many social scientists, who may soon be followed by some politicians, have taken up where most moralists left off many years ago and, possibly influenced by the ideology of Thomas Szasz (1961, 1974), proclaim that alcoholism is not a disease. The moralists objected to the disease concept as advanced, e.g., by many 19th century physicians, on the grounds that it threatened to absolve the drunkard of responsibility for the indulgence of a vice (see, for example, Todd, 1882). Modern supporters of the antidisease concept are mostly more humane in the reasons they cite. Some think that labelling a person as having a disease is unethical or that it is bad for him because it may act as a self-fulfilling prophecy. Some think that it serves to absolve the person of responsibility for his behaviour, or even grants him a licence to misbehave. It is tempting to think that the recent popularization of the term alcohol abuse is not unconnected with the latter notion. And some think that calling alcoholism a disease places it within a classical "medical model", by virtue of which only physicians are permitted to act as agents of change and that therefore - whatever it may be in fact - it should not be called a disease.

The whole question hinges on the definition of disease. If certain somatic or psychic or somatopsychic disablements are diseases, then alcoholism can reasonably be included among them. The three cited authorities (AMA, APA, ICD) have so included them. What the effect of this inclusion may be is outside the present problem of classification and definition.
The following list (the tentative lexicon) is focused on disabilities (disabilities) related to alcohol consumption which may be regarded as essentially "medical" - as included or inculcable within formal classifications of disease. In recent years students of alcohol-related problems and of drinking behaviour in particular - especially social scientists - have begun to focus, as Bacon (1943) urged long ago, on behaviours which do not necessarily fall into any medical classification and on related personal problems. They are trying to describe and classify ordinary, common, normal drinking behaviours and establish the reasonable categories within which they can be discussed phenomenologically. At the same time they are similarly depicting behaviours which apparently fall outside the recognized norms, and attempting to establish useful descriptive categories for them. Clearly the identification of such extranormal categories of alcohol consumption, or drinking behaviours, or drinking-related behaviours is immediately relevant to the question of disabilities. The attempt of the nosologists of the American Psychiatric Association (1968) to define mental disorders in terms of frequency of being under the influence of alcohol or being intoxicated (e.g., more than once a week, at least four times a year) does not seem to be based on anything but impressionistic observation. If there is any point or usefulness in such quantification as an aid in medical-psychological diagnosis, it certainly ought to be based on firm knowledge of behavioural norms and deviations. Thus, while the social scientists who carry out surveys of drinking behaviour may have no interest in medical diagnostic problems as such, their findings are undoubtedly relevant to the task of identifying and classifying disabilities related to alcohol consumption.

The behavioural researchers have thus far engaged chiefly in examining two problems:

(1) How much alcohol (or how much of what type of beverage containing alcohol) is consumed by various categories of people, with what frequency, with what variability, with what motivations, in what circumstances (e.g., Cahalan et al., 1969).

(2) What sorts of effects - ranging from none to intoxication and to familial, social, occupational, health, legal or other problems - are associated with what kinds of drinking patterns in which categories of people (e.g., Clark, 1966; Knupfer, 1966, 1967; Cahalan, 1970; Edwards et al., 1972, 1973; Cahalan & Room, 1974).

Few if any studies of drinking behaviours have been designed to ask all these questions. Some have attempted only to obtain minimal information about quantites consumed by populations composed of relatively broad demographic categories, but some have attempted quite sophisticated classifications of behaviours and effects as seen in broad or specific populations.

The results of such surveys have yielded information on "heavy drinking" (Cahalan & Room, 1974; presumably equitable with such a concept as "excessive drinking" in the APA diagnostic Manual), "escape drinking" (Cahalan & Room, 1974; roughly, drinking to avoid undesired events or emotions), "preoccupation with alcohol" (Mulford & Miller, 1960, 1963; possibly indicative of addiction), as well as information on the rates of various types of effects and problems experienced by people in presumptive association with their quantity or pattern of alcohol intake. The consideration of disabilities associated with alcohol consumption should therefore take account of the information that has emerged from such studies, as they may be decidedly useful aids in nosology and diagnosis.

Concordant with the aim to identify disabilities, the accompanying list consists mostly of diagnostic terms. Some nondiagnostic terms, however, are highly relevant to this aim, especially because the identification of disabilities is not exclusively in the hands of those who prefer diagnostic language. To an increasing extent social scientists, including some epidemiologists, are involved, who from the perspective of their disciplines prefer to identify, describe and categorize in purely descriptive-behavioural or operational terminology.

Examples of such nondiagnostic terms are heavy drinking, escape drinking, heavy escape drinking and deviant drinking. But these terms are not free of labelling disadvantages, as may be seen in the definition, which is not entirely facetious, "An excessive drinker is someone who drinks more than I do." While escape drinking is not as subjective a label as
heavy drinking, it is not necessarily the best expression for the intended meaning, perhaps because "escape" is too common a word and tends to become ambiguous in usage as each user applies his own conception to it rather than the precise definition given by the social scientists.

Of course it is not "terms" that are needed but delimited categories of behaviours to which significant degrees of risk of developing problems or illness - that is, disabilities - can be attributed. The following numbered paragraphs, therefore, describe some drinking "behaviours" - i.e., amounts or frequencies of drinking - which are presumed to imply risks of social (including economic) or psychological or somatic problems or illnesses, together with terms believed suitable for labelling these behaviours and the types of risk involved. Neither the amounts of alcohol nor the associated consequences should be taken as exact criteria. They are intended only to be suggestive and serve as bases for discussion. Moreover, it may be that the same drinking (alcohol-consuming) behaviour will carry more than one (or all) of the various types of risk.

1. Drinking, on average, the equivalent of about 115 ml of absolute alcohol daily,¹ or larger amounts occasionally, with resulting intoxication or hangover or damage of tissues (e.g., gastritis, hepatitis, myopathy), is somatopathic drinking.

2. Drinking frequently (at least twice a year) the equivalent of about 85 ml of absolute alcohol per occasion as a means of "coping with problems of living," or in order "to get along with people," or generally for the avoidance of social discomfort or emotional pain, is thymogenic drinking.

3. Drinking on frequent occasions (at least twice a year) the equivalent of about 70 ml of absolute alcohol or more, with resulting legal troubles or interference in family or social relations or economic functioning, is dyssocial drinking.

Any of these three patterns of drinking may be implicative of alcoholism (Keller, 1960) but the social scientists or epidemiologists engaged in categorizing people by amounts of alcohol intake and effects need not commit themselves to any conclusion beyond what is understood from the definition of the descriptive term. It is assumed, however, that the behaviour implies at least a risk of progression to the core alcoholism syndrome (Gross, 1975), i.e., alcoholism (alcohol addiction, the alcohol dependence syndrome), with possible irreversible damage.

Each of these behaviours may be considered as pathological drinking (= problem drinking?) but this term should be reserved for instances where the more specific label cannot be applied with confidence. The vagueness of pathological drinking and problem drinking should be borne in mind.

4. Drinking the amount cited in somatopathic drinking, together with the effects cited in either of the other forms, might be designated thymosomatopathic or dyssocialsomatopathic drinking (in spite of the clumsiness of the expressions). Either combination should be strongly implicative of alcoholism (alcohol addiction) or at least of prealcoholism (i.e., a prodromal stage).

A combination of all three forms seems to be inescapably implicative and should warrant a confident diagnosis of alcoholism (alcohol addiction, or alcohol dependence syndrome). It is difficult to imagine a person with an emotion-laden basis for consuming enough alcohol often enough to experience troubles in his health and social (or legal or economic) functioning who does not, on experiencing these troubles, reduce his intake to harmless proportions, unless

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¹ This quantity is based on the evidence given by Iber (1974) that it is the amount required to produce tissue damage. See also, e.g., Leibach (1966, 1967) and Rubin & Lieber (1974), with particular emphasis on liver damage.
he is addicted, or helplessly dependent. The positive inference is that if he were not addicted, if he could help it, if he had not suffered impairment of control over drinking, if he had not experienced the damage or disablement of the core alcoholism syndrome (Gross, 1975), he would reduce his drinking to a harmless degree. For that condition, preferentially named the alcohol dependence syndrome, the following definition is proposed:

A dependence on (or addiction to) alcohol, characterized by an overwhelming need to ingest large amounts of alcohol-containing beverage, marked by impaired control over drinking. There is a drive to obtain the gratification of intoxication or to escape mental or physical distress by means of self-alcoholization. The uncontrollable behaviour has been attributed to a learned or conditioned dependence activated by critical internal or environmental stimuli; and to changes in the central nervous system consequent upon habituation or adaptation to, or (Gross, 1975) injury from, large amounts of the ingested drug, often with the development of withdrawal symptoms when the craving is not relieved.

Finally, it should be noted that a list of disablements related to alcohol consumption, particularly one that includes nondiagnostic descriptions of behaviours with a clear implication of risk, may be useful to a far wider range of persons concerned with alcohol problems than those who need diagnostic terminology. In particular, the terms which define or describe or imply levels of risk may be useful to those whose interest is in the realm of prevention rather than treatment alone.2

2. Terms relevant to alcohol-connected disablements

Most of the terms in the following list (tentative lexicon), chiefly diagnostic terms, are derived from the five main sources listed immediately below (under Source symbols). Some terms are derived from the literature generally, with the Journal of Studies on Alcohol as the main source. Definitions are derived from all the sources listed below (except AMA, which does not give definitions), as indicated in each case. In addition, some new or revised definitions are proposed (identified by the symbol MK-1975). Also given are the codes used to identify each term in AMA, APA and ICD. It should be noted that while AMA does not give definitions, its codes, when taken together with the section headings under which they appear, allow quite precise interpretation of the diagnostic terms.

Source symbols


MK-1975: New terms and definitions suggested by the author.

1 By the WHO Group of Investigators on Criteria for Identifying and Classifying Disabilities Related to Alcohol Consumption.

2 The following list is not complete, and the definitions not perfect. Suggestions of additional terms and for refinement of definitions will be received gratefully.
3. A tentative lexicon

Abstinence syndrome

MK-1975: Usually the same as alcohol withdrawal syndrome (q.v.), in which case the latter is preferred. Sometimes used to distinguish the postintoxication symptoms well after all alcohol is gone from the organism, alcohol withdrawal syndrome being reserved for the earlier symptoms when the alcohol concentration in the organism is declining or immediately after it has fallen to zero.

Addictive drinker, drinking

DWA: "ADDICTIVE DRinker = one who shows the signs of alcohol addiction (cf. addictive drinking, below). Straus & McCarthy (1951): 'Whereas all addictive drinkers can be classified as pathological drinkers, not every pathological drinker is an alcohol addict.' ADDICTIVE DRINKING = drinking with the characteristics of alcohol addiction; i.e., drinking with loss of control over the maintenance of complete abstinence or over the decision to stop if drinking is begun; when the progress of alcoholism can apparently be halted only by complete abstinence; when without abstinence, organic disease or psychic deterioration is likely to develop. Clancy (1964): 'Social drinking commonly precedes addictive drinking and in most instances the transition is a gradual process. Addiction may be characterized by increased tolerance, loss of control over intake, withdrawal symptoms and a craving for alcohol. During the transition period . . . the above signs and symptoms may be difficult to elicit . . . '"

Alcohol abuse

MK-1975: The intake of alcohol-containing beverage in a quantity or in a manner that evokes disapproval. Sometimes used pejoratively, sometimes ambiguously as a substitute for alcohol addiction, alcohol dependence, alcohol intoxication, alcohol misuse, alcoholism, drunkenness, excessive drinking, habitual excessive drinking, habitual drunkenness, problem drinking, and possibly with other meanings or with a combination of these meanings either to avoid commitment to a specific meaning or from uncertainty about the nature of the behaviour or condition thus labelled. action n: Alcohol abuser, Abusive drinker.

Comment: That alcohol abuse should generate alcohol abuser was inevitable. That it would generate abusive drinker may not have been obvious, but was equally inevitable. Predictably it will generate additional abusive terms to describe people who are in trouble with their use of alcohol. The pejorative implications of alcohol abuse are obvious; cf. child abuse, self-abuse. The term is unnecessary in scientific communication and should be avoided by scientists and especially by professionals who claim therapeutic motivation. The fact that alcohol abuse was a term in good standing, with a meaning approximating to problem drinking, among Scandinavian users of English (presumably as a literal translation from the Scandinavian languages) does not alter the objectionable character of this term, and its use should be reserved for the intention to indicate that the act or the actor is regarded as malevolent.
Alcohol addiction

DWA: "addiction adapted from Latin addicere with the extended meaning of additus bound, devoted. In Roman law, a formal delivery by sentence of court to a practice.

ALCOHOL ADDICTION = a form of dependence on alcohol characterized by an overwhelming need to drink intoxicating amounts of alcoholic beverages, which the addict will obtain by any means. It is marked by the drive to obtain the gratification of alcohol intoxication or to escape mental or physical distress, and by loss of control over drinking (q.v.). The behaviour has been attributed to a learned or conditioned dependence activated by critical internal or environmental stimuli. It has also been attributed to a hypothetical alteration in cellular metabolism consequent upon habituation to large amounts of the drug, with development of a withdrawal syndrome when the craving is not relieved.

PRIMARY ALCOHOL ADDICTION = directly caused by response to alcohol itself, implying physiological dependence, but not excluding a susceptible psyche.

SECONDARY ALCOHOL ADDICTION = following prolonged reliance upon alcohol intoxication as a means of coping with pain or with psychic problems, implying psychological dependence, but not excluding physiological dependence as the ultimate state. Note: the above is the most logical order; Jellinek at first (1941) reversed the order, but later (1960) noted that he 'would label as secondary addict the alcoholic whom he called in 1941 primary addict, and vice versa.'

Other usage: alcohol addiction has also been defined by a specific physiological standard postulating increased alcohol tolerance, altered cell metabolism, and physiological dependence. Mendelson & Kello (1964): 'The physiological components in addiction can be defined by the traditional pharmacological criteria: (a) Tolerance ... or the ability of animals to consume increasing amounts of alcohol through time without changes of a specific index of behavior such as stimulus discrimination, motor performance or gross level of consciousness ... (c) Dependency defined by the occurrence of physiological abnormalities characterizing withdrawal symptoms upon removal of alcohol.'

The latter phenomenon seems better denoted as drug withdrawal syndrome.

agent n ALCOHOL ADDICT. Also, in E. Simmel's (1948) psychoanalytic classification, an alcoholic = an alcoholic or problem drinker whose ego is said to have regressed beyond the phallic, oral and anal stages to its earliest pre-ego state. There the artificially created sensation of elation (through alcohol) re-establishes the infantile pleasure principle within the conscious mind of the alcoholic, weakening the object strivings of the ego and contributing to the feeling of dependence on the mother (represented by alcohol).

DRUG ADDICTION = Surrender and devotion to the regular use of a medicinal or pleasurable substance for the sake of the relief, comfort, stimulus or exhilaration which it affords; often with craving, when the drug is absent, in addiction to opiates, barbiturates and morphine-like drugs, and perhaps in addiction to alcohol, cocaine, marihuana and amphetamine; together with apparently physical dependence in addiction to opiates and morphine-like analgesics, barbiturates, and possibly alcohol; together with increased tolerance (or adaptation) to opiates and morphine-like analgesics, barbiturates, and perhaps amphetamine and alcohol; and usually with psychotick effects during withdrawal in addiction to opiates, morphine-like analgesics, barbiturates, and alcohol. agent n DRUG ADDICT.

Other usage: WHO EXPERT COMMITTEE ON ADDICTION-PRODUCING DRUGS (1957): 'Drug addiction is a state of periodic or chronic intoxication produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include: (1) an overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means; (2) a tendency to increase the dose; (3) a psychic (psychological) and generally a physical dependence on the effects of the drug; (4) detrimental effect on the individual and on society.' This revision of the 1952 WHO formulation of addiction was not generally accepted and did not lead to the hoped-for distinction between addiction and habituation in drug abuse. In 1964 therefore the term dependence (q.v.) was recommended as a replacement for both terms."
WHO-1974 (303.2, Alcoholic addiction): "Includes a state of physical and emotional dependence on regular or periodic, heavy, and uncontrolled alcohol consumption, during which the person experiences a compulsion to drink. On cessation of alcohol intake there are withdrawal symptoms, which may be severe. If heavy drinking continues for one month or more, addiction (dependence) can be assumed to exist." A footnote to the glossary states: "The term 'dependence' is now recommended instead of 'addiction', both for alcohol and other dependence-producing drugs. (See, for example, WHO Health Org. Techn. Rep. Ser., 1969, No. 407; 1973, No. 516; 1973, No. 526.)"

ICD-8: the inclusion terms under this rubric are: chronic alcoholism, chronic ethylism and dipsomania.

ICD-9 has no rubric "alcohol addiction".

APA (303.2): "This condition should be diagnosed when there is direct or strong presumptive evidence that the patient is dependent on alcohol. If available, the best direct evidence of such dependence is the appearance of withdrawal symptoms. The inability of the patient to go one day without drinking is presumptive evidence. When heavy drinking continues for three months or more it is reasonable to presume addiction to alcohol has been established."

AMA (000-x641): Alcohol addiction chronic.
(000-x643): Alcohol and other drug addiction, combined types.

MK-1975: The same as the alcohol dependence syndrome (q.v.); also, Alcoholism.

Comment: The idea of "uncontrolled alcohol consumption" in WHO-1974 goes to the essence of addiction; but WHO-1974 does not define "uncontrolled" etc. However, if the definition of loss of control over drinking from DWA, or preferably as reformulated herein, is applied to "uncontrolled" etc., this lack would be resolved.

The statements in APA that "the best direct evidence of such dependence" is "withdrawal symptoms," and the unconditional statement (WHO-1974) "On cessation of alcohol intake there are withdrawal symptoms," are both questionable. Withdrawal symptoms do not appear in addiction to all classes of drugs. Moreover, withdrawal symptoms occur in nonaddicts after a single and unique intake episode; and they may fail to appear in addicts (whose addiction is "confirmed" by previous experience of withdrawal symptoms) after observed intake of about 1-1.5 litres of whisky a day for three weeks (Mendelson et al., 1964). Withdrawal symptoms or latent withdrawal signs may become the best evidence if work such as that of M. Gross should result in identification of a core addiction syndrome manifested by CNS changes signalled via, e.g., electroencephalography.

WHO-1974 does not define "heavy drinking" - hence its continuance for three months is as unreliable for diagnosis as its occurrence on one day or continuance for three years.

The advantage in the APA definition is the recognition that "it is reasonable to presume" addiction. The reasonable presumption should be based on a history allowing an inference of loss of control over drinking.

Alcohol dependence (Alcohol dependency)

MK-1975: Alcohol addiction, or Alcoholism (q.v.); see also Alcohol dependence syndrome.

DWA: "Originally, a state in which the ordinary performance of necessary functions - cultural, psychic or physical - is difficult or impossible without drinking."

Comment: The DWA definition is the older classical conception of alcohol dependence (Myerson, 1946), something much less than addiction (or dependence as defined by the WHO Expert Committee on Addiction-Producing Drugs (1964)), and could reflect a prealcoholicic stage, either the one designated by Jellinek (1946) as the "prealcoholic symptomatic phase," or possibly his "prodromal phase" preceding alcoholism (alcohol addiction).
Alcohol dependence syndrome

ICD-9 (303): "A state, psychic and usually also physical, resulting from taking alcohol, characterized by behavioural and other responses that always include a compulsion to take alcohol on a continuous or periodic basis in order to experience its psychic effects, and sometimes to avoid the discomfort of its absence; tolerance may or may not be present. A person may be dependent on alcohol and other drugs; if so also make the appropriate 304 coding. If dependence is associated with alcoholic psychosis or with physical complications both should be coded."

MK-1975: A dependence on (or addiction to) alcohol, characterized by an overwhelming need to ingest large amounts of alcohol-containing beverage, marked by loss or impairment of control over drinking (q.v.). There is a drive to obtain the gratification of intoxication or to escape mental or physical distress by means of self-alcoholization. The uncontrollable behaviour has been attributed to a learned or conditioned dependence activated by critical internal or environmental stimuli or cues; and to changes in the central nervous system consequent upon habituation or adaptation to, or injury from, large amounts of the ingested drug, often with the development of withdrawal symptoms when the craving is not relieved.

Comment: In view of the preference of WHO for drug dependence rather than addiction, and since alcoholism has lost precision in usage even in professional-scientific writings, alcohol dependence syndrome appears to have decisive advantages as a diagnostic term.

Alcohol intoxication

DWA: "ALCOHOL INTOXICATION Drunkenness from the effects of alcohol in the organism; the condition of being disordered or insensible or stupefied through the action of alcohol in the organism. The characteristic signs are facial flushing, slurred speech, unsteady gait, accompanied by euphoria, increased activity, emotion and volubility. In severe alcohol intoxication there is irrational thought and marked impairment of perception and gross loss of muscular control. Anesthesia, with unconsciousness, may occur at or about a blood alcohol level of 0.4% and death at still higher blood alcohol levels. In the American Medical Association Standard Nomenclature of Diseases and Operations (1952), called 'Acute brain syndrome, alcohol intoxication' in the section 'Disorders caused by or associated with impairment of brain tissue function' - a classification that draws no distinction between the effects of alcohol (drunkenness) and the effects of drunkenness (hangover, etc.); that is, between states appearing during the presence of alcohol in the organism and states appearing when all alcohol has left the organism. While both kinds of states may be justly regarded as the general outcome of poisoning by alcohol (in the strict medical sense of intoxication), postintoxication state (q.v.) would represent a useful distinction.

ACUTE ALCOHOL INTOXICATION Severe drunkenness. Also, especially in provisional diagnoses, obvious drunkenness varying from mild to severe conditions. Meaning of 'acute' ranges from 'short-lived' or 'current' to 'severe'. Ambiguity may be avoided by using 'severe' where appropriate.

CHRONIC ALCOHOL INTOXICATION A prolonged state of drunkenness maintained by repeated intake of alcohol before or soon after the metabolism of alcohol taken previously. Isbell et al. (1955): 'Period of chronic intoxication; It was planned to administer alcohol in amounts sufficient to maintain the maximum degree of intoxication compatible with safe ambulatory management (approximately grade 2) continuously for 6 to 12 weeks.'

Other usage (especially in the obsolete sense of 'chronic alcohol poisoning') alcoholism."

1 See the chapter by Milton M. Gross in this publication.
APA (Acute alcohol intoxication, 291.4): "All varieties of acute brain syndromes of psychotic proportion caused by alcohol are included here if they do not manifest features of delirium tremens, alcoholic hallucinosis, or pathological intoxication. This diagnosis is used alone when there is no other psychiatric disorder or as an additional diagnosis with other psychiatric conditions including alcoholism. The condition should not be confused with simple drunkenness, which does not involve psychosis. (All patients with this disorder would have been diagnosed 'Acute brain syndrome, alcohol intoxication' in DSM-I.)"

AMA (011-33212): Alcohol intoxication (simple drunkenness); √Nondiagnostic term/.  
(000-33212): Acute brain syndrome, alcohol intoxication.  
(009-33212): Chronic brain syndrome, alcohol intoxication.

Comment: Acute alcohol intoxication seems an unfortunate choice by APA. The simple choice, Alcoholic psychosis, unspecified, was available. Reading the APA description, it is impossible to distinguish it from Other /and unspecified/ alcoholic psychosis (291.9), q.v., unless the intention here was to emphasize the acute feature - which could be better done by altering the code after the decimal. But it does not appear that emphasis of acute was in fact the special intention here, and it is not apparent, in spite of the warning not to confuse this condition with simple drunkenness, in what way it differs from "simple" drunkenness. (Especially noteworthy is that AMA makes Alcohol intoxication = Simple drunkenness, without the ambiguous "acute," but makes it a nondiagnostic term, while alcohol intoxication conceived as an acute brain syndrome is a diagnostic term.) From the viewpoint of language and usage, acute alcohol intoxication most commonly means, exactly, drunkenness, and is used especially by physicians as a formal diagnostic term for drunkenness, apparently from the feeling that drunkenness is a too common lay expression. Acute alcohol intoxication thus bears the same relationship to drunkenness as cephalalgia bears to headache. It would be harmless except for the ambiguity of acute (sometimes also tautological); cf. DWA at acute alcohol intoxication.

The two AMA brain syndrome terms (000-33212 and 009-33212) apparently belong under Alcoholic psychoses, and are repeated there.

Alcohol poisoning

DWA: "poisoning, alcohol  Alcohol intoxication. Often used instead of 'alcohol intoxication' to describe (a) cases of unusual severity, involving, for example, blood alcohol concentrations sufficient to produce unconsciousness, or (b) the effects of accidental drinking of alcoholic beverages (or nonbeverage alcohol), especially by children."

AMA (010-33212): Acute ethyl alcohol poisoning.  
(011-33212): Chronic ethyl alcohol poisoning.

Alcohol tolerance

DWA: "ALCOHOL TOLERANCE  The constitutional (preadapted) capacity of an organism to withstand the effects of alcohol, measured by the blood alcohol concentration at which a specified function is first affected; usually conceived in terms of adverse effect, i.e., deterioration of the function. Or, a stage in the process of adaptation to alcohol, regarded as an arbitrary index of function, similarly measured, in comparing individuals with undetermined degrees of preadaptation.

Other usage: As a confusing alternative term for adaptation (q.v.) in its various meanings. Also, popularly, an individual's capacity to drink without showing manifest signs of being affected; therefore = (alcohol) capacity (q.v.)."
MK-1975: The constitutional (preadapted) capacity of the organism to withstand the effects of alcohol, measured by the blood alcohol concentration at which a specified function is first affected. Or, the developed capacity to withstand the deteriorating effect of alcohol on a specified function, conceived of as an adaptive state, or as the effect of an injury to the central nervous system.\(^1\)

**Comment:** If, according to Gross,\(^1\) an improved capacity to withstand a normally deteriorating effect of alcohol may be caused by an injury to the CNS, we may entertain the conception, in this connexion, of something like a dysadaptation - i.e., a harmful adaptation. Not to be disabled by small amounts of alcohol, but to be disabled by amounts that begin to be injurious (or that threaten to allow addiction), is clearly advantageous to the organism. To develop a capacity to tolerate amounts that threaten the organism (e.g., by allowing addiction, or cirrhosis) is clearly disadvantageous to the organism. It is not unreasonable to think that such a disadvantageous development could be caused, as Gross suggests,\(^1\) by an injury. Basic evolutionary conceptions of organismic adaptation are involved here: presumably there were and are adaptations which are narrowly and immediately advantageous (e.g., capacity to withstand certain function-deteriorating effects of large amounts of alcohol) but are disadvantageous in the long run (in the same example, by allowing the development of addiction, cirrhosis, etc.).

**Alcohol withdrawal syndrome**

DWA: "withdrawal syndrome, alcohol  The complex of symptoms emerging at the termination of a prolonged drinking bout (which is often one of many), when drinking is abruptly stopped or reduced. They include tremulousness, psychomotor and autonomic overactivity, gastric distress, seizures, delirium tremens, and alcoholic hallucinosis, sometimes associated with headache, fever, sweating, vomiting, diarrhea, hypertension, hyperreflexia and nystagmus. They may be prevented or relieved by alcohol or some drug with similar pharmacological effects, such a paraldehyde, barbiturate, and chloral hydrate; or by ataraxics."

ICD-9 (Drug withdrawal syndrome, 292.0): "States associated with drug withdrawal ranging from severe, as specified for alcohol under 291.0 (delirium tremens) to less severe states characterized by one or more symptoms such as convulsions, tremor, anxiety, restlessness, gastrointestinal and muscular complaints, and mild disorientation and memory disturbance."

MK-1975: A complex of symptoms, ranging from hangover (q.v.) to delirium tremens (q.v.), often occurring in severe forms when alcohol intake is stopped after a prolonged bout, sometimes beginning when the blood alcohol concentration is allowed to decline during a bout, and sometimes manifested in mild forms after a brief session of heavy alcohol intake or a single intake of a large quantity of alcohol. The symptoms may include tremulousness, psychomotor and autonomic overactivity, gastric distress, headache, fever, sweating, hypertension, hyperreflexia, nystagmus, seizures and hallucinations.

**Alcohol withdrawal syndrome, latent**

MK-1975: A craving or urge or impulse to drink alcohol-containing beverage after a period of abstinence, conceived of as a manifestation of addiction or the alcohol dependence syndrome, indicating either an injury in the central nervous system\(^1\) or an unconscious conditioned response to learned cues or stimuli.

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\(^1\) See the chapter by Milton M. Gross in this publication.
Alcoholic amblyopia

DWA: "amblyopia [NL from Gk, dimness of sight] Dimness of vision or partial loss of sight without observable lesion in eye structures or optic nerve.

ALCOHOLIC AMBLYOPIA, AMBLYOPIA ALCOHOLICA Amblyopia formerly believed to be caused by excessive drinking of beverages containing ethyl alcohol but more likely to be due to either (1) nutritional deficiency associated with alcoholism (see nutritional amblyopia, below); here the visual loss is gradual; or (2) methyl alcohol poisoning; here the visual loss is sudden and may be permanent. Harrington (1961): '(1) tobacco amblyopia is a recognizable (though presently uncommon) clinical entity; (2) amblyopia from ethyl alcohol (aside from methyl alcohol poisoning) is nonexistent; (3) the amblyopia often associated with . . . alcoholism is a nutritional deficiency disease and is probably a manifestation of subclinical pellagra; (4) the term "tobacco-alcohol amblyopia" is a misnomer for a very rare entity and should be discarded.'

NUTRITIONAL AMBLYOPIA Amblyopia due to vitamin or other dietary deficiency, especially pellagra (which may be subclinical). The loss of vision is gradual. Nutritional amblyopia may be associated with alcoholism when alcohol (containing calories but no vitamins) is ingested instead of food containing vitamins.

TOBACCO AMBLYOPIA Temporary amblyopia due to nicotine poisoning, with debility, in smokers of cigarettes, cigars and pipes, in tobacco chewers, and in snuff inhalers.

TOBACCO-ALCOHOL AMBLYOPIA Probably a misnomer for a rare form of amblyopia associated with nicotine, not alcohol, poisoning (see tobacco amblyopia, above), and with nutritional deficiency (see nutritional amblyopia, above).

M. Victor (1963) has proposed to replace the various misnomers by NUTRITIONAL RETROLUBULBAR NEUROPATHY."

AMA (9623-33212.x): Toxic amblyopia due to ethyl alcohol.

Alcoholic beriberi, see under Beriberi

Alcoholic cardiomyopathy

AMA (430-33212): poisoning of myocardium by ethyl alcohol.

Comment: "Alcoholic cardiomyopathy" appears to be the condition classified in AMA. In view of the uncertainty of its etiology but the beliefs of some clinicians and some research workers that it is due to the direct toxic action of alcohol, a definition needs to be formulated on the basis of a critical review of the recent literature.

Alcoholic central pontine myelinolysis

MK-1975: Localized loss of myelin attributed to prolonged heavy intake of alcohol.

Alcoholic delirium

DWA: "DELIRIA, ALCOHOLIC Forms of brain reaction to alcohol intoxication, with the common features of agitation, hallucinations and disorientation. Examples include delirium tremens, pathological reaction to alcohol, Korsakoff's psychosis, and milder forms of delirium tremens.
characterized under various names, especially in the 19th century, such as delirium a (e) potu; delirium a (e) potu suspenso; delirium (mania) gravis potorum (Krafft-Ebing, 1897); ferocitas et morositatis ebrisorum, anoesia e potu, anoesia semisomnis (Fleming, 1844); mania a potu (Maudsley, 1879; Clouston, 1898). French délires alcooliques appear similar.

Cf. délires alcooliques subaigu. German Alkoholdelir also appears similar, but sometimes precisely = delirium tremens (q.v.).

délires alcooliques /Fr/ Term occurring in French medical literature for severe mental confusion and disorientation during drinking or alcohol withdrawal. See further under delirium.

DÉLIRE ALCOOLIQUE DU TYPE AUDITIVE Papadaki's (1904) term for delirium tremens and alcoholic hallucinosis considered as a single entity. The same as the délires systématisé alcoolique of Magnan (1874).

DÉLIRE ALCOOLIQUE SUBAIGU /First named by Lasègue (1869)/ According to Ey, Bernard & Brisset (1963), a subacute form of delirium (the acute form being delirium tremens), occurring usually in persons over 40 years of age after heavy drinking, with a characteristic onset of dreamlike confusion, nightmares extending into daytime fears, and delusions resulting in domestic violence, fear of imaginary enemies, or guilt over imaginary crimes. The patient presents a clinical picture of red and swollen or pale face, profusely sweating body, coarse general tremors, quickened pulse, dehydration, ambyopia or scotoma or other eye disease, general agitation, restlessness, and preoccupation with his delusional world. Occasionally hallucinatory states occur without confusion or illusion, or limited to automatism. The delirium is expressed not only verbally but with the entire body. Thus the subject may relive scenes of working life, in which he addresses colleagues, upbraids them, encourages them, and so on. The hallucinations are visual (e.g., of creeping animals, blood, monsters), olfactory, gustatory or tactile (e.g., of creatures slithering over the body). The abnormal movements following the profound disintegration of consciousness in delirium tremens do not, however, occur. The prognosis is generally favourable, with recovery a few days after onset. Very rarely, however, the patient develops delirium tremens, or the effects of his delirium persist as transitory postillusionary fixed ideas, or as an alcoholic psychosis. The delirium is also known as the délires alcoolique simple of Magnan (1874) and the encéphalose alcoolique subaigu.

Victor & Hope (1953) describe a closely corresponding condition which they class as a mild form of delirium tremens."

Alcoholic dementia

DWA: "dementia, alcoholic Falling off in general mental capacity accompanying general deterioration or nutritional deficiencies due to alcoholism. The signs are impairment of judgment; loss of memory, particularly for recent events; shallow and unstable emotionality; disorientation for time, place and person; confusion; loss of intellectual ability; and a general decline in personal care and living habits. Cf. deterioration, alcoholic."
APA (291.5): "All varieties of chronic brain syndromes of psychotic proportion caused by alcohol and not having the characteristic features of Korsakov's psychosis are included here. (This condition and Korsakov's psychosis were both included under 'Chronic Brain Syndrome, alcohol intoxication with psychotic reaction' in DSM-I.)"

Alcoholic disability

MK-1975: Any disorder (condition, disease, illness, pathology) secondary to severe alcoholization or to the alcohol dependence syndrome (or alcoholism or alcohol addiction) which interferes with the capacity to function normally in the economic or social sphere. Examples are any of the alcoholic psychoses or alcoholic encephalopathies (qq.v.), or mental or psychic deterioration attributable to prolonged alcoholization, or any somatic disease (such as anemia or cardiomyopathy or cirrhosis or neuropathy) caused directly or indirectly by prolonged alcoholization. Also, the alcohol dependence syndrome itself.

Alcoholic encephalopathy

DWA: "encephalopathia alcoholica Name given by Bender & Schilder (1933) to a number of major alcoholic encephalopathies classified on clinical and pathological grounds. Some of the clinical signs they noted were later observed to disappear when treated with vitamins. For diseases currently placed under this head see (alcoholic) encephalopathies.

encephalopathies, alcoholic Brain disorders associated with alcoholism, such as Wernicke's disease, nicotinic-acid-deficiency encephalopathy, Marchiafava's disease. Korsakoff's psychosis and delirium tremens may also be included, as well as portal-systemic encephalopathy when it occurs in a confirmed alcoholic."

AMA (930-33212): Encephalopathy, toxic, due to ethyl alcohol.
(930-760): Encephalopathy due to vitamin deficiency.

Alcoholic epilepsy, seizures

MK-1975: Epileptiform convulsions occurring during a severe alcohol withdrawal syndrome.

Alcoholic hallucinosis

DWA: "hallucinosis, alcoholic (sometimes called acute in contradistinction to a chronic condition, q.v. below) Transitory mental state associated with alcoholism and usually seen as a postintoxication or withdrawal phenomenon, lasting several days to weeks. The outstanding symptom is of auditory hallucinations of voices discussing the patient in the third person in a threatening or reprimanding manner. Olfactory hallucinations also occur. Visual hallucinations are rare. Orientation and sensorium remain clear. While some cases eventually prove to belong to the schizophrenias, the following features in a substantial number of cases strongly suggest a distinct psychopathological entity: (1) the patient is extroverted, cheerful, sociable (i.e., not schizophrenic in personality) prior to the appearance of the syndrome; (2) the patient's age is greater than that considered typical for the onset of schizophrenia; (3) sleep is invariably disturbed, suggesting a cyclic toxicity; (4) the patient tends to agree with the voices, which may represent an exaggeration of his failings as he sees them, or his preoccupation with them; (5) the patient's insight into the hallucinatory nature of the voices may lead him to anticipate insanity and to commit suicide (unlike the outwardly directed violence of schizophrenia); (6) or, since the auditory hallucinations, which may represent vestibular disturbances, are typically of invisible people outside the patient's room, spatially placed in a manner that explains the acoustic upset in
the organism itself, the patient may test the reality of his sensations by searching for the voices, and may attempt to adapt himself to their reality.

The American Medical Association Standard Nomenclature of Diseases and Operations (1952) lists acute hallucinosis under 'Acute brain syndrome, alcohol intoxication,' together with delirium tremens. However, a few authorities, sometimes on a mistaken reading of Bleuler, take the clear sensorium to be evidence against an organic brain syndrome, and prefer to view the condition as a psychological release phenomenon determined by underlying personality factors and situational conditions.

CHRONIC ALCOHOLIC HALLUCINOSIS The possible existence of a distinct chronic entity which may develop from the above has been under discussion from the time of Magnan, Krafft-Ebing, Kraepelin, and others. The German school of psychiatry has extended the concept to a generalized hallucinatory state without specific reference to the acute form described above. Bleuler (1949 etc.) pointed out that a chronic state may sometimes develop in conjunction with schizophrenic traits, which are apparently aroused by the intake of alcohol. Benedetti (1952) distinguishes two chronic forms, one a severe chronic brain syndrome, or dementia, the other a chronic form of schizophrenic reaction, paranoid type. In substantial agreement, Victor & Hope (1958) indicate that a number of auditory hallucinoses may develop out of the initial form; in these alcohol is seen as an indirect factor, involving hallucinosis as a withdrawal phenomenon. In a few of their cases hallucinations persisted for months without development of schizophrenia. The factors responsible for the prolongation of the illness are not understood."

APA (Other alcoholic hallucinosis, 291.2): "Hallucinoses caused by alcohol which cannot be diagnosed as delirium tremens, Korsakoff's psychosis, or alcoholic deterioration fall in this category. A common variety manifests accusatory or threatening auditory hallucinations in a state of relatively clear consciousness. This condition must be distinguished from schizophrenia in combination with alcohol intoxication, which would require two diagnoses."

AMA (000-332121): Acute hallucinosis (alcoholic).

DWA: "délie hallucinatoire aigu ſFr/ Term occurring in French medical literature for delirium tremens and alcoholic hallucinosis considered as a single process. Cf. délie systématisé alcoolique.

délie systématisé alcoolique ſFr/ Magnan's (1874) term for delirium tremens and acute alcoholic hallucinosis considered as a single entity."

Alcoholic jealousy state

DWA: "jealousy, alcoholic, alcoholic jealousy state Paranoid delusions of marital infidelity, or deluded resentment that another person is showing affection for a third, sometimes accompanying the growth of the alcoholic's incapacity for marital and other personal relations. The condition is sometimes ranked as an (alcoholic) paranoid state (q.v.). Bowman (1936): 'While many paranoid ideas are often found in cases of chronic deterioration due to alcohol, there is a rather specific type of paranoid reaction. . . . Delusions of various sorts may occur, but one particular type is so common as to be almost pathognomonic. The patient, who is usually a male, develops ideas of infidelity on the part of his consort."

Alcoholic ketoacidosis

MK-1975: An absolute or relative reduction of alkali in body tissues and fluids, associated with an increased production of ketone bodies, similar to the acidosis in diabetes mellitus but reported to occur with some frequency in malnourished nondiabetic alcoholics.
Alcoholic myelopathy

AMA (970-33212): Myelopathy due to ethyl alcohol. (See also under Beriberi.)

Alcoholic myopathy

MK-1975: Pain or swelling in widely distributed muscles occurring after bouts of intoxication, often with myoglobinuria and demonstrable electromyographic and histological abnormalities.

Alcoholic paranoid state

DWA: "paranoid state, alcoholic \_\_\_\_\_ para beside, in LL used to denote a disordered condition, and noun mind\_\_\_\_\_ A schizophrenic paranoid state occurring after many years of excessive drinking; the psychosis is generally regarded as a latent one precipitated by the drinking. Haggard & Jellinek (1942): 'The paranoid states, whether alcoholic or not, are characterized by ideas of persecution. The sufferer feels that the whole world is against him, and he may see signs of this in the most harmless acts, even when committed by persons who do not know of his existence. When associated with inebriety the delusions often take the form of unreasoning jealousy, and the most fantastic reasons are offered to explain them. As with schizophrenia, the alcoholic paranoid state is a chronic psychosis from which recovery is not common.' Paranoid states or conditions now describes clinical states that occupy a position between frank paranoia and the paranoid form of schizophrenia. The disorder in alcoholism is one of these. Also called ALCOHOLIC PARANOIA."

APA (Alcohol paranoid state (Alcoholic paranoia), 291.3): "This term describes a paranoid state which develops in chronic alcoholics, generally male, and is characterized by excessive jealousy and delusions of infidelity by the spouse. Patients diagnosed under primary paranoid states or schizophrenia should not be included here even if they drink to excess."

Alcoholic polyneuropathy

DWA: "peripheral neuropathy, polyneuropathy A disease of the peripheral nervous system often seen in alcoholics, caused by a deficiency of B vitamins, particularly thiamin. The neuropathy is bilateral and symmetrical, and characteristically involves the lower extremities first and thereafter predominantly. Early symptoms include anorexia and fatigue. Calf muscle tenderness, typically revealed when the calf is squeezed, burning of the soles of the feet, and paresthesias in the toes and fingers may be the leading symptoms. Varying degrees of muscular weakness, absence of ankle jerks and later of knee jerks, and loss or impairment of sensation on a distal symmetrical distribution are leading signs. In the severest cases ankle and wrist drop with complete incapacitation occurs. Formerly called, and often still mis-called, polyneuritis and alcoholic polyniemritis, and polyneuritis potatorum \_\_\_ polyneuropathy related to alcoholism."

AMA (98..-33212): Toxic neuropathy of \_\_\_ due to ethyl alcohol (specify nerve).
(98..-76..): Neuropathy due to vitamin deficiency (specify).

Alcoholic psychoses

WHO-1974: "Includes organic psychoses due mainly to excessive consumption of alcohol; defects of nutrition are thought to play a leading role. Excludes alcoholism without psychotic
features (303); psychoses associated with alcoholic excess but not exhibiting at any stage the characteristic features of organic psychosis - these should be classified according to the syndrome exhibited, e.g., schizophrenia, paranoid type (295.3)."

ICD-9: "Includes organic psychotic states due mainly to excessive consumption of alcohol; defects of nutrition are thought to play an important role. Excludes alcohol dependence syndrome (303); psychoses associated with alcoholic excess but not exhibiting at any stage the characteristic features of organic psychotic states. They should be classified according to the syndrome they exhibit, e.g., paranoid schizophrenia (295.3)."

DWA: "Psychoses. Severe mental disorders involving extensive disorganization of the personality and a significant loss of the ability to judge the real world, with domination by wishes, fantasies and fears.

ALCOHOLIC PSYCHOSES = such mental states frequently, regularly or specifically associated with alcoholism, including delirium tremens, alcoholic hallucinosis, Korsakoff's psychosis, Wernicke's disease, and the alcoholic paranoid states; possibly including pathological reaction to alcohol.

(The) ALCOHOLIC PSYCHOSES = obs delirium tremens. Cf. the similarly obsolete alcoholomania, with the same meaning.

CHRONIC ALCOHOLIC PSYCHOSES See (alcoholic) deterioration."
DWA: "alcoholism, from NL alcoholismus, invented by Magnus Huss, 1849. A chronic and usually progressive disease, or a symptom of an underlying psychological or physical disorder, characterized by dependence on alcohol (manifested by loss of control over drinking) for relief from psychological or physical distress or for gratification from alcohol intoxication itself, and by a consumption of alcoholic beverages sufficiently great and consistent to cause physical or mental or social or economic disability. Or, a learned (or conditioned) dependence on alcohol which irresistibly activates resort to alcohol whenever a critical internal or environmental stimulus occurs. Or, (alcohol) addiction (q.v.).

Alcoholism is also characterized by a number of symptoms neither invariable nor exclusive:

The clinical picture may include alcohol intoxication, hangover, delirium tremens, adaptation to alcohol, alcoholic deterioration, coma, gastritis, hepatic disease, peripheral neuropathy, Wernicke's disease, nicotinic-acid-deficiency encephalopathy, Marchiafava's disease, Korsakoff's psychosis, convulsive disorders, alcoholic hallucinosis, blackouts. The behavioral picture may include loss of the sense of ethics, denial, projection, rationalization of drinking, grandiosity, sexual jealousy, secret drinking, morning drinking, loss of efficiency at work, guarding the supply, geographic escape, change of drinking companions, loss of job, or of residence. Guze et al. (1963): 'In order to be diagnosed as an alcoholic, a subject was required to have symptoms in at least three out of the following five groups of symptoms. Group 1: (a) tremors, delirium tremens or a history of cirrhosis; (b) impotence associated with drinking; (c) alcoholic "blackouts"; (d) alcoholic binges or benders. Group 2: (a) drinking every day; (b) drinking the equivalent, in terms of alcohol content, of over 34 ounces of whisky per week; (c) being unable to answer questions concerning the frequency or quantity of drinking, which was interpreted to mean evasiveness about the amount of alcohol consumed. Group 3: (a) the subject had not been able to stop drinking when he wanted to stop; (b) subject tried to control drinking by allowing himself to drink only under certain circumstances, such as only after 5 p.m., or only on weekends, or only with other people; (c) drinking before breakfast; (d) drinking nonbeverage forms of alcohol. Group 4: (a) arrests for drinking; (b) traffic difficulties associated with drinking; (c) trouble at work because of drinking; (d) fighting associated with drinking. Group 5: (a) subject felt he drank too much; (b) family objected to his drinking; (c) other people objected to his drinking; (d) he lost friends because of drinking; (e) he felt guilty about his drinking.'

Other definitions which serve special purposes include: (1) (Epidemiological) Excessive drinking of alcoholic beverages as a mass phenomenon causing damage to individual and public health, measurable in pattern and quantity of consumption and in effects or risk in terms of death, defect and disability; or measured by such criteria as the Jellinek Estimation Formula, the Drinking-History Questionnaire, the Preoccupation-with-Alcohol Scale, or the Quantity-Frequency-Variability Index. Here the emphasis is less on alcoholism as a clinical entity than on forms of excessive drinking. Keller (1960): 'Alcoholism is a chronic disease manifested by repeated impulsive drinking so as to cause injury to the drinker's health or to his social or economic functioning.' Clark (1966): 'Many definitions of alcoholism emphasize the evaluations of others in the drinker's milieu. This does not imply that all the others in that person's environment share the same standards, but merely that the drinker has encountered rather severe trouble on one or more occasions because of his drinking or behavior while drinking. For present purposes the following indices were combined: trouble with spouse, friends, employers or police, or any interpersonal problems due to excessive aggressiveness while drinking.' (2) (Behavioral) Drinking of alcoholic beverages so as to invoke a value judgment of deviancy from the ways of the society and so that damage to the drinker results therefrom. Keller (1958): 'Alcoholism is a chronic disease, or disorder of behavior, characterized by the repeated drinking of alcoholic beverages to an extent that exceeds customary dietary use or ordinary compliance with the social drinking customs of the community, and that interferes with the drinker's health, interpersonal relations or economic functioning.' (3) (Sociological) Excessive drinking associated with the records of the official community and involving those who have sought treatment for their drinking problems, been arrested for public drunkenness, traffic violations and vagrancy with intoxication, or the like. McCord, McCord & Gudeman (1959): 'We measure alcoholism, operationally, in terms of community records. Those men whose chronic drinking had caused sufficiently severe problems to bring them to the attention of the "official" community were defined as alcoholics—that is, those men who had been arrested two or more times for public drunkenness, or had been
committed to a mental hospital with a diagnosis of alcoholism, or had sought treatment for alcoholism through AA, mental health clinics or community committees on alcoholism, were regarded as alcoholics.\(^4\) (Legal) Habitual intemperate use of alcohol with loss of control over drinking and resulting danger to others, or to the public morals, health, safety or welfare, or to the alcoholic himself. Curran (1966): 'The loss of control refers to control over the drinking itself, not over other actions while under the influence of liquor... Other states have selected either loss of control or danger to self or others as controlling.'

Other usage: (1) (Med.) *obs A disease caused by the chronic excessive drinking of alcoholic beverages. (2) Any drinking of alcoholic beverages that causes any harm to anyone (proposed by Jellinek, 1960, as a point of departure for discussion of the utility of specific definitions but sometimes taken as a serious definition in itself). (3) In popular usage, alcoholism often = drinking, drunkenness, heavy or excessive drinking, or inebriety. (4) (Illiterate or pedantic) Alcohol intoxication or alcohol poisoning."

APA (303): "This category is for patients whose alcohol intake is great enough to damage their physical health, or their personal or social functioning, or when it has become a pre-requisite to normal functioning. If the alcoholism is due to another mental disorder, both diagnoses should be made. The following types of alcoholism are recognized:

- (303.0): Episodic excessive drinking...
- (303.1): Habitual excessive drinking...
- (303.2): Alcohol addiction...
- (303.9): Other and unspecified alcoholism..."

AMA (000-x641): Alcohol addiction chronic. (AMA Index: Alcoholism.)

MK-1975: A conditioned dysbehaviourism, the same as alcohol addiction or the alcohol dependence syndrome (q.v.), manifested by repetitive ingestion of alcohol-containing beverage to a degree that harms the ingester. The observed alcoholismic (or alcohol-addictive) behaviour must be such as to allow a diagnostic inference that the person is at least occasionally disabled from choosing whether or not to drink, and, if he drinks, is usually or occasionally disabled from choosing when to stop, i.e., loss or impairment of control over drinking (q.v.).

Comment: In view of the loss of precision in usage of the term alcoholism, and its confusion with "problem drinking" and other behaviours not definable as addictive or dependent, the term alcohol dependence syndrome is to be preferred in diagnostic usage and to describe a disease.

Alcoholism syndrome (see Core alcoholism syndrome)

Alcoholization (see also Alcoolisation)

DWA: "alcoholization Saturation with alcohol. Or, subjection of organisms to the influence of alcohol. Cf. alcoolisation."

Alcoolisation

DWA: "alcoolisation Fr\(\) Alcoholization; the drinking of large amounts of alcoholic beverages daily or very frequently, viewed either as a subclinical or as a pathological process. Or, the condition arrived at by such a process. The idea of alcoolisation, which obtains in France and other wine-drinking countries, does not imply an abnormal cause in the individual but rather cultural or economic causes arising from the nature of the society, and excludes..."
'alcoholic complications.' Cf. the following conditions which, though similar, are regarded as pathological phenomena: inveterate drinking, Jellinek's (delta) alcoholism, Marconi's (continuous) alcoholism, the (chronic sober) alcoholism of Wingfield (1919). Sauvy (1956): 'The researches of Sully Ledermann, which take unexplained excessive male mortality as their point of departure, have led to the uncovering of the phenomenon of alcoholisation, which appears in the individual between the ingestion of alcohol and the much later occurring symptoms of alcoholism.' Ledermann (1964): 'We must distinguish physical deterioration or modifications of behavior due to alcoholisation chronique and transitory troubles due to the occasional presence of alcohol in the blood . . . Let us suppose that these chronically "alcoholized" (alcoolisés) people put themselves, or find themselves placed by circumstance, in a situation rather different from that of other, nonchronic, subjects. This difference is going to appear in an average exposure to accidents that is different from that of the non-chronic subjects at the same blood alcohol concentration.'

Amnestic psychosis, Amnestic-confabulatory psychosis, see Korsakoff's psychosis.

Beriberi

DWA: "beriberi; also Oriental beriberi, Asiatic beriberi (from its high incidence where polished rice is the commonest food staple) A condition characterized by varying degrees of polyneuropathy, which may occur alone or in combination with edema, serous effusions, enlarged heart and circulatory failure. It is due mainly to vitamin B_1 (thiamin) deficiency and is associated with a prolonged diet of calories derived from refined carbohydrate, such as polished rice, or alcohol. The clinical types are:

1. DRY BERIBERI, also PARAPLEGIC BERIBERI = polyneuropathy; the signs are practically limited to the nervous system.

2. WET BERIBERI = EDEMATOUS BERIBERI, in which the polyneuropathy, whether insignificant, mild or severe, is associated with edema and serous effusions in the pericardial, pleural and peritoneal cavities. Cf. beriberi heart below.

3. BERIBERI HEART, CARDIAC BERIBERI = in which the polyneuropathy is associated with circulatory disturbances, including congestive heart failure (generally bilateral) often with heart enlargement, edema and serous effusions, dilated cervical veins, increased or normal velocity of the blood flow in the presence of congestive heart failure, and a palpable liver, dyspnea, orthopnea, pulmonary congestion, precordial pain, and rapid, bounding pulse with 'pistol shot' sounds. The condition is dependent on vitamin B_1 (thiamin) deficiency, and responds to specific therapy with complete reversibility of the circulatory manifestations.

4. The mixed type, a combination of polyneuropathy, edema, and congestive heart failure.

ALCOHOLIC BERIBERI = formerly applied to beriberi occurring in alcoholics. Now expressed as alcoholism with beriberi.

CEREBRAL BERIBERI = a condition noted by De Wardener & Lennox (1947) in Japanese prisoner-of-war camps during World War II, where the diet consisted of little more than polished rice. The symptoms were anorexia, vomiting, nystagmus, loss of interest in the surroundings, classic semicoma of beriberi, and severe oculomotor palsy. It is the same as Wernicke's disease, encephalopathy."

AMA (010-7621): Beriberi. (The code signifies due to vitamin B_1 deficiency.)
(410-7621): Beriberi heart.
(970-7621): Myelopathy due to beriberi.
Cirrhosis of the liver

DWA: "cirrhosis of the liver /kər'hoʊs tɔm'nɔ/ Hepatic disease of uncertain cause, characterized by scarring of the liver or fibrosis, necrosis and regeneration. It gives rise to distortion of hepatic architecture which interferes with liver function and with circulation of the blood and flow of bile.

ALCOHOLIC CIRRHOSIS See Laennec's cirrhosis, below.

LAÈNNEC'S CIRRHOSIS /əˈhɔːr ˈleːnɛk, ˌlɛnɛk/ Atrophic diffuse nodular cirrhosis, or hobnail cirrhosis, the form often called alcoholic liver cirrhosis, frequently associated with fatty infiltration; a form of cirrhosis associated with nutritional deficiency, or with alcohol or other hepatotoxins. Disorganization of liver structure and development of fibrosis lead to constriction of the portal and hepatic blood vessels, which in turn lead to further disturbance of liver function. The disease is often associated with ascites, encephalopathy, jaundice, edema, hemorrhage from the esophagus, and spider angiomas.

PORTAL CIRRHOSIS OF THE LIVER = referred particularly to the porta hepatitis or entrance to the liver."

AMA (680-956): Laennec's cirrhosis. (The code signifies due to unknown or uncertain cause with the structural reaction manifest.)

Core alcoholism syndrome

MK-1975: According to Gross,¹ a change in the central nervous system, induced after heavy intake of alcohol-containing beverage, marked by alcohol withdrawal symptoms and by electroencephalographic phenomena, and thought to indicate increased alcohol tolerance and physical dependence upon alcohol, with consequent latent craving for alcohol which may be activated by renewed alcohol intake or by other internal or environmental cues. (Cf. alcohol addiction and alcohol dependence syndrome.)

Delirium tremens

ICD-9: "Includes acute and subacute organic psychotic states in alcoholics, characterized by clouded consciousness, disorientation, fear, illusions, delusions, hallucinations of any kind, notably visual and tactile, and restlessness, tremor and sometimes fever. Inclusion term: Alcoholic delirium."

WHO-1974: "Includes acute psychosis in alcoholics that is characterized by clouded consciousness, disorientation, fear, hallucinations of any kind (notably visual and tactile), restlessness, tremor, and sometimes fever. Inclusion terms: Alcohol withdrawal syndrome; Alcoholic delirium (acute)."

DWA: "delirium tremens /ˈdeɪlɪrɪəm ˈtreməns/ trembling; the entity first named in 1813 by Dr Thomas Sutton, 1767-1835, who acknowledged a description of the condition by Dr William Saunders of Guy's Hospital/ An acute mental and physical disorder occurring in alcoholics while drinking or as an alcohol-withdrawal syndrome. The onset is marked by tremulousness, nausea, vomiting, weakness, hallucinations, or collapse due to malnutrition from a prolonged diet of liquor. The preliminary clinical picture includes flushed face, mild tachycardia, anorexia, nausea and retching, insomnia, agitation, disorientation, and preoccupation. As the delirium develops, the commonest incidence being 72 to 96 hours after the last drink, the tremor becomes predominant, involving a coarse shaking of the whole body, acutely affecting fingers, face and tongue. Other outstanding features include wakefulness for the duration of the episode; heavy sweating, restlessness, hyperreflexia, agitation, and hallucinations, chiefly visual, but

¹ See the chapter by Milton M. Gross in this publication.
sometimes also auditory, olfactory or tactile, all frequently of a terrifying nature. In most cases the delirium tremens ends abruptly after two or three days, when the patient falls into a deep restful sleep, but in some cases it persists in an intermittent manner for several weeks. Complications are frequent; they include convulsions (preceding the delirium in almost all cases), pneumonia, fever, hepatitis, fractures, and infections. Fatal outcome has been reported in as many as 15% of fully-developed cases, but the diagnostic criteria in various reported series are not strictly comparable and the rate of fatalities is usually reduced by intensive treatment."

Délire hallucinatoire aigu, see under Alcoholic hallucinosis.
Délire systématisé alcoolique, see under Alcoholic hallucinosis.

APA (291.0): "This is a variety of acute brain syndrome characterized by delirium, coarse tremors, and frightening visual hallucinations usually becoming more intense in the dark. Because it was first identified in alcoholics and until recently was thought always to be due to alcohol ingestion, the term is restricted to the syndrome associated with alcohol. It is distinguished from other alcoholic hallucinosis by the tremors and the disordered sensorium. When this clinical picture is due to a nutritional deficiency rather than to alcohol poisoning, it is classified under Psychosis associated with metabolic or nutritional disorder."

AMA (000-322122): Delirium tremens.

Comment: Since the question whether delirium tremens is due to "nutritional deficiency" or "alcohol poisoning" is unresolved in present clinical practice, and opinion may vary among diagnosticians in the same institution as well as in different ones, the concluding classificatory advice of APA can only result in a scattering of diagnoses of the same condition with resulting faulty statistics, i.e., where diagnosticians believe the cause to be nutritional deficiency the cases will not be found as delirium tremens.

Deviant drinking

DWA: "deviant drinking (Sociology) Consumption of alcoholic beverages in a manner that represents a departure from accepted social norms, or so as to be questioned by the community generally. agent n DEVIENT DRINKER."

Dipsomania

AMA: (-076, supplementary term)

DWA: "dipsomania /Gk dipsa thirst + mania/ obs In the 19th century, alcoholism. Specifically, periodic alcoholism, with bouts precipitated by apparently spontaneous craving, believed to originate in neurological or biochemical changes (though these have never been satisfactorily established), or in psychological tensions. Wingfield (1919): 'True Dipsomania. - There are several varieties of this comparatively uncommon form. The characteristic of them all is that craving occurs spontaneously, and does not require alcohol to excite it. These patients drink in bouts much like the pseudo-dipsomaniacs.'

Other usage: obs delirium tremens.

agent n DIPSMANIAC In the classification of Bowman & Jellinek (1941), tentatively included as an alcoholic type of the symptomatic sort, and in Jellinek's (1960) classification, as an epsilon alcoholic.

Other usage: (popularly) a drunkard.

PSEUDODIPSOMANIA Name given by Wingfield to a type of alcoholism in which craving is absent until alcohol is ingested, whereon the patient drinks to great excess. Wingfield (1919): 'Pseudodipsomania. - In this (which I believe represents the primitive type) craving is absent
unless alcohol be first taken. If alcohol in sufficient amount be taken, irresistible craving is invariably excited; and the patient drinks in great excess, until, owing to physical disability (usually due to gastric catarrh) he can take no more. The attacks usually last for a week more or less.' Both manic-depressive and schizoid excessive drinkers, as well as epileptics who drink to excess from time to time as a result of the dysphoria associated with the epileptoid personality, have been said to suffer from pseudodipsomania by those who postulate an organic basis for 'true' dipsomania. Bowman & Jellinek (1941): 'Due to the periodicity of drinking, manic-depressive drinkers have been frequently referred to as dipsomaniacs but those who postulate an organic dipsomania usually refer to the manic-depressive periodic drinkers as pseudodipsomaniacs.' Both dipsomania and pseudodipsomania are now considered obsolete.'

Drunkenness

DWA: "drunkenness, The state of being drunk; the habit of being drunken; intoxication. (USA) State statutes employ diverse legal criteria, such as Blackstone (1765-1769): 'Drunkenness is an artifical, voluntarily contracted madness, which, depriving men of their reason, puts them in a temporary phrensy.' Lefler v. Fischer (1964): 'When it is apparent that a person is under the influence of liquor, or when his manner is unusual or abnormal and his inebriate condition is reflected in his walk or conversation, when his ordinary judgment and common sense are disturbed, or his usual will power is temporarily suspended, when these symptoms result from the use of liquor, and are manifest, then, within the meaning of the statute, the person is intoxicated, and anyone who makes a sale of liquor to such a person violates the law of the state. It is not necessary that the person would be called "dead drunk" or hopelessly intoxicated; it is enough that his senses are obviously destroyed or distracted by the use of intoxicating liquor.' See also intoxication.

HABITUAL DRUNKENNESS = (Law) defined in various ways according to local statute, usually in general terms, e.g. NORTH-WESTERN MUTUAL LIFE INSURANCE Co. v. MUSKEGON NATIONAL BANK (1964): 'Neither does a single or an occasional excess make an habitual drunkard; but, if the habit and rule of a man's life is to indulge periodically, and with increasing frequency and violence, in excessive fits of intemperance, such a use of liquor may properly cause the finding of habitual drunkenness.' Generally = the condition of being an alcoholic, and regarded as suffering from a disease needing treatment. But in the case of public officers or professional workers such as physicians, dentists, prison officials or nurses, habitual drunkenness may lead to revocation of licence. By English law, an habitual drunkard is a person who, not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor, or the habitual taking or using, except upon medical advice, of opium or other dangerous drugs within the meaning of the Dangerous Drugs Acts, 1920-23, at times dangerous to himself or herself, and his or her affairs. Cf. driving while intoxicated.

CHRONIC DRUNKENNESS OFFENDER; as also CHRONIC INEBRIATE OFFENDER; CHRONIC POLICE-CASE INEBRIATE One arrested repeatedly for drunkenness, or for associated offenses (such as vagrancy) which the authorities believe are caused by drunkenness. Pittman & Gordon (1958): 'Some of the chronic inebriate offenders are confirmed alcoholics; others are miscreants whose present use of alcohol is preliminary to confirmed alcoholism; and others are nonaddicted excessive drinkers who will never become alcoholics, , , a group of excessive drinkers who may or may not be alcoholics, but whose drinking has involved them in difficulty with constituted sources of authority - the police, the courts, and the penal institutions.'

PUBLIC DRUNKENNESS, PUBLIC INTOXICATION (Law) According to statutory law in most states of the USA = a criminal offense generally linked with either disorderly conduct or negligence; e.g., 'boisterous or indecent conduct, or loud or profane discourse in any public place or near any private residence not [the defendant's/own]' while intoxicated. Some statutes do not specify appearance in public, but they are usually construed to require it. Some 15 states also penalize drunkenness in employees in charge of trains, various public officers on duty, physicians when acting professionally, etc. Recent court decisions (Driver v. Hinnant, 356 F. 2d 761, 1966; Dewitt Easter v. District of Columbia, 209 A. 2d 625, 1966) have
declared that 'chronic alcoholism is a defense to a charge of public intoxication' (Easter, supra), and that 'the State cannot stamp an unperturbing chronic alcoholic as a criminal if his drunken public display is involuntary as a result of disease' (Driver, supra).

According to English law, under section 12 of the Licensing Act, 1872, every person found drunk in any highway or other public place, whether a building or not, or on any licensed premises, commits an offence. (A public place includes any to which the public has access, whether on payment or otherwise.) It is also an offence for a person to be drunk while in charge, on any highway or other public place, of any carriage, horse, cattle, or steam engine, or to be drunk in possession of any loaded firearms. Being drunk in a street, and guilty of riotous or indecent behaviour there, being drunk and persisting in attempting to enter a passenger steamer, or being drunk on board and refusing to leave when requested, and being found drunk in any highway or other public place, whether a building or not, or on any licensed premises, while having the charge of a child apparently under the age of 7 years, are also offences."

Drunking

MK-1975: Ingesting large amounts of alcohol-containing beverage, with resulting intoxication, or for the purpose of achieving intoxication; in contrast to drinking (i.e., drinking ceremonially or for pleasure or for sociability or for nutrition without intent to become drunk).

Dyssocial drinking

MK-1975: Drinking on frequent occasions (at least more than two times a year) the equivalent of about 70 ml of absolute alcohol or more, with resulting legal troubles or interference in family or social relations or economic functioning. Such drinking is implicative of alcohol dependence or implies at least a risk of progression to alcohol addiction (the alcohol dependence syndrome). [The quantity and frequency of drinking are tentative.]

Dyssociosomatopathic drinking

MK-1975: The combination of dyssocial and somatopathic drinking (qq.v.), presumed to be strongly suggestive of alcohol addiction or at least of the stage of prealcoholism.

Escape drinking

MK-1975: Drinking motivated essentially by desire or need for relief from discomfort, tension or anxiety.

Ethylism

DWA: "ethylism rare Alcoholism. French = ÉTHYLISME, sometimes referring to addiction to distilled spirits as distinguished from addiction to wine. n from adj French ÉTHYLISTE or ÉTHYLIQUE; Italian ETILISTE; Spanish ETILISTA."
Excessive drinker

DWA: "excessive drinker One whose drinking is (1) excessive in amount: (a) in terms of daily calorie value of the alcohol intake; according to Marconi (1959), excess would occur if one received over 20% of his daily calories from alcohol; or (b) in terms of temporary effect, i.e., involving intoxication; or (2) excessive in time distribution: (a) short-term, bringing about intoxication; or (b) long-term, over extended periods of time, bringing about illness resulting from intoxication or repeated drinking bouts, or from continuous drinking though never or seldom manifesting overt intoxication; or (3) excessive in effects: (a) compared with effects on the social drinker (q.v.), resulting in intoxication; or (b) compared with the standpoint of another community with different drinking habits; or (c) from the standpoint of the drinker's own community; or (d) from the standpoint of health, when the drinking involves frequent large amounts sufficient to cause disease, even if it does not manifest intoxication; or (e) involving a breakdown in the drinker's social or family life, or his work, or his finances; or (4) excessive in etiological factors, cultural, physical or psychological, involving dependence on alcohol (q.v.). See further under alcoholisation.

The term is inherently subjective, overlapping such expressions as inebriate or alcoholic, and when used in formal descriptions the amounts, time, effects or other determining factors are arbitrary and require specification. Cf. moderate drinker.

Other usage: an inebriate, or an alcoholic, or anyone who drinks more than the speaker."

APA: See under Excessive drinking, episodic (303.0), and Excessive drinking, habitual (303.1).

Excessive drinking, episodic

APA (303.0): "If alcoholism is present and the individual becomes intoxicated as frequently as four times a year, the condition should be classified here. Intoxication is defined as a state in which the individual's coordination or speech is definitely impaired or his behavior is clearly altered."

Comment: "If alcoholism is present" - the criterion of becoming intoxicated "as frequently as four times a year" does not seem particularly useful. Is three bouts a year too few? The intention seems to be to name the condition traditionally called periodic alcoholism (q.v.). One would wish APA had made its definition of intoxication the basis for a separate diagnostic category; surely alcohol intoxication is a mental disorder, even without "psychosis" and even if it vanishes with the decline of brain alcohol concentration.

Excessive drinking, habitual

APA (303.1): "This diagnosis is given to persons who are alcoholic and who either become intoxicated more than 12 times a year or are recognizably under the influence of alcohol more than once a week, even though not intoxicated."

Comment: The "more than 12 times a year" criterion seems arbitrary and almost irrational. (Are 12 times not enough because there are 13 moons in the year?) There is no definition of "under the influence of alcohol," thus leaving this diagnosis to inevitably vague and inconsistent application. The time element, "more than once a week," is also arbitrary. As in the case of Excessive drinking, episodic, this diagnosis seems superfluous, since "persons who are alcoholic" are persons in whom "alcoholism is present." Apparently the intention of Excessive drinking, episodic, and Excessive drinking, habitual, was to distinguish two types of alcoholic behavior. If there is diagnostic utility in this distinction it would be better
made by diagnosing Alcoholism, episodic type and Alcoholism, habitual type. There would remain the inconsistency, in Excessive drinking, episodic, of intoxication "as frequently as four times a year" - which does not exclude the "more than 12 times a year" of Excessive drinking, habitual. But these arbitrary frequencies require modification anyhow.

Patty liver

DWA: "fatty liver, fatty infiltration of the liver Condition of the liver occurring often in alcoholics (but also in diabetics and others), in which there is an abnormal intracellular accumulation of lipid, so that the organ becomes engorged with fat and the functions of the liver become impaired. Necrosis of liver cells and cirrhosis may develop."

AMA (680-33212): Fatty liver due to alcohol poisoning.

Gayet-Wernicke's disease, or encephalopathy, or syndrome

DWA: "Gayet-Wernicke's disease, encephalopathy, syndrome Name often given in France, Latin America and elsewhere to Wernicke's disease (q.v.) in honour of Frudent Gayet, French 19th-century physician, for his studies of the syndrome."

Hangover

DWA: "hangover from an older sense, meaning 'remainder' or 'survival'. As hangover is still treated as slang in most dictionaries, formal writers frequently prefer postintoxication state, though that includes other states. A postintoxication state showing the immediate after effects of drinking alcoholic beverages in excess. Physiological signs include fatigue, which intoxication and such factors as congenial company and pleasant conditions may have obscured, and which may contribute to hangover as much as intoxication; headache, thirst, vertigo, gastric disorder, nausea, vomiting, insomnia, fine tremors of the hands, liver function impairment, and raised or lowered blood pressure. Psychological symptoms, which are closely allied, include acute anxiety, guilt or remorse, depression, and extreme sensitivity. The excess needed to produce hangover varies (1) with the mental and physical condition of the individual, although generally the greater the blood alcohol concentration during the period of intoxication, the more acute the subsequent symptoms; (2) with social attitude. Observers of some primitive societies remark on an apparent absence of hangover after ritual or fiesta drinking with several days' communal intoxication. Contrarily, the hangover of alcoholics, sometimes an object of such dread that they will continue a drinking bout as long as possible, may be linked with desire to avoid social reckoning in a sober world. For these reasons, the full-blown hangover may be difficult to reproduce in laboratory conditions, where (a) fatigue is avoidable and (b) social criticism is lacking. Hangover usually lasts not more than 36 hours after all traces of alcohol have left the organism."

Heavy drinking

MK-1975: According to Cahalan et al. (1969), drinking very frequently (nearly every day) and consuming five or more drinks on an occasion at least once in a while, or drinking regularly (about once a week) and usually consuming five or more drinks on each occasion.
Heavy escape drinking

MK-1975: Drinking which combines the motivations of escape drinking (q.v.) with the quantities and frequencies describing heavy drinking (q.v.).

Hepatic disease

DWA: "hepatic disease Disorder of the liver. The connexion between excessive drinking and liver disorder is generally established as follows. Alcohol intoxication of a severe kind usually produces an enlarged inflamed liver (hepatitis), which subsides rapidly in sobriety. Frequent excessive drinking, however, may underlie the genesis of chronic fatty infiltration of the liver, which in turn seems associated with the development of Laënnec's cirrhosis."

Hepatitis

DWA: "hepatitis [Gk hepar, hepat- liver] Inflammation and enlargement of the liver, usually from a viral infection, sometimes from toxic agents. Hepatitis is generally present during or after severe alcohol intoxication, due to the disturbance of chemical and hormonal states of the body essential to the normal handling of fat by the liver, but the swelling and inflammation subside rapidly in sobriety unless repeated intoxication induces renewed impairment of liver function. Frequent repetition may underlie the genesis of chronic fatty infiltration of the liver in alcoholism. Hepatitis may have a special significance in the prodromal stage of delirium tremens when, perhaps associated with gastritis, it leads the patient to experience a disgust for alcohol and to stop or reduce drinking for several days.

CHRONIC CIRRHOSOUS HEPATITIS = incipient cirrhosis of the liver.

CHRONIC INTERSTITIAL HEPATITIS = cirrhosis of the liver."

AMA (680-3..): Diffuse degeneration of liver (hepatitis) due to poison. (Specify poison.)

Hence: (680-33212): Diffuse degeneration of liver (hepatitis) due to ethyl alcohol.

Comment: It is not clear, in AMA, how hepatitis, which implies an inflammatory process, can be a degenerative process (indicated by the code 680), although since the etiology is attributed to ethyl alcohol a degenerative process would be expected. Possibly the AMA nosologists did not believe it should be called hepatitis but, rather, hepatothropy.

Implicative drinking

MK-1975: Repetitive intake of alcohol-containing beverage in amounts or in ways that evoke the suspicion that "there is something wrong with it" and give rise to an inference that the person may be addicted to alcohol. The confirmation of addiction requires evidence of harm to the drinker, from his drinking, in his physical or mental health, or in his social or economic functioning (Keller, 1960). Or, any intake of alcohol-containing beverage which may be characterized as dyssocial, thymogenic or somatopathic drinking (q.v.).
Intoxication (see also Alcohol intoxication)

APA: "Intoxication is defined as a state in which the individual's coordination or speech is definitely impaired or his behavior is clearly altered" (p. 49, under Episodic excessive drinking).

Jolliffe's encephalopathy, see Nicotinic-acid-deficiency encephalopathy.

Korsakoff's/Korsakov's psychosis

ICD-9: Korsakoff's psychosis, alcoholic, 291.17. "Includes a syndrome of prominent and lasting reduction of memory span, including striking loss of recent memory, disordered time appreciation and confabulation, occurring in alcoholics as the sequel to an acute alcoholic psychosis, especially delirium tremens, or, more rarely, in the course of chronic alcoholism. It is usually accompanied by peripheral neuritis and may be associated with Wernicke's encephalopathy. Excludes: Korsakoff's psychosis or syndrome (non-alcoholic) (294.00)."

ICD-8: Korsakoff's psychosis (alcoholic), 291.17. "Includes a syndrome of prominent and lasting reduction of memory span, including striking loss of recent memory, disordered time appreciation, and confabulation; occurring in alcoholics (but seen in other conditions also) as the sequel to an acute alcoholic psychosis (especially delirium tremens) or, more rarely, in the course of chronic alcoholism. It is usually accompanied by peripheral neuritis and may be associated with Wernicke's encephalopathy. Excludes non-alcoholic Korsakoff's psychosis (293.9). Inclusion term: Alcoholic polyneuritic psychosis."

DWA: "Korsakoff's psychosis (term suggested by Bonhoeffer); amnestic psychosis; amnestic-confabulatory psychosis. A mental disorder first described by S. S. Korsakoff (in 1887) under the name of 'psychosis polyneuritica' and later (in 1889) as 'cerebropathia psychica toxaemica.' The onset is either sudden in delirious form or insidious in stuporous form. It is frequently but not exclusively associated with alcoholism; and the frequent occurrence of polyneuropathy in the alcoholic variety has led to a hypothesis of a nutritional-metabolic etiology, especially deficiency of B vitamins (particularly thiamine). The outstanding mental symptom is a defect in retentive memory function, involving both anterograde amnesia and impairment of remote memory, with a marked tendency for compensatory confabulation. Other cognitive and perceptual functions depending little or not at all on memory are impaired to a relatively minor degree. Patients tend to lack spontaneity and initiative. On the other hand their social behavior is unaffected; they are responsive; and they can form proper deductions from given premises and solve problems that do not tax the forward memory span. The confabulation is usually present in the acute phase but not in the chronic. The state often emerges as a sequel to delirium tremens or Wernicke's disease. The condition may improve after several weeks or months, but frequently some degree of permanent impairment of memory remains."

APA: Korsakoff's psychosis (alcoholic) Also "Korsakoff" (291.17). "This is a variety of chronic brain syndrome associated with long-standing alcohol use and characterized by memory impairment, disorientation, peripheral neuropathy and particularly by confabulation. Like delirium tremens, Korsakoff's psychosis is identified with alcohol because of an initial error in identifying its cause, and therefore the term is confined to the syndrome associated with alcohol. The similar syndrome due to nutritional deficiency unassociated with alcohol is classified Psychosis associated with metabolic or nutritional disorder."

Comment: ICD-9, ICD-8 and APA all include confabulation as an identifying symptom of Korsakoff's psychosis. DWA seems less certain of its invariable occurrence. The problem was discussed recently in Keller & Efron (1974) who noted that while many American psychiatrists diagnosed Korsakoff's psychosis without ascertaining the presence of confabulation, Russian psychiatrists apparently regard it as essential. In unpublished correspondence, L. Sattler
(Berlin, 1974) calls attention to the fact that S. S. Korsakoff himself did not consider the presence of confabulation as essential. Keller & Efron, on the basis of an examination of Korsakoff's Russian and German papers, will agree with Sattler and suggest a distinction between Amnestic psychosis and Amnestic-confabulatory psychosis.

Korsakoff's syndrome

DWA: "KORSAKOFF'S SYNDROME The same as Korsakoff's psychosis. Or, the same condition secondary to other conditions than alcoholism, such as metallic poisoning, any of the encephalopathies, or toxemia of pregnancy."

Loss of control over drinking

DWA: "Loss of control over drinking Loss of ability consistently to choose (1) to refrain from drinking or (2) to stop if drinking is begun. The two forms of the phenomenon have often been thought of as distinct symptoms: (1) Inability to refrain from drinking; manifested in abstinent alcoholics. It is a characteristic of Marconi's (1959) intermittent alcoholism. (2) Inability to stop drinking once it is begun; inducible also by the onset of withdrawal symptoms on termination of drinking, as the blood alcohol level declines. The latter has sometimes erroneously been considered the only form. It is the characteristic of Jellinek's (1946) 'loss of control in the drinking situation'; of the 'Inability to stop' of the WHO Expert Committee (1953); of inveterate drinking; and of Marconi's (1959) continuous alcoholism.

Loss of control over drinking is considered the unmistakable sign of true alcoholism."

MK-1975: The disablement from consistently determining whether to drink alcohol-containing beverages and, if drinking is attempted, the disablement from consistently determining when to stop, presumed to be due to alcohol addiction or the alcohol dependence syndrome (q.q.v.) and considered - when inferable from an individual's repetitive behaviour - the prime or pathognomonic sign of the addiction or syndrome.

Marchiafava's disease, Marchiafava-Bignami's disease

DWA: "Marchiafava's disease, Marchiafava-Bignami's disease; or degeneration of the corpus callosum A rare mental disorder of alcoholics, first described by the Italian pathologists Marchiafava and Bignami in 1897, and characterized chiefly by degeneration of the middle layer of the corpus callosum and by symmetrical foci of demyelination in the anterior commissure and cerebral white matter. The clinical picture is extremely varied and includes virtually all the abnormalities attributable to deranged cerebral function. The most prominent signs are those of bilateral frontal lobe deficit - motor and mental slowness, grasping and sucking reflexes, incontinence, and ataxia. There may be disturbances of speech. The diagnosis, however, is usually made only post mortem. Although the greatest incidence has been reported in Italian males who drink wine, the disease has been reported from all over the world and in nonalcoholics. Its basis is probably nutritional."

Comment: For unknown reasons, this condition, well attested in the literature, does not appear in AMA or APA; it is listed in ICD-8 (referred to code 341). It can be precisely recorded under the AMA system as either 943-33212.9 (if believed due to alcohol) or 943-760.9 (if believed due to vitamin deficiency), or 943-911-075 (degeneration of corpus callosum due to unknown or uncertain cause, with use of alcohol), etc., as indicated by Keller (1942).
Nicotinic-acid-deficiency encephalopathy

DWA: "nicotinic-acid-deficiency encephalopathy, niacin-deficiency encephalopathy, Jolliffe's encephalopathy. A mental disorder characterized by clouding of consciousness, cog-wheel rigidities of the extremities, and uncontrollable sucking and grasping reflexes. The condition represents an acute complete deficiency of nicotinic acid, identified in alcoholic patients by Norman Jolliffe (1936)."

Pathological alcohol reaction

ICD-8: "Other and unspecified alcoholic psychoses (291.9). Pathological drunkenness, when specified as psychotic."

ICD-9: (Pathological drunkenness, 291.4). "Includes acute psychotic episodes induced by relatively small amounts of alcohol. These are regarded as individual idiosyncratic reactions to alcohol, not due to excessive consumption and without neurological signs of intoxication. Excludes simple drunkenness (305.0)."

APA: (Pathological intoxication, 291.6). "This is an acute brain syndrome manifested by psychosis after minimal alcohol intake. (In DSM-I this diagnosis fell under 'Acute Brain Syndrome, alcohol intoxication'.)"

DWA: "pathological reaction to alcohol, pathological intoxication. An extraordinarily severe response to alcohol, especially to small amounts, marked by apparently senseless violent behavior, usually followed by exhaustion, sleep and amnesia for the episode. Intoxication is apparently not always involved, and for this reason pathological reaction to alcohol is the preferred term. The reaction is thought to be associated with exhaustion, great strain, or hypoglycemia, and to occur especially in people poorly defended against their own violent impulses. The phenomenon is sometimes classed among the alcoholic psychoses."

Comment: The ICD-9 and DWA definitions both seem to hit the mark, but the DWA term Pathological reaction to alcohol seems preferable to ICD-9 "Pathological drunkenness" and APA "Pathological intoxication." DWA's term may be further modified, as suggested by the heading here, to Pathological alcohol reaction.

Pathological drinker

DWA: "pathological drinker. One whose use of alcohol appears to be a disease. Or, one whose use of alcohol appears related to the presence of some disease other than alcoholism. The term applies to effect (behavior) rather than essence (physiology or psychology). Cf. dependence on alcohol. Strauss & McCarthy (1951): 'The pathological drinker can be defined operationally as a person whose use of alcoholic beverages interferes repeatedly with his health and personal relations and materially reduces his efficiency and dependability at work and in other activities. Associated with the condition is a state of discomfort the origin of which may be physiological, psychological or social, or a blending of all three. Alcohol is resorted to for the relief of this discomfort.' action n PATHOLOGICAL DRINKING.

See also nonaddictive pathological drinker."

MK-1975: A dysocial or somatopathic or thymogenic drinker (qq.v.). Cf. Problem drinker.
Pathological drinking

DWA: "The action of pathological drinker, q.v."

MK-1975: Any form of intake of alcohol-containing beverage described under dyssocial, somatopathic or thymogenic drinking.

Periodic alcoholism

DWA: "PERIODIC ALCOHOLISM Alcoholism in which bouts of gross drinking alternate with long periods of abstinence or moderation. Also called dipsomania, both in the older literature and occasionally still in Europe and Latin America, though this term has also been applied to remittent alcoholism, where a dependence on alcohol is also said to be involved, with an accompanying psychiatric disturbance. Jellinek proposes the further term epsilon alcoholism for the same drinking pattern, without discussing dependence. Cf. pseudoperiodic alcoholism, below. A connection with epilepsy (cerebral dysrhythmia) has long been suspected. Agent n PERIODIC ALCOHOLIC, sometimes misnamed 'periodic drinker.'"

Polioencephalopathy, superior, haemorrhagic, see Wernicke's disease

Portal-systemic encephalopathy

DWA: "encephalopathy, portal-systemic A brain disease, which may include coma (hepatic coma) associated with cirrhosis of the liver, and attributed to the passage of toxic nitrogenous substances from the portal to the systemic circulation owing to liver malfunction."

Postintoxication state

DWA: "postintoxication state Any pathological condition following a drinking bout, when all or nearly all traces of alcohol have left the organism, ranging from states of anxiety and fatigue to hangover and to syndromes more definitely identified with alcohol withdrawal, such as psychomotor agitation, delirium tremens, alcoholic hallucinosis, the acute stage of Korsakoff's psychosis, and other disorders, chiefly of the nervous system. Acute alcoholic state differs by including alcohol intoxication. Since intoxication and postintoxication represent a continuum, the terms are frequently not distinguished."

Prealcoholic n

MK-1975: One whose intake of alcohol-containing beverage matches that described under dyssocial, somatopathic or thymogenic drinking (q.v.) but who is not thought to have entered the stage of alcohol addiction or the alcohol dependence syndrome. The same as pathological drinker (MK-1975). adj Prealcoholicism.

Prealcoholism

MK-1975: That stage of implicative drinking (q.v.), dyssocial, somatopathic or thymogenic (q.v.), in which the consequences are not severe enough to allow a confident inference of loss or impairment of control over drinking but which allows an inference that continuation of the pattern is likely to induce alcohol addiction or the alcohol dependence syndrome.
Prealcoholismic adj see under Prealcoholic, Prealcoholism

Problem drinker

DWA: "problem drinker  An excessive drinker whose drinking causes private or public harm and who is seen to cause problems for himself or for others. The category includes the alcoholic. Often, a euphemism for alcoholic, used especially in business and industrial programmes, or to avoid the implication of a diagnosis. Kepner (1964): 'Eventually he may use alcohol to avoid every problem, large and small, and then he is a problem drinker or alcoholic.' Or, (Behavioral) one who scores high on a scale of items intended to elicit admission of behavior suggesting alcoholism, incipient or actual, such as P. Park's college-student problem-drinker scale. action n PROBLEM DRINKING.

Other usage: Any drinker whose drinking is perceived by anyone as causing any harm to anybody."

MK-1975: A dysthymic or somatoplastic or thymogenic drinker (qq.v.), suggesting a prealcoholismic pattern of alcohol intake. Not distinguishable from Pathological drinker.

Comment: The term problem drinker (problem drinking), even more than alcoholism, has lost all precision and appears useless in scientific discourse - not to speak of nosology - although the euphemistic value noted in DWA survives. The more specific terms dysthymic, somatoplastic and thymogenic drinker (drinking) are proposed, with the definitions suggested herein or with more consensual definitions to be developed.

Problem drinking

The action n of problem drinker, q.v.

MK-1975: Any form of intake of alcohol-containing beverage described under dysthymic, somatoplastic or thymogenic drinking.

Protoalcoholism

MK-1975: An alternative term for Prealcoholism. Or, a nondiagnostic term proposed to describe a primal condition of increased risk of developing alcohol addiction (or the alcohol dependence syndrome) before manifesting any of the implicative drinking behaviours, but suggested by a genetic, familial or behavioural history like that observed frequently to precede the addictive condition.

Rum fits, see Alcoholic epilepsy

Somatoplastic drinking

MK-1975: Drinking, on average, the equivalent of about 115 ml of absolute alcohol daily, or larger amounts occasionally, with resulting intoxication or hangover, or damage to tissues, such as gastritis, hepatitis or myopathy. Such drinking is implicative of alcoholism or implies at least a risk of progression to alcohol addiction or the alcohol dependence syndrome. (The quantity and frequency of drinking are tentative.)
Thymogenic drinking

MK-1975: Drinking frequently (at least twice a year) the equivalent of about 85 ml of absolute alcohol per occasion as a means of "coping with problems of living," or in order "to get along with people," or generally for the avoidance of social discomfort or emotional pain. Such drinking is implicated of alcoholism or implies at least a risk of progression to alcohol addiction or the alcohol dependence syndrome. The quantity and frequency of drinking are tentative.

Thymosomatopathic drinking

MK-1975: The combination of thymogenic and somatopathic drinking (q.v.), presumed to be strongly suggestive of alcohol addiction or the alcohol dependence syndrome.

Wernicke-Korsakoff syndrome

DWA: "Wernicke-Korsakoff syndrome. Term applied to the entire sequence, most commonly seen in alcoholics, in which relief of the acute symptoms of Wernicke's disease (q.v.) is followed by the Korsakoff's psychosis (q.v.) becoming manifest."

Comment: It seems unfortunate that the use of the term Wernicke-Korsakoff syndrome has given rise to an impression that they constitute a single disorder and even have a unitary etiology. Actually the etiology of Wernicke's encephalopathy is confidently attributable to acute severe deficiency of thiamine, while the etiology of the Korsakoff psychosis is still veiled. The combined term thus tends to mask the fact that the Korsakoff manifestations still require to be explained.

Wernicke's disease, encephalopathy, syndrome

DWA: "Wernicke's disease, Wernicke's encephalopathy, Wernicke's syndrome (also called polioencephalitis hemorrhagica superior) The condition first described by Carl Wernicke in 1881, characterized clinically by clouding of consciousness, disorientation in all spheres, difficulty in grasp and comprehension, with weakness or paralysis of ocular muscles, most frequently manifested by a horizontal nystagmus on lateral gaze with weakness of the lateral rectus muscles; the involvement of the 6th nerve usually bilateral; pupillary reactions usually normal; ataxia frequently, with disturbances of both gait and stance. The areas most constantly pathologically involved are the paramedian and periventricular nuclei of the thalamus and hypothalamus, the mamillary bodies and paraependymal regions of the midbrain (3rd and 4th nerve nuclei), the abducens nuclei, the nuclei triangularis and Bekhterev of the vestibular nerve, and the dorsal vagus nuclei. The cause is now generally recognized as an acute severe deficiency of vitamin B1 (thiamin). The condition occurs most frequently in alcoholics, but occasionally in malnourished cachectic individuals. The disease is often associated with polyneuropathy, and a residual Korsakoff's psychosis has been noted in many of the recovered patients. See also (cerebral) beriberi.

Note: Wernicke's syndrome is sometimes reserved for the condition occurring in the aged."

Withdrawal, see Alcohol withdrawal syndrome.
Zieve's syndrome

DWA: "Zieve's syndrome. Jaundice, hyperlipemia or hypercholesterolemia, and hemolytic anemia, accompanied by symptoms such as anorexia, nausea, weakness, chilliness, upper abdominal pain, low-grade fever and tremulousness, recognized by L. Zieve (1958) as a distinct syndrome in alcoholics with liver disease."

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MEASUREMENT AND DISTRIBUTION
OF DRINKING PATTERNS AND PROBLEMS
IN GENERAL POPULATIONS

by
Robin ROOM

Social Research Group, School of Public Health,
University of California, Berkeley, CA, USA

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1. Categorizations of drinking patterns

Although earlier antecedents can be found, survey research on drinking patterns and problems is primarily a phenomenon of the last 30 years. In a relatively short period of time, surveys have become an important element in our understanding of drinking practices and problems in the general population. By now, results are available from studies on drinking practices on a more or less detailed basis in a majority of European countries, in North America, in several locations in South America, and in a few places in Africa, Asia, and Australia. In some countries, primarily in North America and Scandinavia, several surveys stretching over a period of years have been conducted; their findings permit some analysis of shifts in drinking patterns with time. Surveys of problems related to drinking have not been so common, but by now the data derived therefrom are also available for a number of countries.

Most drinking surveys have been primarily descriptive; a typical survey will describe the distribution of the population on a summary indicator of patterns of drinking, and variations between subgroups of the population defined by such demographic differentiations as sex, age, social class, and ethnoreligious groups. Often, the survey report will include an analysis of variation by pattern of drinking in relation to the locale and company in which the drinking was done, the reasons respondents give for their drinking, and attitudes towards drinking. This table of contents of a typical drinking survey report and partly from general conventions about the survey research report and partly from the particular traditions of studies on drinking practices. In general, the result has been, as Bacon (1969) puts it, what "could be called a demographic analysis of beverage alcohol users [which] only considers the sociocultural settings in broad, almost abstract categories", and not the "styles, procedures and qualities" of customary drinking behaviours (pp. xx, xxiii). As Bacon also notes, the surveys have usually attempted, of course without complete success, to operate totally inductively, without reference to the very strong assumptions that characterize most thought on drinking patterns and problems; "[the survey data] are not theoretical or policy statements; they are potentially useful statements of fact expressed in sophisticated and verifiable fashion" (p. xxii).

1.1 Diversity of categorizations

A large number of categorizations of drinking behaviour have been used in surveys. This diversity reflects a number of factors. In the first place, the behaviour which the categories seek to summarize is very complex and diverse, encompassing the consumption of a wide range of alcoholic beverages of varying strength in various quantities and under a variety of conditions. Most studies have focused on a summary of the drinking patterns of the individual in current time. However, in household-budget studies usually and market-research studies often, the household is used as the unit of analysis in investigations of consumption; and a study of drinking practices among Africans in Rhodesia found that (as perhaps in the case of sociable marijuana use in the United States of America) the amount of drinking could only reliably be estimated for a drinking group as a whole (Wolcott, 1974). Observational studies of drinking in bars have sometimes had as their implicit unit of analysis the "person-occasion" rather than the person as a continuing entity (see Room & Roizen, 1973, pp. 27-30). The time period covered by "current" has ranged from one day (Sadoun et al., 1965) to three years (Cahalan & Room, 1974); a few studies have also measured "ever" and "past" patterns; and longitudinal studies, of course, provide data on drinking patterns for the same individual in more than one specific period of time.

1.2 Eliciting information on and measuring drinking behaviour

In the second place, the diversity of categorizations reflects differences in the means of eliciting information on or measuring drinking behaviour. There have been two major methods of eliciting information: by obtaining information on specific drinking occasions, sometimes by observation or by the use of diaries, but usually by retrospective recall of occasions; and by asking respondents to give summary judgements of their drinking patterns. There have been limited methodological studies of the differences in results with the different methods (see references cited in Room & Roizen, 1973); though each method has its virtues, it appears that the summary-judgement method tends to yield a higher estimate of drinking. Within each of
these major methods, there have been differences in methods of asking questions and recording and summarizing answers which often result in incompatible characterizations. Genevieve Knupfer has remarked on the timidity which often characterized early attempts to measure drinking patterns and the resulting failure to ask about sufficiently large amounts of drinking.

1.3 Purposes of characterization of drinking behaviour

In the third place, the diversity of characterizations reflects the different purposes for which the characterizations have been used. Thus studies done by temperance-oriented insurance companies have tended to concentrate on the dichotomy between drinking and abstinence, both in the insurance company mortality studies of the last century and in the recent surveys commissioned by the Ansvar group of insurance companies (Lindgren, 1973). Proponents of the "single-distribution" theory have also shown an interest primarily in survey data on the proportion of abstainers (De Lint & Schmidt, 1971), since the theory in question requires only these survey data in combination with social statistics data on per capita consumption to predict the distribution of consumption in a population. Many surveys of drinking practices have been concerned primarily with a descriptive partitioning of the population into usefully sized drinking groups, and studies with this aim have often used quite complicated and inclusive definitions of "heavy drinking", in a compromise between face validity and adequate numbers for useful analysis. Studies associated with the alcoholic beverage industries and those carried out in environments where heavy drinking is customary, such as in France, have tended to use an overall measure of volume of drinking in a given period or time - say a day or a month - since this measure is most directly related to total consumption. Volume measures have also been popular with epidemiological health studies, perhaps partly because of the ease of manipulation of such a single continuous variable in multivariate statistical analysis. Noting that intoxication and the attendant risks result from the clustering of drinks on drinking occasions rather than from the overall volume of drinking, many studies have distinguished a dimension of at least occasional heavy drinking (Straus & Bacon, 1953; Knupfer, 1966; Cahalan & Clalin, 1968). A concentration on heavy drinking or intoxication both as a phenomenon of interest in its own right and as an indicator of potential drinking-related problems has led several research workers to use measures of the frequency of drinking occasions on which a specified number of drinks was consumed or a specified blood-alcohol level attained (Room, 1972; Brun, 1969).

The particular characteristics of drinking in the population under study have also undoubtedly influenced the categorizations chosen. And lastly, as Brun-Gulbrandsen (1973) has remarked, some of the variation in categorizations also probably results from the pressures on investigators to show originality in their work.

1.4 Distinction between abstention and drinking

The most widely used and available categorization of drinking behaviour is, of course, the distinction between abstention and drinking. Information on the proportion of drinkers among adults in the USA, for instance, is available from more than a dozen Gallup polls dating back to 1945 (Cahalan et al., 1969, p. 20), and these data have been reanalysed in terms of trends and cohort patterns (Glenn & Zody, 1970). Even this apparently simple distinction between drinking and abstaining, however, harbours some complexities of measurement (Knupfer & Room, 1970, pp. 110-112). Several studies have shown that there is a difference for many respondents between characterizing oneself as a "drinker" or "abstainer" and stating whether one has had a drink in a given period (Lindgren, 1973; Roizen, 1974); cross-national comparisons suggest that in environments where drinking is traditionally light, some respondents will characterize themselves as "abstainers" even though they sometimes take a drink, while in places where drinking is heavier, some will not call themselves "abstainers" even if they have not had a drink in the last year (Lindgren, 1973; Nelker, 1973).
1.5 Measurement of time period of drinking

There has been considerable variation in the time period used to define respondents as drinkers or abstainers. In many studies, the operative questions are simply asked in the present tense, so that the time period covered varies according to the respondent's definition of the present tense, and occasionally one will come across a respondent who is an "abstainer" because he gave up drinking the day before. Sadoun et al. (1965) defined nondrinking in their study of France by patterns for a single day, while general-population studies in the USA have varied the time frame from one month (Knupfer & Room, 1970) to three years (Cahalan & Room, 1974), according to the logic of the analysis.

In general, in designing measures of drinking versus abstention, it is worth keeping in mind whether it is a self-characterization or a description of behaviour which is sought, and the time period which is to be used to define "drinking". The questions should also make it clear that drinking rather than drunkenness is the referent (to call someone a "drinker" in popular parlance is ambiguous) and that wine and beer as well as distilled spirits are covered by the inquiry (Haberman, 1970).

1.6 Measurement of drinking frequency

Probably the next most widely available categorization of drinking patterns is frequency of drinking occasions. While there is variation between studies in the response categories available, and some measurements of frequency have been in terms of time between drinking occasions, most studies are keyed to the basic Western calendar units, so that comparisons in terms of at least yearly, at least monthly, at least weekly, and daily drinking are possible. A number of studies have collected data on frequency for each of three classes of beverages (beer, wine, and spirits); in a few of these studies, an overall frequency is available only approximately by aggregation from the three classes. While frequency is in general positively associated with volume of drinking and with quantity drunk on occasion, the relationship with quantity among drinkers is not strong in many populations, so that frequency is not an adequate measure of "heavy drinking" as it is usually conceptualized. However, frequency of drinking is an indicator of whether drinking is a part of a person's everyday life, or a regularly recurring activity, or a special or infrequent event. In studies of the contexts of drinking, which tend to focus on the regular occurrence of social gatherings as part of the person's drinking milieux, measures of frequency of drinking are especially appropriate (Roizen, 1972).

Frequency has usually been measured in terms of the average or general pattern for the respondent, and, except for some limited attention in Finnish studies (Ekholm, 1968; Mäkelä, 1971b), the respondent's variability in frequency has not been studied. For drinkers who drink in a spree pattern - i.e., periods of frequent drinking at infrequent intervals, a question on average frequency is bound to elicit a misleading response.

Measures of frequency of drinking depend upon the respondent's own definition of what constitutes a drinking "occasion", and this is likely to result in uncertainties, particularly for respondents who drink every day. Does an aperitif before dinner, wine with dinner, and brandy after dinner count as one or three occasions per day? We may expect that for most respondents, separate occasions are separated by time and often by space, but some variation on this issue is undoubtedly built into conventional measures of frequency.

1.7 Measurement of quantity of drinking

There has been a wide variation in measures of what is often called the "quantity" dimension of drinking, reflecting the complexity inherent in the dimension. A difficulty shared by all methods - short of taking a reading of the respondent's blood-alcohol level - is the necessity of asking respondents about the form in which the beverages were consumed, when some investigators explicitly, and all apparently implicitly, conceptualize quantity in terms of the absolute alcohol consumed. In many studies, the unit of measurement has been the "drink" or "glass". There is some justification in adopting this approach: a "drink" in the USA might be thought of in terms of 53 ml of spirits, or 140 ml of table wine, or 420 ml of beer, which all have about the same alcoholic content. (This rough equivalence of doses is in itself interesting; Gilbert of the Addiction Research Foundation of Ontario has remarked that
the normal single dose of socially accepted psychoactive drinks appears to be about half the average daily quantity for regular users.) But clearly there is much variation from these standards; a bar drink of spirits is likely to contain 35 ml while a drink poured at home may contain 140 ml. Alcohol consumed as beer is particularly likely to be overcounted by the assumption of the equivalence of drinks, since many drinks of beer are in the range of 210-280 ml and relatively fewer at the 560 ml level. Some studies (Straus & Bacon, 1953; Mulford & Miller, 1960a) have asked instead about "bottles" of beer; but this solution no longer helps in the USA with the proliferation in recent years of different sizes of bottles and cans.

In more recent studies, within the limits of maintaining comparability with earlier studies, questionnaires used by the California Social Research Group have shifted to more exact enumerations of equivalency at given levels of alcohol intake. These enumerations have included specifications of "bottles", "pints", etc., since heavy drinkers often think more in these terms than in "drinks" (Bailey et al., 1966). Studies which collect data on particular drinking occasions can, of course, collect the information in whichever terms the respondent offers it.

The amount drunk on an occasion gives a good general picture of the degree of intoxication on that occasion, but a more exact calculation of the blood-alcohol level attained requires knowledge also of other factors - at the least, of the time during which the drinking was done and of the respondent's bodyweight. Relatively few surveys have analysed their data in these terms (Bruun, 1969; Mokely, 1971b), although categorizations of drinking have been proposed that would require such data (Kwing, 1970).

One commonly used measure of quantity of drinking, particularly in earlier surveys and in surveys with only a few questions on drinking, has been the usual quantity of drinking. For analytical purposes, the measure has considerable attractions; apart from using it on its own to indicate the level of intoxication usually attained by the respondent, the analyst can multiply it by the frequency of drinking to get an estimate of the overall volume of drinking. Nevertheless, estimates of quantity based solely on the usual quantity of drinking should be avoided where possible in surveys of drinking, because of the substantial underestimation of quantity the measure yields for some specific fairly common patterns of drinking. In many countries, a rather substantial proportion of the population drinks small quantities at frequent intervals but larger quantities less frequently - for instance, one drink every day but 8 drinks twice a week. Those with such patterns will respond quite accurately that their usual quantity of drinking is one drink, so that they will appear to drink smaller quantities on an occasion than those who drink only according to the pattern of 8 drinks twice a week, and will also appear to have the same overall volume of drinking as those drinking only one drink a day, although in the example we have used the true volume would be three times that of the one-drink-daily pattern.

A dimension of quantity of drinking that is available from many surveys is the respondent's maximum quantity - the highest amount consumed on an occasion within a given period, often one year. In many surveys, including the US national drinking practices surveys (Cahalan et al., 1969), the operative question is whether the respondent drinks a specified amount as often as "once in a while"; in the US national survey in particular, the question is asked for each beverage-type, but only for those who drink the particular beverage-type at least once a month. Comparison of results where both this method and a direct question on the greatest amount drunk in the last year were used suggests that respondents will often report higher quantities drunk in the last year than they will report as part of their current drinking patterns on even a "once in a while" basis.

1 Thus in the 1964 San Francisco sample, 23% of respondents reported drinking 6 or more drinks at least "once in a while", but 34% reported drinking 6 or more drinks "the time when you had the most of all" to drink in the last year.
1.8 Frequency-quantity measures of drinking

Maximum quantity of drinking obviously does not lend itself easily to estimating overall volume of drinking, and neither does it indicate the frequency of heavy drinking, but it does indicate whether a respondent ever drinks to levels which put him at risk of intoxication and elevate his risk of social consequences of drinking. For a country such as the USA, with many light and infrequent drinkers, an adequate sectioning of the population for analysing general drinking patterns, but not for analysing heavy drinking, can be constructed using just frequency of drinking and maximum quantity - for example:

A. Abstainers and very infrequent drinkers
B. Infrequent low-maximum drinkers - less than once a week, never 5+ drinks on an occasion
C. Infrequent high-maximum drinkers - less than once a week, 5+ drinks on an occasion at least once in a while
D. Frequent low-maximum drinkers - at least once a week, never 5+ drinks on an occasion
E. Frequent high-maximum drinkers - at least once a week, 5+ drinks on an occasion at least once in a while.

Such a sectioning preserves a distinction between the frequency and quantity dimensions of drinking, which have been found to have different correlates (Knupfer, 1966; Cahalan et al., 1969, App. 1), but uses only the limited information which is perhaps most likely to have been collected in roughly comparable form by different studies.

Combined frequency-quantity measures of drinking have by now a 20-year history in alcohol studies, and a variety of such measures have been used since Straus & Bacon's pioneer Q-F index (1953). (See the accompanying table.) The measures draw on one or both of two basic rationales:

(1) an overall summarization of drinking behaviour, often into "heavy", "moderate", and "light" categories (see Cahalan et al., 1969; Edwards et al., 1972a);

(2) a summarization which preserves a distinction between frequency and quantity dimensions (see Straus & Bacon, 1953; Knupfer et al., 1963; Cahalan et al., 1969, App. 1).

Many of the measures combine the two principles; thus Edwards et al. preserve a distinction between "frequent light" and "infrequent light", and Knupfer et al. distinguish two levels ("heavy" and "frequent moderate") within the more frequent and heavier quadrant.

The five measures cited are not comparable with each other for a variety of reasons: incompatibilities in the questions used, different principles of construction, and different cut-off points. Often even formally similar categories will have been formed by different rules of precedence; for example, Straus & Bacon (1953) and Edwards et al. (1972a) defined the respondent's Q-F category in terms of the most frequent beverage-type (three types for Straus & Bacon, 15 types for Edwards et al.) while Knupfer et al. (1963) used the category defined by the beverage-type yielding the "highest" category.
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<tr>
<th>Table of Usage of Frequency-Quantity Measures of Amount of Drinking in General-Population Surveys</th>
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<tr>
<th>Straus &amp; Bacon's QF:</th>
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<tr>
<td>United States college students (Straus &amp; Bacon, 1953)</td>
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<td>Iowa State (Mulford &amp; Miller, 1960a, 1963)</td>
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<td>USA nationwide (Mulford, 1964)</td>
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<td>Cedar Rapids, Iowa (Mulford &amp; Wilson, 1966)</td>
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<th>Knupfer et al.'s F/Q:</th>
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<td>Berkeley, California (Knupfer et al., 1963)</td>
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<td>San Francisco, California (Knupfer &amp; Room, 1964)</td>
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<td>Sydney, Australia (Engel et al., 1972)</td>
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<th>Cahalan et al.'s QFV:</th>
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<td>Hartford, Connecticut (Cahalan et al., 1965)</td>
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<td>USA nationwide (Cahalan et al., 1969)</td>
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<td>Three British Columbia cities (Cutler &amp; Storm, 1973)</td>
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<th>Cahalan et al.'s Volume-Variability</th>
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<td>USA nationwide (Cahalan et al., 1969, App. I)</td>
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<td>San Francisco, California (Room, 1972)</td>
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<td>Three British Columbia cities (Cutler &amp; Storm, 1973)</td>
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<th>Jesser et al.'s Q-F:</th>
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<td>Triethnic community in Colorado (Jesser et al., 1968)</td>
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<td>(This is a straightforward volume measure built from the same items but with somewhat different assumptions from Cahalan et al.'s Volume dimension of Volume-Variability)</td>
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<th>Edwards et al.'s QF:</th>
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<td>Camberwell, England (Edwards et al., 1972a)</td>
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These various incompatibilities make very substantial differences in who gets denominated a "heavy drinker" and affect considerably the correlates of heavy drinking (Room 1971b). But the various measures are based conceptually on a relatively small number of dimensions:

1. frequency of drinking (all measures except "volume-variability", Cahalan et al., 1969, which uses "volume" based jointly on frequency and quantity);

2. "Usual" quantity (Straus & Bacon, 1953; Mulford & Miller, 1960b), "modal" quantity (Knupfer et al., 1963; Cahalan et al., 1969) or "usual upper limit" (Edwards et al., 1972a);

3. "maximum" quantity (Knupfer et al., 1963; Cahalan et al., 1969) or "variability" (Cahalan et al., 1969, App. I).

One further frequency-quantity measure of drinking adds another dimension to its typology of drinking: a differentiation between current and past patterns (Knupfer & Room, 1970).

It should be noted that shifting conceptualizations and the desirability of maintaining comparability have resulted in an increasing distance between the direct questions asked and the measures based on them: thus "volume-variability", conceptually composed of the volume of drinking and the maximum quantity, is constructed from the standard 12 questions in the studies.
of Knupfer et al. and Cahalan et al., which ask, for each type of beverage, the frequency of drinking and the proportion of occasions on which 5+, 3-4, and 1-2 drinks are consumed.

Recent studies using categorizations of drinking practices in the general population have tended to focus more specifically on patterns of heavy drinking, defined at more stringent levels than in former studies. This is perhaps partly because of trends in behaviour in the general population, both towards more relatively heavy drinking and towards a greater validity in self-reports of drinking (Room & Beck, 1974). But primarily the tendency results from a shift in the concerns of investigators towards measuring behaviour which is likely to be substantially more implicative of the social, psychological and health consequences of drinking, and towards measuring the relation between the behaviour and the consequences.

These concerns have led to a focus on the frequency of drinking relatively substantial amounts of alcohol, often measured more directly than in the earlier studies. A number of reports of studies by Cahalan and coworkers have used measures of heavy drinking incorporating a "frequent heavy drinking" measure of how often the respondent drinks 5 or more drinks on an occasion (Cahalan, 1970; Room, 1972; Cahalan & Room, 1974).

This measure is related to earlier measures used in work on drinking problems by Clark (1966) and Knupfer (1967). Contemporaneously, Bruun (1969) and Mkeleti (1971a) have used a measure of the frequency of attaining a blood-alcohol level of .10 or .15. Measures of the occurrence and frequency of very heavy drinking episodes, which in earlier work had been treated as symptoms rather of "pre-occupation with alcohol" (Mulford & Miller, 1960c), have also been used in United States studies as indicators of drinking behaviour (Clark, 1966; Knupfer, 1967; Cahalan, 1970; Cahalan & Room, 1974), and some work has been done using a typology of interactions between the two types of "heavy" drinking (Cahalan & Room, 1974). The measures of heavy drinking behaviour have been primarily of the frequency of drinking at particular specified levels, which tends to yield greater detail on the frequency than on the amount-of-drinking dimension; a good argument could be made for constructing questions to measure instead the greatest amount consumed at a sitting in particular time-intervals - in a usual (or the preceding) day, in a usual (or the preceding) week, in a usual (or the preceding) month, in a usual (or the preceding) year.

2. Demographic variations in drinking patterns

As we have noted, variations in drinking patterns by the commonplace social differentiations often referred to as "demographic variables" have usually been the next item on the survey analyst's agenda after the construction of a categorization of drinking patterns. Generalizations in this area are difficult to make and liable to falsification, for two good reasons. In the first place, the results can differ according to the measures used. Thus different measures of "heavy drinking" based on the same survey data can yield opposite results in analyses of patterns by social class (Room, 1971b). The measurement of the demographic variables can also affect results; thus income often shows a closer relationship to frequency or amount of drinking than do other measures of socioeconomic status (Knupfer et al., 1963).

In the second place, the relationships between social differentiations and drinking patterns vary according to time and place, and according to circumstances and interactions with other social differentiation variables. This applies even to what seem the safest generalizations. References can be found in the older British and United States literature to circumstances in which it was assumed that heavy drinking was commoner among women than among men (Heron, 1912; Bailey, 1922). A survey in Poland suggests that heavier drinking is commoner there in the countryside than in the city (Święcicki, 1972). In the USA, the general association of abstention with lower status seems to be reversed in parts of the country where drinking is light (Room, 1972).

A third consideration to keep in mind is the relatively small proportion of the world population in which drinking surveys have been done. Generalizations which can be made must be based essentially on parts of Europe and the English-speaking world, and should not be assumed to apply universally.
2.1 Variations by sex

Keeping all of these cautions in mind, we can nevertheless describe some general patterns. Women today seem generally less likely to drink and less likely to drink heavily than men. This tendency seems to extend over the whole range of drinking, but to be more marked at heavier levels of drinking. While there is evidence of historical changes towards more drinking by women in line with general emancipation trends, these changes occur more at moderate than at heavy drinking levels. Survey data do not usually correct for the difference in average weight between men and women, but it is clear that the differences in consumption are greater than would be explained by such a correction.

These sex differences have been described in terms of general norms of conformance for women (Clark, 1964) as the "culture-bearers" in Western European societies, or conversely in terms of "licence" for men, particularly young men (Knupfer & Room, 1964). It has been pointed out that the consumption of alcoholic beverages has traditionally been prohibited or limited for those seen as being in a dependent or subservient status - women, children, slaves, prisoners, etc. (Knupfer & Room, 1964).

2.2 Variations by age

Cross-sectional data by age, of course, confound cohort effects, historical changes in patterns, and the effects of ageing and age status in the individual respondent's life. Current data for the USA generally show a concentration of abstainers in the older age groups and, of course, in the childhood and adolescent years. Abstention appears to be declining among teenagers, and it may well also be declining in older persons, as these latter age groups cease to be dominated by cohorts brought up during the Prohibition era, and in the wake of modest tendencies to emancipate the old from expectations of constraint.

Among regular drinkers, the modal pattern of drinking after age 30 appears to be frequent light drinking, while among the young the modal pattern appears to be less frequent but heavier drinking. Thus "steady fairly heavy" patterns predominate among heavier male drinkers in all except the youngest adult age group (Cahalan & Room, 1974, p. 152). There are a number of possible factors underlying these differences. Certainly ageing processes place physiological limits on the amount consumed on an occasion, while on the other hand, older people are likely to lead lives of greater regularity. Younger people, particularly those under the legal age for drinking, are likely to have less regular access to alcohol, to lack the financial resources to support an overall high volume of drinking, and thus perhaps to operate more on a festive or special-occasion principle by which all available supplies are consumed on the spot.

Relatively heavy drinking is primarily associated with sociability, and sociability may well occupy a larger portion of our time in youth than in middle age.

These different patterns of regular drinking among older and younger people mean that comparisons of prevalences of "heavy drinking" are likely to depend a great deal on the particular categorization chosen: measures emphasizing high frequency or volume of drinking will tend to find "heavier" drinking among the middle-aged than among the young, while measures emphasizing large quantity drunk on an occasion will find "heavier" drinking among the young (e.g., "high volume" versus "high maximum" in Cahalan et al., 1969, p. 216).

2.3 Variations by marital status

The relations of drinking patterns with marital status have not been as commonly investigated as the relations with sex and age. In the United States national data, the married were more likely than the unmarried to drink regularly and not to drink heavily, but this difference was fairly specific to those aged under 45 and of lower socioeconomic status (Cahalan et al., 1969, p. 34). Clark's analysis of San Francisco data (1964) suggests that heavier drinking among the married is related to differences in styles of socializing between the married and the unmarried: the unmarried were very much more likely to patronize taverns and to go to parties regularly.
2.4 Variations by social class

The relationship of drinking behaviour with social class is more equivocal than the relationship with sex and age. In the USA, abstention is associated with lower socioeconomic status in those areas of the country where drinking is traditionally heavier but with higher status in at least some of the areas where it is lighter, while the opposite patterns appear for relatively heavy drinking, at least for some measures and in some segments of the population (Cahalan et al., 1969, p. 43; Room, 1971b, 1972). In particular, people of higher socioeconomic status in areas of heavier drinking seem more likely to engage in frequent light drinking and to show greater sexual equality in drinking patterns, while patterns of heavy intake per occasion are more characteristic of persons of lower socioeconomic status (Cahalan & Room, 1974, p. 152). The same general distinction of different types of high consumption in upper and lower groups has also been found in Finland (Mäkelä, 1971a, p. 3) and in England (Edwards et al., 1972a, p. 87), although the fact that cirrhosis mortality is negatively correlated with class in the USA but positively correlated in Great Britain (Terris, 1967) suggests that heavy drinking occasions may be less common generally among lower-status people in Great Britain than in the USA.

Although the findings for the USA do not suggest a strong relationship of amount of drinking with social class, the data do seem to hint at different class styles of drinking. Community studies of small towns in the USA make it clear that in this limited kind of milieu there are very clear class differences in drinking styles. In part, these styles have to do with finances; it is notable that the dimension of status with the strongest positive relation to frequency of drinking is income. The poor, like the young, have special reason to try to get the most for their money and some among them would consider money spent on a drink wasted unless the drink were sufficiently intoxicating. But irrespective of financial questions, the styles may also reflect differences between class subcultures of long historical standing, as Edwards et al. suggest (1972a, p. 88). This may be especially true in England, with its tradition of class segregation even in the same tavern; in the USA, on the other hand, the relevant literature places some emphasis on the tavern as a meeting-place for people of different classes.

It is worth keeping in mind the strong possibility that apparent class differences for the USA are but a pale image of much stronger differences for particular occupational groups. Although business and professional occupations are conventionally considered as being of equal status in measures of socioeconomic rank, Cahalan et al. (1969) found that heavy drinking among businessmen was half as much again as that among professional men (p. 30). This difference may well be of long standing: in a mail survey conducted in 1895, John Billings found twice as many "regular moderate drinkers" among businessmen as among professional men (Billings, 1903, pp. 309-338). Towards the other end of the status scale, there are also marked differences between specific occupations (Hitz, 1973). Many occupations isolated geographically or by the nature of the work from the larger society, such as those of loggers, miners, longshoremen and seamen, which are also distinguished by their strong historical tendencies to strike (Kerr & Siegel, 1954), appear to have a tradition of heavy drinking as a part of their strong occupational subculture. In many of these occupations, and some others, the structure of the job itself dictates the nature of the drinking pattern, with long periods at sea or in the woods or on the range broken by brief periods of what is known in US military parlance as "rest and recreation". The "explosive drinking" of the Finnish lumperjack parallels the traditional drinking bout of the American cowboy or the sailor on shore leave.

General-population data on the relationship of specific occupations with particular drinking patterns is very sparse. This is primarily because of the very wide variety of occupations and the relatively small numbers of those engaged in even the most common of them, which precludes the use of conventionally sized survey samples. Thus the question of whether there are general class patterns of drinking beyond the patterns of specific occupational groups has not been faced.
2.5 Variations related to urbanization

The relation of urbanization to patterns of drinking appears to vary from place to place. The proportion of abstainers was substantially higher in the country than in the cities in only 6 of the 11 countries tabulated by Lindgren (1973). A survey in France found that both the percentage of drinkers in the population and the average level of consumption varied very little with the size of the community (Sadoun et al., 1965, p. 36); a survey in Finland found both consumption and heavy consumption more common in the cities and towns than in the rural communes (Mikkelä, 1971a); a survey in Poland found rural males more likely to drink heavily at a sitting than urban males (Świącicki, 1972, p. 5). In the USA, rural areas are quite strongly associated with abstention and an absence of heavy drinking, in all regions of the country, as regards both high volume and high maximum of drinking (Room, 1971a).

In Finnish studies, relative lack of drinking in rural areas has been linked to difficulties of availability, and certainly in the rural South of the USA - the only section of the country where there remain strong variations in availability - drinking at all, though not drinking heavily, varies with availability (Room, 1971a). But the availability is itself to some extent a reflection of community sentiment, and it is worth noting that "small-town America" was a stronghold of the Prohibition movement (Gusfield, 1963) and that, whether or not they drink, rural respondents today are still more likely than their urban counterparts to respond "nothing" when asked what are some of the good things about drinking (Room, 1971a). In general, the association of rurality with abstention appears to be the most marked in countries with the strongest historical temperance movements.

2.6 Variations by region

Urbanization is to some extent interrelated with the other primary geographical variable, region. Regional variations in drinking patterns are quite large in many countries and are well known to the alcoholic beverage industries, but are not often analysed in survey data. The most obvious regional differences are in choice of beverage - beer, cider and spirits versus wine in France, wine versus beer and bourbon versus Scotch whisky in the USA - but there are also differences in general categories of amount of drinking. The survey of France found that regions varied in their reported 24-hour consumption per respondent from 26 ml to 48 ml. United States national data show strong regional differences in the proportions of abstainers and heavy drinkers. The country can in fact be split into two sets of census regions, an area of greater availability of alcohol and an area of lesser availability where the former shows half as many abstainers and twice as many heavy drinkers as the latter (Cahalan & Room, 1974, p. 80). The area of lesser availability was the stronghold of the classical temperance movement, and has a long-standing cultural association of heavy drinking with socially disruptive behaviour. Explosive drinking and intermittent very heavy drinking appear to play a larger role in heavy drinking patterns in this area (Cahalan & Room, 1974, pp. 152, 172). These comparisons within the USA to some extent mirror Christie's comparisons in Scandinavia, particularly between Denmark, where alcohol is readily available, and Finland, where it is not (Christie, 1965). As Christie notes, "a strict system of legal and organizational control of accessibility to alcohol seems to be related to low alcohol consumption, but also to a high degree of public nuisance" (p. 107) - with the causal chain going in both directions. I have elsewhere sketched in some of the likely dynamics of this interaction.¹

2.7 Variations by cultural or ethnoreligious group

The major remaining demographic variable used in studies of drinking practices is cultural or ethnoreligious group. Cross-national comparisons are, of course, one form of this variable; and it can plausibly be argued that regional differences within a country are akin to ethnoreligious differences; the South of the USA - in fact, the numerically predominant fraction of the area of lesser alcohol availability - has often been treated as a separate protoethnic subculture.

It is well recognized that there are marked differences between ethnoreligious groups in their patterns of drinking. Comparisons of data for the population of the USA have shown low rates of abstention among persons of Italian origin and Jews, but high rates among those of British, Irish and Latin American ancestry and among blacks, while the differences in the respective proportions of heavy drinkers were smaller (Cahalan et al., 1969, pp. 52-55; Cahalan & Room, 1974, pp. 99-109). Comparisons of data from studies of individual communities where ethnic origin is less ambiguous show heavy drinking to be most prevalent among men of Irish, non-Jewish Eastern European, and Latin American ancestries (Cahalan & Room, 1974, p. 203; Knupfer & Room, 1967).

Comparisons between countries based on survey data are in a far more rudimentary state, although it is clear that there are big differences between countries in the proportion of abstainers (Lindgren, 1973). Recent work (Stivers, 1971) cautions us against too easy an assumption that differences between ethnic groups in the USA will necessarily mirror differences between their respective nations of origin.

3. Measurement of drinking problems

3.1 Constituent items in measures of drinking problems

Survey studies of drinking problems have been less widespread and generally less developed than studies of drinking patterns. The approach has generally been explicitly eclectic and the measures used have often originally derived from clinical and other sources. To a remarkable degree, the constituent items of measures of drinking problems can be traced back to Jellinek's analysis (1946) of a questionnaire constructed by Alcoholics Anonymous for use among their own members, a questionnaire which drew on the common experience of AA members and often on the folk wisdom of bar-room lore ("take a drink first thing in the morning" = "the hair of the dog that bit you").

As in Jellinek's analysis, in the famous WHO definition of alcoholism (WHO Expert Committee on Mental Health, Alcoholism Subcommittee, 1952), and generally in much clinical thought, the items in the survey inventories of drinking problems were usually assumed to be characteristics of the individual, rather than properties of the interaction of the individual and his social environment. Seeley (1959) pointed out the oddity of taking social disabilities as indicators of a disease state, and survey analysis of drinking problems has often underlined the interactive nature of social problems with drinking; for instance, a given level of drinking patterns is associated with a much greater probability of social consequences of drinking in areas of lesser alcohol availability than in those of greater availability in the USA (Cahalan & Room, 1974, p. 178). But the technology of surveys has tended to reinforce the view of drinking problem items as properties of the individual, since the conventional methodology of probability sampling is designed to yield a sample of isolated individuals with a minimum chance of interactions between each other.

3.2 Drinking problems measured in surveys of the general population

Because of their general characteristics, sample surveys of the general population are also much better equipped to handle some sorts of drinking problems than others. Many drinking problems which figure in public discussions of alcohol problems exist more at system than at individual levels and are not easily glimpsed in individual interviews - e.g., loss of production due to drinking. Some kinds of problems are difficult areas for respondents to give useful information on - e.g., health problems due to drinking, where the connexion between the condition and drinking behaviour may not be recognized by the physician, let alone communicated to the respondent, and where, on the other hand, questions on the respondent's own thoughts on the topic often yield projections of inflated fears and dreads. Other kinds of problems which have a vivid existence in the clinical milieu are unmeasurable in the general-population survey because of their rarity, a difficulty whose solution would require extraordinarily large samples.

Studies carried out among the general population have an extremely important role to play in our understanding of alcohol problems, precisely because of the difference between the clinical milieu and the outside world. Much of our knowledge of alcohol problems is based on
clinical research, and if we are seriously to try to build an adequate treatment and service
system, and even more if we are seriously to undertake the prevention of alcohol problems in
the population at large, we need to know the relation between clinical reality and reality in
the general population. The search for a "core entity" of alcoholism needs to take into
account the issue of numbers, for it may be quite possible to define a "core entity" which
characterizes only a very small proportion of those with one or another kind of alcohol
problem. In this case, the difficulty remains of clarifying the status of the legions of
those with alcohol problems; past experience would suggest that we may fall back on two
equally unsatisfactory expedients: forgetting about all those not falling into the special
category with the "core entity"; or making the unjustified assumption that they are all
"prodromal" cases of the "core entity".

3.3 Measures used in surveys of drinking problems

Measures used in surveys of drinking problems can be regarded as falling into four major
conceptual areas. The following discussion of the measures should be read in conjunction with

(1) Measures of drinking behaviour per se

This category includes measures drawing on the heaviest patterns revealed by the Q-F
series of questions on drinking patterns discussed above, and measures of drinking bouts
("binge drinking") - i.e., of the duration and frequency of lengthy drinking episodes.

The status of measures of drinking per se as "problem" measures is of course thoroughly
arguable, and investigators' unease over this issue is often betrayed by wordings such as
"problematic intake" and undocumented arguments that the behaviour is likely to be indicative
of future problems. The use of these measures in problem scores raises quite explicitly the
issue of who is to define what is a "problem" - the investigator or the respondent - and in
what sense we mean "problem". In certain instances drinking patterns which would certainly
fit survey "problematic intake" criteria are arguably a "problem" to no one. On the other
hand, the survey measures do conform to the recognition of particular drinking patterns as
problems in everyday discourse: it is the blood-alcohol level attained, and not one's
behaviour "under the influence", which defines the crime of drunken driving; and Chafetz
(1967) has proposed that anyone who becomes intoxicated at least four times a year ought to be
regarded as a problem drinker. And from the point of view of aggregate-level social problems,
the frequency of episodes of intoxication is certainly relevant to arguments about an
alcoholized society (Paris, 1974).

(2) Measures of behaviour while drinking

This is the area in which the measurement and conceptualization have been weakest. In the
hands of various analysts, the same behavioural item has often been interpreted as having very
different meanings, and items in this area have often been treated as components of various
sorts of personal and social alcohol problems.

The measures of behaviour while drinking which are of particular interest in measuring
"drinking problems" are those which potentially put the respondent at odds with his social
environment or endanger his health. As with the drinking behaviour itself, it is illegitimate
to assume that these behaviours actually indicate perceived problems for the respondent:
fighting while drunk or drinking on the job may be acceptable and expected in his milieu, and
skipping meals while drinking or experiencing hangovers and self-medicating them with alcohol
may not have any further health consequences.

Belligerence. One area of behaviour which has been measured in a number of studies,
although often with rather weak items, is belligerence while drinking. Unfortunately,
available measures are not sensitive to the issue of whether the respondent is equally
belligerent when drinking as when sober or whether he is perhaps less belligerent when under
the influence of alcohol: a respondent who "gets into fights while drinking" may also do so
when sober. No other aspects of general characterizations of drinking behaviour which is
potentially obnoxious or dangerous have been systematically measured as part of drinking
problems scores, although clearly there are other aspects of individuals' reactions to alcohol which can be problematic in given circumstances - inappropriate sleepiness, boisterousness, chance-taking, flirting, affability, melancholy, vomiting, etc. A really worthwhile area for study which is at present essentially untouched is the conditions and correlations of the relations between pattern of drinking, behaviour while drinking, and social consequences of drinking. Knupfer (in preparation) has argued that social norms for drinking are more directed at behaviour during or after drinking than at the amount of drinking per se.

Work-related problems. Other aspects of behaviour during drinking which have figured to a greater or lesser extent in surveys of drinking problems are directed at the situational appropriateness of the drinking behaviour, but have commonly not been interpreted in terms of this face meaning. Items concerned with what is presumed to be inappropriate drinking behaviour with respect to the job role (drinking on the job, going to work drunk, being late for work or reporting sick because of a hangover) have sometimes been treated as parts of "job problems" scores, although it is clear that these behaviours often do not in fact cause "problems" for the individual respondent, and depending on circumstances may also not be a tangible "problem" at aggregate levels. Like belligerence and other qualities of behaviour, they presumably increase the risk to the respondent of suffering tangible social consequences of his drinking, but the conditions governing this risk and the variations to which it is subject have been little explored.

Driving after drinking. Another dimension of situationally inappropriate behaviour, which has been investigated in special-purpose surveys (e.g., Wolfe, 1976) rather than in general drinking-problem surveys, is driving after drinking. Roadside breath-test surveys and other drinking-driving surveys are essentially concerned with measuring a problematic behaviour during or after drinking, a behaviour which is not itself a problem to the respondent nor necessarily to others unless it is observed by a policeman or has an untoward consequence (e.g., an accident). In the light of the importance of drunken driving both in the public consciousness and in terms of its contribution to the economic costs of drinking, it would be desirable if future problem-drinking surveys devoted more attention to this area.

Other situationally vulnerable behaviours. The list of situationally vulnerable behaviours during or after drinking which might well be explored in surveys of drinking problems could be very profitably extended, although, of course, the questionnaire cannot cover everything one wants to know. The frequency of appearing drunk in public is clearly related to general problems of public nuisance and order and to potential individual problems (arrest, etc.) for the respondent. The general issue of default on role responsibilities could well be expanded beyond the focus on limited aspects of the job role to include family and other social roles. (At least one clinical discussion treats missed doctor's appointments as a symptom of alcoholism!) Other risk-taking behaviour induced by alcohol, besides drunken driving, might be explored, as also might child battering and other manifestations of violence which are unlikely to be caught by items on "fights while drinking", and such inconspicuous but problematic behaviours as falling asleep in bed with a lighted cigarette after drinking.

It might be noted here that there are essentially two dimensions of risk involved in a given drinking-related behaviour or demeanour: one is the exposure to risk offered by the behaviour or demeanour itself, the other is the vulnerability to tangible consequences which the situation and the individual's social position impose on a given behaviour or demeanour. The second dimension is obviously not solely a property of the individual involved. This is an issue to which we shall return later.

Behaviour affected by social constraints. A further category of measures of behaviour during drinking derives essentially unchanged from Alcoholics Anonymous orthodoxy by way of the Jellinek (1946) analysis: indicators of disjunction between the individual's drinking behaviour and his social environment as revealed by the individual's sneaking or hiding behaviour - "taking a few quick drinks before a party to make sure I'll have enough", "sneaking drinks when no one is looking", etc. These items can be and usually have been interpreted as indicators of the respondent's state of control over his drinking behaviour: they are part of the list of "bad signs" of dependence on alcohol established by conventional wisdom and professional opinion, and surveys have variously classed them into scales of "addictive symptoms" (Knupfer, 1967), "preoccupation with alcohol" (Mulford & Miller, 1960c), and "symptomatic drinking"
Short-term physiological consequences of heavy drinking. A final set of behaviours during or after drinking which is not so situationally affected, but which is also commonly featured on lists of "bad signs", are items indicating the short-term physiological consequences of heavy drinking: hangovers, waking the next morning with no recollection of the night before, hand tremors, etc. These items again may be interpreted several ways: as harbingers of more permanent impairment of health as a consequence of drinking, as indicators of physiological dependence, as indirect indicators simply of the fact of heavy drinking, or as health problems in their own right. Survey research experience suggests some caution in the interpretation of these items: on the one hand, some "naive" respondents apparently assert to these items with the intent of conveying a meaning other than the very significant connotations often found in the literature on alcohol (for example, "woke next day unable to remember the night before" may imply that someone put the respondent to bed when he fell asleep - not that he had an "alcoholic blackout"); on the other hand, the items on the list of "bad signs" have been so widely diffused that they become merely signals of admission to a drinking problem - thus Jellinek found some evidence of overclaiming of such symptoms among Alcoholics Anonymous members (Jellinek, 1960, p. 38).

(3) Measures of the psychological loading on the drinking behaviour

Items in this category have a long history in drinking surveys, particularly in the USA, perhaps because of strong concerns in that country with motivations for problematic behaviours, and certainly because of the classical definition of alcoholism in United States literature in terms of the existential problems of self-recognized loss of control over drinking behaviour.

Motivations for drinking. Questions on motivations for drinking have appeared regularly in surveys of drinking behaviour since Riley et al.'s pioneer report in 1948. Various labels have been attached to scales based on these questions - "definitions of drinking" (Mulford & Miller, 1960b), "use of alcohol for coping" (Knupfer, 1967), "personal-effects reasons" (Jessor et al., 1968), "psychological dependence" (Cahalan, 1970), "ataraxic motivation" (Edwards et al., 1972b) - but the interpretation of the items has remained constant: social reasons for drinking are considered nonproblematic, while "personal-effects" reasons, and particularly the use of alcohol as a mood modifier or to forget worries, are considered problematic. Both Knupfer et al. (1963) and Cahalan et al. (1969) used the combination of heavy drinking and "escape" motivations for drinking as a problematic-drinking category standing in for a full measure of drinking problems; in later work, the correlation of such a measure with a full "overall drinking problems" score (including the components of the heavy-escape measure) turned out to be substantial (.71) but clearly not enough to assume identity (Cahalan, 1970, p. 115).

Recently, the Hobbesian assumption underlying the automatic identification of social reasons for behaviour as good and personal reasons as bad has come to be recognized, as has the puritanical concept that mood-modification is bad (Cahalan & Room, 1974, p. 20). Yet the measure is clearly closest to traditional psychiatric conceptualizations of neurotic drinking, etc., and is a clear indication of the psychological loading the respondent himself puts on his drinking behaviour. The theoretical status of these items is thus perhaps best described as being subject to constant modification.

Self-perception of drinking problems and degree of control. Apart from the interpretation of items concerned with behavioural and physiological effects as indicating addiction (see above), the other major type of item indicating the psychological loading to be put on the drinking behaviour is the direct measurement of the respondent's self-perceived problems with and degree of control over his drinking. This dimension originated with Genevieve Knupfer's predilection for simple and direct measures - that one very good way to find out if someone had a problem was to ask him. In its original form (Knupfer, 1967) it drew on open-ended responses to such questions as whether the respondent ever felt he should cut down on drinking and why,
indicating much concern or fruitless efforts at control. In later work (Cahalan & Room, 1974) it has developed more into an attempt to operationalize and measure in partly behavioural and partly self-perceptual terms the concept of "loss of control over drinking" which figures so heavily in conceptions of alcoholism as a disease, in order to test the fit of this "alcoholism paradigm" to data derived from the general population.1

(4) Measures of the consequences of drinking behaviour

Social and health damage. This dimension of drinking problems has a long history in survey studies, appearing perhaps for the first time in Straus & Bacon's study (1953) as "social complications", being used as the prime indicator of alcoholism in the New York Washington Heights studies (Bailey et al., 1965), and formulated by Mulford as a "troubles" index (Mulford & Miller, 1960c), which he also came to view as a prime indicator of alcoholism (Mulford & Wilson, 1966; Mulford, 1968). The long-standing tendency in surveys to identify the consequences of drinking as the primary indicator of alcoholism is in line with classical formulations of the disease concept, as most explicitly stated by Keller (1960), who equates a definition of alcoholism in terms of loss of control with an "operational definition" in terms of the consequences of drinking. Keller's argument depends on an assumption that all normal people are completely rational: that the social and physiological penalties of unrestrained drinking are so severe and so obvious to all rational men that anyone who repeats such behaviour must have lost control of his drinking. Unease over this equation and a desire to avoid wrangling over what constitutes "real" alcoholism have led some survey analysts to prefer to talk instead of "problem drinking" (Knupfer, 1967; Cahalan, 1970). In any case, the emphasis on consequences of drinking as the heart of our concern with alcohol problems has, if anything, been sharpened in recent years, and Bruun (1973) has argued that an enumeration of the social and health damages caused by alcohol obviates the need for any separate consideration of alcoholism as an addictive state. The formulations of the concerns of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) in the USA have tended to gravitate towards a concentration on social and health damage, although they are still expressed in an increasingly transparent verbalization in terms of disease (Chafetz, 1971).

Extent of causal involvement of alcohol. One unsolved problem with measures of the consequences of drinking, in surveys as elsewhere, is the extent to which alcohol is causally involved in the problem. We know that the role of alcohol is likely to be underestimated in many situations, for instance in many chronic illness conditions. But in a society such as the USA, where drinking alcohol does potentially carry a moral onus which differentiates it from drinking water or soft drinks, there is also a strong tendency to assume that alcohol is the primary cause if it is present in any problematic situation, resulting in overestimations of the role of alcohol. This tendency is institutionalized in some states of the USA by defining the drinking driver in an accident as automatically at fault. The tendency is a basic operating assumption in the recent report to NIAAA, entitled Economic Costs of Alcoholism (Policy Analysis, Inc., 1974), in which it is assumed that the difference in average income between moderate-drinking and problem-drinking males is due to their difference in drinking behaviour. This cultural proclivity contrasts, for example, with attitudes in Bulawayo, Rhodesia, where it appears that adults do not think of alcohol as causing a problem, even if the problem arises when the person is intoxicated (Wolcott, 1974).

Attribution of problem to alcohol. Survey items on consequences of drinking have tended to rely on one of four "authorities" in attributing the problem to alcohol:

(1) the respondent himself/herself (e.g., "do you feel that drinking was harmful to your friendships and social life");

(2) a significant or authoritative other person (e.g., "a doctor told you to cut down on your drinking");

(iii) a definition on the part of legal or certifying authorities (e.g., "arrested for drunken driving");

(iv) an assumption on the part of the survey analyst that a drinking behaviour constituted a problem (e.g., "came to work drunk").

If not our common sense, then labelling theory should sensitize us to the fact that these "authorities" are not necessarily in agreement. Yet very little work has been done on the empirical relation between these different types of attributions. Obviously, there is room for considerable disagreement over whether a "problem" exists at all; thus, for instance, a respondent may not recognize that a friend has quietly dropped him because of impatience with his drinking, or conversely the survey analyst may impute the existence of a problem where the behaviour was not in fact problematic. Beyond this, the question of the role of alcohol in causing the problem is often quite ambiguous and as much a matter of social and situational definition as of any pharmacological or physiological mechanism.

Probing for a connexion between alcohol and problems. Despite these issues, most surveys of drinking problems have used direct measures which probe for a specific verbalized connexion between the problematic situation and the respondent's drinking behaviour. The issue of attribution of responsibility for the situation to alcohol can be avoided by switching to a correlational analysis of life problems and drinking behaviour, where the "dependent" variable to be explained is life problems rather than alcohol-related problems, and where alcohol's role in the problematic situation is imputed statistically by some such measure as "relative risk", rather than measured directly. General-population studies of the relation of drinking patterns to mortality (Room & Day, 1974) have taken this approach, and the triethic study by Jessor et al. (1968) comes close to taking it for a generalized measure of deviance. But this approach yields a measure of relation between alcohol and problems only for the population or subgroups rather than for individuals, and alcohol is not sufficiently strongly identified with most life problems for survey analysts to be willing to use "factor scores" or similar strategies to ascribe associational patterns in the group to the constituent individuals.

Temporal association between alcohol and problems for the individual. Another approach, which has not been much used, presumably because of the complexity of data required, is an analysis which measures the temporal association of drinking behaviour and problematic events or conditions in the life of the individual respondent. In this case, the unit of observation is each of a series of epochs or periods in the respondent's life, and the result would be a relational rather than causal statement about the joint occurrence of drinking and problems in each respondent's life. This approach is, of course, possible only when the "problem" under consideration is a repeatable event or sporadic condition; it would not be useful for studies of mortality nor, probably, of cirrhosis. Nevertheless, some such approach would be worth exploring as a means of progressing beyond the present practice of the unexamined attribution of causal relation involved in measuring "drinking problems".

Long-term physiological consequences of drinking. As we have already mentioned, long-term physiological consequences of drinking are perhaps the most difficult area for which to elicit valid data from a respondent. Surveys have used several types of measure: the respondent's self-estimation of a health problem due to drinking; a doctor's order to reduce intake; a putatively alcohol-related disorder such as cirrhosis; and a report of an alcohol-related accident or hospitalization. A combination of at least two of these enhances our confidence in the validity of the data, although the result is still not foolproof.

Social consequences of drinking. Measures of the social consequences of drinking have tended to centre around the respondent's significant role-sets: marriage and home-life; job and occupational life; friendships and social life. In addition, of course, what might be called consequences in the respondents' citizen-role - trouble with the police - have been measured. In each of the three major role-sets, the archetypal "problem" has been assumed to be a break in relationship, and complaints, arguments, and suggestions on reducing alcohol consumption from others have been assumed to be a more minor problem but on the same dimension as a break in relationship. Each of these assumptions may well break down in specific cases: for some respondents, a break in relationship is a solution rather than a problem, and in some relationships, complaints indicate no increased risk of a break. Nevertheless, however
arbitrary the assumptions, studies by Knupfer (1967), Cabalan (1970) and associates have at least consistently tried to measure differences in recency and in severity in each problem area, whereas many surveys have made do with "ever" items and one item per problem area.

Financial problems due to drinking. A problem area that has tended to lie uneasily between a drinking-related behaviour and a consequence of drinking is financial difficulties due to drinking. This has generally been poorly specified and measured: Mulford's item mixed it with family troubles in the wording of the item (Mulford & Wilson, 1966, p. 43), while the measure used by Cabalan and associates has combined "spent too much money on drinking, or while drinking" - a behavioural measure - with "felt drinking was harmful to my financial situation" - which understandably correlates well with job problems (Cabalan & Room, 1974).

4. Aggregations and interrelations of drinking problems

4.1 Reason for aggregating items

In spite of the deficiencies we have noted, and others that could be named, the dimensions of drinking problems that we have outlined have required dozens of items in the more extensive survey schedules. A number of methods of aggregating these items have been used by different investigators, but a feature they have in common is that they attempt to balance three different requisites:

(1) The need for a relatively simple and explicable conceptual scheme, tending to result in the use of summary scores and typologies.

(2) The need for sufficient numbers. Most survey analysts want not only to estimate prevalences but to describe characteristics of "problem drinkers". Hence they need a respectable number of "problem drinkers". This is not easy to manage with conventional survey sample sizes.

(3) The need for face validity. The cut-off points for the scores or typologies used in the analysis need to have some inherent plausibility.

The influence of the need for sufficient numbers for analysis should not be underestimated. For instance, the cut-off point for defining "problem drinkers" in Cabalan's book (1970) was set by balancing the competing demands of requisites (2) and (3). This cut-off point was later used by NIAAA to project the figure of 9 000 000 alcoholics in the USA. It is not entirely a jest to say that if Cabalan's sample had been twice the size, there would be half as many alcoholics in the USA today.

4.2 Need for a variety of definitions

This consideration underlines the arbitrariness of cut-off points in problems scores and measures, and suggests the necessity of offering, as for instance Clark (1966) did, a variety of definitions and measures to encourage understanding of the negotiability of prevalence statistics. As Bruun (1970) puts it, "One way to avoid the negative effects of the black-and-white thinking easily introduced by the dichotomy alcoholics/non-alcoholics is to try to use not only one but two or three measures thereby indicating the vagueness of our definitions... This will force the users to discuss what is behind these measures".

4.3 Disjunctive and conjunctive measures

Another way of emphasizing the issue of numbers is to note that survey measures of drinking problems are almost universally disjunctive, that is, "problem drinkers" are defined in essence by saying "yes" to one or two or three of a much larger number of items. But classical descriptions of the disease concept of alcoholism were conjunctive - Jellinek described a whole list of symptoms which were added to each other in a determinate sequence in his famous 1952 article. Even in 1960, his definition of "gamma alcoholism" is essentially conjunctive. A research worker dealing with general-population data once tried out a literal interpretation of Jellinek's approach: he applied a conjunctive definition requiring the
simultaneous presence of a list of items, but found that "to employ indicators for all the
descriptions of the species given by Jellinek soon eliminates virtually all cases" (Mulford,
1968, p. 10). Once again, we are reminded that clinical reality does not correspond to
reality in the general-population milieu.

It might be noted here that recent clinical definitions, faced with the administrative
necessities of a large-scale treatment system, have also tended to move to essentially
disjunctive definitions as in the "Criteria for the Diagnosis of Alcoholism" sponsored by the
National Council on Alcoholism (NCA) (1972). It is also noteworthy that earlier studies of
drinking problems made sustained efforts to preserve some conjunctivity in their measures, as
in Mulford's H-Technique Guttman scales (Mulford & Miller, 1960b, c); but even these loosely
conjunctive scales failed the conventional tests for scalability (Room, 1966), and Mulford's
final recommendation for a measure identifying problem drinkers combined (disjunctively) a
disjunctive social troubles score with disjunctive items indicating loss of control (Mulford,
1968, p. 27).

4.4 Overall drinking problems scores

The overall drinking problems scores used in various studies have varied considerably in the
number and nature of items used, in the time period covered, and the details of aggregation of
the scores. But stripped of their essence, nearly all of them have been additive scales
where the cut-off criterion for "problem drinking" or "alcoholism" is set relatively low,
resulting in an essentially disjunctive definition of "problem drinking": a problem drinker
is someone who gives response A, or response B, or response C, etc. Most of the scores have
included measures of social consequences of drinking - troubles with the police, job, spouse,
relatives, friends; the primary difference between scores has been in the extent to which the
scores drew also on areas beyond the ambit of social consequences.

The most inclusive scores used have been the Overall Problems Scores originally concep-
tualized by Knupfer (1972) and adapted by Cahalan (1970). These scores include items from
each of the four general areas of items discussed above. Knupfer's perspective in designing
the score was essentially clinical: all items on behaviour or consequences were to be treated
as potential symptoms by which the respondent could tell us of his underlying drinking problem.
Since, as the levels of severity have been defined, the measures of heavy drinking, of use of
alcohol for coping (or psychological dependence), and of symptomatic behaviour tend to be among
the most prevalent "problem areas", social consequences items tend not to play a great part in
determining whether the respondent satisfies the minimum "problem drinking" criteria.

Other surveys have used scores which reach considerably beyond the ambit of social
consequences of drinking. Besides short-term and long-term health consequences, Edwards
et al.'s Troubles with Drinking Score (1972b) includes symptomatic behaviour items, loss of
control items, and even an item - the most productive by far - on drinking behaviour "Have you
ever been 'under the influence'?"). Mulford's final "Loss of Control Index" (1968) includes,
as we have said, loss of control items besides items on social and health consequences of
drinking.

Most other investigators, as well as some of those named above, have used criterion scores
essentially based on social and health consequences of drinking. A good argument can be made
for separating the social and health aspects in the analysis, since they seem to have different
meanings and different correlates in the population.

4.5 Methods of aggregation for summary scores

With some exceptions, little attention has been paid in constructing summary scores to the
methods of aggregation used - the general rule is one point per drinking problem item or area,
irrespective of the mix of items or areas available in the questionnaire. Knupfer's (1972)
more refined system of points according to severity of problems does not alter the fact that
each problem area in the list of areas covered is weighted essentially equally. Scores such as
Edwards et al.'s (1972b), which do not subaggregate into scores for individual problem
areas, can be viewed as effectively weighting areas of content according to the number of items
in each area.
4.6 Incommensurability of items in summary scores

Overall summary scores are a tremendous convenience: they provide adequate numbers for analysis, and they form interval scales which are easily manipulable in multivariate analysis. The tendency in studies carried out by the Social Research Group, at least in recent years, has been to move away from them. Even a score limited to "social consequences" contains quite incommensurable items: e.g., an arrest, an expression of concern by a spouse, and drinking while on the job.

Because of this felt incommensurability, and because of a desire, as Knupfer put it, "to turn assumptions into hypotheses to be tested", studies of drinking problems by Knupfer and coworkers and Cahalan and coworkers, since Clark's pioneer article in 1966, have tended to place considerable emphasis on a roster of a dozen or so drinking problem-area scales, each based on between two and a dozen questionnaire items, both as tools for description and as the materials for an analysis of interrelations between "drinking problems".

4.7 Indicators of drinking problems

Most general-population surveys of drinking problems, since Mantis & Hunt's original report (1957), have used indicators of problems in various areas as a descriptive device (see compilations of earlier survey results in Clark, 1966, and Knupfer, 1967). A number of implicative regularities seem to emerge from all United States studies of drinking problems: e.g., problems with spouses are much more common than problems with friends and other social problems generally; drinking bouts, job problems and police problems (drunken driving or public drunkenness) are generally the rarest occurrences; police problems tend to arise with persons in the younger age groups and health problems with older persons; data on the time ordering of problems (Cahalan & Room, 1974; Fillmore, in preparation) show that drinking bouts, police problems and symptomatic behaviours both start and remit before problems arise with health, friends, relatives and spouse, which suggests that social frictions continue for a while even after the remission of problematic drinking behaviours. Perhaps the most crucial finding is that all drinking problems and problematic behaviours are more prevalent, at least among men, in the early twenties than at any later age; this finding contrasts with the typical age distribution - 35-60 years - in clinical populations.

4.8 Interrelationship of drinking problems

In terms of interrelations between drinking problems, the general findings of Clark's 1966 paper have held up well in later analyses (Cahalan, 1970, p. 40; Cahalan & Room, 1974, chap. 3; Clark & Cahalan, 1973; Cahalan & Roizen1; Fillmore, in preparation), as the analysis has been extended across time as well as cross-sectionally across problems. In the general population of the USA, having any particular drinking problem is only a modest predictor of having any other particular problem, and having a problem at one particular time is only a modest predictor of having the same problem at another time. The picture that seems to emerge is of a relatively large fraction of the population - perhaps 20% - which drinks enough to be at substantial risk of drinking problems, this fraction accounting for over three-quarters of all alcohol consumed (Room, 1970). There is a considerable turnover in a period of a few years in the persons who are in this relatively heavy-drinking fraction of the population (Cahalan, 1970, chap. 6; Room, 1972; Cahalan & Roizen1), so that over the course of their lifetime a somewhat higher proportion of persons (including perhaps a majority of males) have at one time or another been in this "at-risk" population. Among those drinking relatively heavily at any particular time, the occurrence of particular problems with drinking may be as much a matter of situational and social factors and of chance as one of relatively permanent characteristics of the individual's psychological state and life style. Conventional survey research methods, which as we have noted focus on the isolated individual usually measured at one point in time, allow only refracted measurement of factors other than those assumed to be relatively permanent properties of the individual respondent. The individual psychological and life-history variables most amenable to survey analysis do indeed show a substantial relation with drinking problems (Cahalan & Room, 1974), but fall far short of accounting for most of the variance in drinking problems.

5. The two worlds of alcohol problems

The classical description of alcoholism proposed a coherent entity marked by phases and symptoms which occurred in a regular, progressive order (Jellinek, 1952). Alcoholics were seen as presenting "prodromal signs" at younger ages, but the process typically culminated in the full-blown case only after age 30. This description was based on experience in clinical and other special populations in the USA, notably Alcoholics Anonymous.

Later analysis suggested that even in clinical populations, the coherence and unidimensionality of the entity had been overestimated (Trice & Wahl, 1958; Room; Park, 1973). However, the general clinical picture of a relatively coherent phenomenon marked by a lengthy drinking history in a population composed mostly of persons aged 35-60 remained fairly consistent.

As we have just noted, the picture in the general population seems markedly different. Drinking problems are generally more common at ages 21-24 than in middle age, and the overlap between different problems and in the same problem across time periods is markedly less than in clinical populations.

5.1 Studies comparing alcohol problems in clinical and general populations

There are by now several studies which apply the same measures to clinical and general populations and allow a direct comparison of the characteristics of alcohol problems in the two populations. Mulford & Wilson (1966) used the same measures of drinking behaviour and problems on a hospitalized population of alcoholics, on a sample of persons known to community agencies as having alcohol problems but domiciled in the community, and on a sample of the general population in the same community. As might be expected, the "known alcoholics" gave positive responses to drinking-history items intermediate between the high prevalences and positive responses in the hospitalized sample and the low prevalences in the general-population sample. But there was a very much greater overlap between a positive response on one drinking-history scale and a positive response on another scale for the "known alcoholics" than for the general population (Mulford & Wilson, 1966, pp. 28-29; see Room, 1966). Room (1968) found that it was only the subgroup of the general population with the most severe social problems with drinking, comprising less than 1% of the total adult population, who reported drinking patterns roughly commensurate with those reported in clinical samples. Similarly, Armor et al. (1975) found that the small subgroup (about 3%) of a nationwide sample defined as "problem drinkers" on the basis of a criterion including heavy drinking had a mean consumption level only about half that of clinical samples of alcoholics.

These studies add further support to the conclusion that there is a wide gulf between reality in the context of the general population and clinical reality. General-population measures as they have been used do not define a population which is equivalent in its alcohol-related behaviour to clinical populations. Measuring behaviour which is equivalent would require sample sizes far beyond any that have yet been contemplated.

5.2 Measurement error

In expressing this conclusion we are, of course, ignoring the issue of measurement error. It is known that alcohol consumption is underestimated in surveys of the population at large (Room, 1971c) and that, in general, there is some tendency for discreditable behaviour to be underestimated or backdated. But presumably, if a "denial factor" were operating, it would operate relatively consistently for all drinking problems, and therefore would tend to increase the overlap between problems among those who did report any problems. Thus the reported overlapping problems in the general population is likely to represent, if anything, an overestimate.

1 In a paper entitled "Assumptions and implications of disease concepts of alcoholism", presented at the 29th International Congress on Alcoholism and Drug Dependence, Sydney, 1970.
On the other side of the comparison, it may well be that the overlap of the various problems is overestimated in clinical populations. Clinical data are usually collected at the time of admission, when there is often a strong material incentive for the potential client to create a particular impression, which may well be that of a person with a host of problems. The influence of ideology and a general "admission factor" may also be felt. Trice & Wahl (1958) found that an Alcoholics Anonymous sample showed a higher overlapping of problems than a hospitalized sample of persons who did not belong to Alcoholics Anonymous, and Jellinek remarked on the occurrence of false positive responses among Alcoholics Anonymous members (1960, p. 38). A recent study in matched pairs of hospitalized patients found to be alcoholics showed that those who identified themselves as alcoholics responded positively to more drinking-history items than those who did not (Kaplan et al., 1974). These effects may have produced the considerably higher prevalences of drinking-history items for the hospitalized alcoholics than for the "known alcoholics" resident and interviewed in the community in Mulford & Wilson's study (1966).

5.3 Differences between estimates of problems among clinical and general populations

As Mulford & Wilson's study shows, it is unlikely that elimination of any clinical over-reporting would substantially bridge the gap between clinical and general-population findings. It remains to interpret the meaning of these findings. On the one hand, it is clear that projections of the number of "alcoholics" on the basis of results for the population at large are gross overestimates if the term "alcoholics" implies "persons like those in treatment for alcoholism". On the other hand, it is clear that the search for the "hidden alcoholic" and the increasing emphasis on case-finding and "secondary prevention" are doomed to failure if these efforts are predicated on the existence of a large hidden population many times greater than the number in clinics but resembling clinical populations in every way except that they are not hospitalized. Disjunctive definitions such as problem scores in the general population and the NCA criteria (1972) cast a fine net but catch many small fry; conjunctive definitions, such as classical disease concepts of alcoholism, cast a wide-meshed net and yield only a small catch in the general population. Any syndrome rigorously defined on the basis of clinical research and experience will apply to only a small group of all those in the general population with one or another kind of alcohol problem.

Beyond these truisms, we are in the realm of speculation. The processes by which individuals "leave" the general population and enter the clinical population have not been explored at all fully. Edwards (1973), in a report contrasting measures of alcohol problems used in a survey of the general population with those of a reporting agency in a single suburb, remarks on the importance of informal social mechanisms in the control of drinking problems in the general population: "society will respond to [the troubled drinker] through the actions of varieties of important noninstitutionalized persons such as his family, his neighbors, his employers, and the man at the bus stop" (p. 133). Presumably admission to a clinic often involves a lengthy process of wearing out the patience of everyone in the potential client's immediate environment; the clinic is a last resort when all social resources have been exhausted, often after the client has lost both spouse and job. Frequently the major potential function of the clinic for the client who wishes to re-establish himself is to serve as a vouching agency which may help to revive his credibility and social credit with those outside the clinic door.

5.4 "Problem drinking" as a poor predictor of "clinical alcoholism"

The disparity in age between alcoholic patients in clinics and "problem drinkers" in the general population is suggestive of another possible perspective. The lesser accumulation of problems and the younger ages of the latter group are sometimes taken as evidence that they represent simply an earlier stage of the full-blown entity seen in the clinic. In a limited sense this assumption is almost bound to be true: most clinical cases were indeed once in the general population, were once younger, and once had fewer problems. But there are so many more "problem drinkers" in the general population than there are clinical cases that "problem drinking" cannot be a very good prediction of clinical alcoholism: matching his survey with clinical and agency data, Edwards (1973) found that the number of persons he defined as "problem drinkers" on the basis of survey questions covering behaviour in a one-year period was nine times greater than the number of persons known as alcoholics to any "opposite" community agency.
Furthermore, the disparity in age between problem drinkers in the population at large and alcoholics in clinics is too great to fit a progressive model easily. If the former group were a prodromal form of the latter, we should expect a closer overlap in the age distributions. The considerable age gap we find suggests another mechanism is at work. Perhaps drinking problems among young men in the general population should be interpreted instead as a kind of "normal" or tolerated deviance. If young men are at liberty to drink heavily (Knopfer & Room, 1964), perhaps the scrapes and problems that result should not be regarded or treated too severely. Thus young men have quite a wide margin of social credit concerning the consequences of impulsive or risky behaviours, in the sense that the consequences tend not to be held permanently against them. However, the social norms decree that as time passes, the young man should settle down, get a steady job, marry, and abandon or at least modify his rash behaviour. Most men follow this general path in the course of time, and the prevalence of drinking problems accordingly decreases in the late twenties, gradually removing the protection of numbers from those who retain their youthful heedlessness and drinking styles. The labelling of middle-aged problem drinkers and their extrusion from the general milieu and incorporation into the clinical population thus derive not only from the fact that they are now old enough to have a considerable if often sporadic history of problems - which is in itself seen as implicative - but also from the fact that their behaviour is now uncommon and considered inappropriate to their age group. The middle-aged heavy drinker may indeed have changed his drinking style as part of his gravitation into an enclave subculture, but the more important fact is that those around him have changed their drinking habits. The emphasis on surreptitious drinking in the classical Alcoholics Anonymous drinking history is an indication of this ecological problem for the middle-aged heavy drinker.

It should be recognized that what have been offered here are plausible interpretations and not conclusive analyses of the apparent gap between realities pertaining to the clinical population and those pertaining to the general population. There seems now to be some international agreement between workers in the field of alcohol research, at least in Finland, the United Kingdom and the USA, on the importance of focusing on these issues, and more definitive assessments of the relations between the two worlds may be expected in the future.

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