©1990 The Institute of Mind and Behavior, Inc.
The Journal of Mind and Behavior
Summer and Autumn 1990, Volume 11, Numbers 3 and 4
Pages 531 [285] - 544 [298]
ISSN 0271-0137
ISBN 0-930195-05-1

The Conceptual Bind in Defining the Volitional Component of Alcoholism: Consequences for Public Policy and Scientific Research

Richard E. Vatz
Towson State University

and

Lee S. Weinberg
University of Pittsburgh

An essential element in both lay and professional definitions of alcoholism is the a priori claim that afflicted individuals lack control over their drinking and/or over their behavior while drinking. The social, legal and scientific consequences of accepting this claim are examined. Based on specific evidence drawn from recent journal articles, we argue that alcohol researchers fail to adequately engage the issue of volition and that their research designs and findings are thereby flawed.

What does "alcoholism" mean? Contrary to the assumption of large numbers of Americans, there is no clear definition – not in medicine, not in law, and not in the community at large (Blakeslee, 1984). The conceptual confusion arises out of the implicit postulating of a necessary but untestable component of psychiatric and medical theoretical definitions of alcoholism: a lack of volition, or the inability to control one's drinking behavior.[1]

Requests for reprints should be sent to Richard E. Vatz, Ph.D., Department of Communication, Towson State University, Baltimore, Maryland 21204.

[1]The American Psychiatric Association (APA) speaks of "alcohol dependence" and "alcohol abuse" as two types of alcoholism, but the distinctions are not important for this paper, for both involve the criterion of alleged inability to cut down. Some sources delineate "species" of "alcoholism" relative to the pattern of drinking (American Psychiatric Association, 1987, p. 173), and in some there is a concession as well that there may be a type of "alcoholism" that does not include uncontrollability as a necessary component (Jellinek, 1960). The APA concedes only the possibil-

The definitional confusion surrounding the concept of "alcoholism" is of more than theoretical interest. The combined necessity and untestability of this alleged lack of control results in the dissemination of unreliable information in the popular press and in the generation of unreliable research in the professional sphere. Beliefs about the nature of excessive drinking have serious consequences for public policy dealing with heavy drinkers and the acts in which they engage while intoxicated. If we believe that physicians are able to medically identify what alcoholism is and who is an alcoholic, we can more easily justify: the expenditures made by thousands of firms and public agencies which have employee-assistance programs; the spending of millions of dollars by health insurance concerns for alcoholic services; and the extending to millions of Americans who drink heavily financial and legal protections accorded to handicapped individuals.

The costs of identifying and treating "alcoholics" plus the expense of paying for the damage done by excessive drinking in this country exceeds $120 billion, according to the National Institute on Alcohol Abuse and Alcoholism (NIAAA) (Kolata, 1987b). Such estimates assume we are able to define alcoholism and identify which drinkers are "alcoholics," as opposed to just willful drinkers; moreover, the estimates of these costs are uniformly based on the assumption that alcohol is the *cause* of the actions of people who drink heavily, thereby combining cases wherein there is arguably such a connection (e.g., automobile accidents) with cases where there is arguably little if any causal connection (e.g., job absenteeism).

It is easy to understand why the public assumes such a causal connection. Statistically, alcohol consumption is highly correlated with a wide variety of anti-social and socially disvalued behaviors. There is near-ubiquitous quoting in both the popular and academic press of statistical estimates of alcohol-related social problems in America, statistics provided by alcohol interest groups, such as the NIAAA.[2] Significantly, when the NIAAA and other alcohol-interested parties present such statistics, they imply that the alcohol

ity of *unawareness* of "lack of control," and in only a minority of "people with alcoholism" (American Psychiatric Association, 1987, p. 173). More important, there is little or no reference in the popular or academic press to "alcoholism" that does not explicitly or implicitly involve the loss of control. One differentiation should be stressed, however. As we will refer to "alcoholism" as it is used in the popular press and academic research, we do not refer to either the pathoanatomical consequences of ingesting alcohol or what psychiatrists call "alcohol-induced organic mental disorders" (American Psychiatric Association, 1987). The latter notion does involve conceptual difficulties not dissimilar to those of the notion of "alcoholism," but that is beyond the scope of this paper.

[2]Here are some typical examples from typical lists: In about 90% of child abuse cases "alcohol is a significant factor" (Corbett, 1987, p. C5); almost one-half of all fatalities from driving accidents "involve alcohol" (Niven, 1984, p. 1913); "Alcohol is a factor in nearly half of America's murders, suicides and accidental deaths" (Lord, 1987, p. 56); and "Alcoholism and alcohol abuse . . . [creates] costs to the economy, which amount to about $117 billion a year, most of it in lost productivity" (Holden, 1987, p. 1132).

consumption is the cause of the incidents, and "alcoholism," with all of its conceptual fuzziness, not "heavy drinking," is almost invariably the terminology used to characterize the excessive alcohol consumption.

Such consistent popular press and, to a lesser extent, academic press acceptance of alcoholism as a disease has been a major factor in convincing the public. Seventy-nine percent of respondents in a 1982 Gallup poll assented to the notion that alcoholism is a disease (Blume, 1983, p. 471), with the implications that alcoholism is well-defined, identifiable and renders its victims out of control.

The Issue of Control of One's Own Behavior

The issue of "control" of one's own behavior – the volitional question – has been historically and continues to be a central premise of the theory that alcoholism is a disease. This has been granted by both supporters (Blume, 1983) and skeptics (Fingarette, 1988) of that view, although not without exception (see footnote 5).

The question of volition is the critical question in the diagnosis of alcoholism, particularly with respect to the formation of legal and social policies concerning how we deal with the drinking and behavior of so-called alcoholics. Despite all of the confusion over the meaning of alcoholism, most medical experts see some loss of control over one's drinking to be a defining hallmark, although a few experts argue that there exists a minority of cases in which alcoholism can theoretically exist without implying loss of control or an inability to abstain (Blume, 1983).[3]

The component of volition is supremely important since the assumption that "alcoholics" cannot control their drinking or behavior-while-drinking on their own is the explicit or implicit justification for providing free help, as well as excusing some people for their actions. It is important to stress, however, that the argument over whether "alcoholism" is an "illness" is at the same time an argument over the volition question. While one might logically maintain that alcoholics cannot control their drinking but that this lack of control does not constitute an "illness," the conventional view rests on the implied assumptions that alcoholics lack control and that this lack of control itself constitutes an illness. Yet lack of control cannot be measured, since willfulness can only be assumed and not tested. Even the American Psychiatric Association (APA) takes the position that psychiatrists cannot measure volition, a position taken in response to attacks on the insanity plea

[3]The concept of volition, however, like the concept of alcoholism itself, is more complicated than generally acknowledged. In addition to the question of whether one can control whether he or she drinks is the crucial question of whether and to what extent the drinker can control his or her *behavior after* ingesting large quantities of alcohol.

several years ago (APA, 1982). Still, a thorough examination of reports in the popular press before 1988 reveals not only an absence of *analysis* of the confounding issue of volition, but also no mention of the problem of its measurement.[4] Popular press articles from 1986–1987 (and certainly in years prior to these) imply that alcoholism is a discrete phenomenon and can be readily identified by professionals and even lay people who know the "symptoms."

Although the public does not feel confused about "alcoholism," the medical community is unable to provide a medically meaningful definition. The public usually conceptualizes disease in a simple, straightforward way, meaning a biologically unhealthy condition with a clear medical cause, such as infections. But the "disease" or "disorder," the term used by the APA's diagnostic manual advisedly to avoid definitional specificity (APA, 1987, p. xxii) of "alcoholism," is diagnosed by the psychiatric and medical communities mostly by criteria of behavior and powerlessness to reduce drinking. Powerlessness, or lack of volition, is typically assumed to exist if the drinker's family, legal or financial problems are severe and seen as a consequence of the drinking. Specifically, the APA's diagnostic manual posits uncontrollability of the heavy drinking as a diagnostic criterion, but this loss of volition is not measured directly, but inferred from the bad life experiences of the drinker and an undefined "desire" to "cut down" the drinking (APA, 1987, p. 168).

The imprecision in psychiatric diagnosis of "alcoholism" is mirrored in the medical community in general. There are no laboratory tests specific for alcoholism, nor could there be in view of the inability to scientifically measure a construct (Liskow and Goodwin, 1986, p. 196). Moreover, Liskow and Goodwin argue in a work well-received by the *Journal of the American Medical Association* (Craig, 1987) that research on "alcoholism" is hopelessly confused by conceptual inconsistency: "epidemiological studies of alcohol use and abuse are bedeviled by the uncertainties of what to measure and how to measure it. The terms alcoholism, alcohol dependence, alcohol abuse, problem drinking, and drinking problems continue to be used by different researchers in different ways" (p. 191).

Partially due to these definitional difficulties, the search for genetic markers for "alcoholism" has been unsuccessful (Nurnberger, Goldin, and Gershon, 1986). Researcher Donald Goodwin points out that "Almost without exception, whenever a report of an association between a marker and alcoholism is followed by attempts to replicate the finding, the findings are contradictory" (Goodwin, 1979, pp. 57–58). In sum, as Goodwin points out, "we are not certain that *anything* is inherited" (p. 60, emphasis in original). Most

[4]This includes a survey and content analysis of articles referenced under the title "alcoholism" 1985-1988 in *The National Newspaper Index*. The *Index* comprises *The New York Times, The Washington Post, The Los Angeles Times, The Wall Street Journal*, and *The Christian Science Monitor*.

researchers agree that the behaviors we call "alcoholism" are a result of a complex combination of innate influences, simple learned behavior and freedom of choice. The suspicion that there is some genetic component to uncontrolled heavy drinking rests on the finding that alcoholism, however defined, tends to run in families, even though the vast majority of children of biological parents diagnosed as "alcoholics" do not become "alcoholics" (in fact, a disproportionate number become lifelong teetotalers) and most "alcoholics" have no such family history. Studies of twins, even when twins are separated at birth and adopted by nonalcoholic parents, show significantly higher rates of alcoholism (again, even with varying definitions) in children of alcoholic parents than in children of alcoholic parents whose biological parents were nonalcoholic (Goodwin, 1979).

Liskow and Goodwin (1986, p. 206) ask the key question that goes to the root of all the confusion: even if there is a hereditary factor, "What is inherited?" The speculations as to what may be inherited include most prominently (a) an increased euphoria from alcohol, and (b) the *lack* of intolerance to alcohol. The surest thing scientific studies can tell us is who is genetically *undisposed* to become "alcoholic" (Goodwin, 1979).

Legal Consequences

It is not surprising that the conceptual confusion and uncertainty evident in the medical community regarding alcoholism and volition is reflected in the law's posture as well, including the differentiating between volition concerning drinking and volition concerning behavior after heavy drinking (see footnote 3). In a 1962 case involving drugs, the Supreme Court (*Robinson versus California*, [1962]) held that California could not punish narcotics addicts merely for being addicts, i.e., to criminalize the "status or condition" of being an addict amounted to cruel and unusual punishment. But in 1968 the Court held that Texas could punish public drunkenness despite the offender's being a chronic alcoholic (*Powell versus Texas*, [1968]). The divided Court ruled that while punishing an alcoholic based on his or her status as an alcoholic is impermissible and that punishment of the mere act of drinking might be similarly impermissible, the further act of public drunkenness is punishable.

A 1988 Supreme Court decision (*Traynor versus Turnage* and *McKelvey versus Turnage*, [1988]) in combination with the publication of a book (Fingarette, 1988) on the issue earlier in that same year (and quoted by the Court in that decision), marked a new phase in the debate over whether alcoholism is a disease. These two highly-publicized events seem to have the potential to significantly change legal and public perceptions of the volitional issue as well as other issues and assumptions surrounding "alcoholism" and heavy drinking (see below). The actual Court ruling involved only a decision as to whether

the refusal by the Veterans Administration (VA) to grant extensions of benefits to two "alcoholic" veterans on the ground that their "alcoholism" resulted from "willful misconduct" was inconsistent with Section 504 of the Rehabilitation Act.

Under the law governing veterans' benefits Congress has provided for extensions to "any eligible veteran who was prevented from initiating or completing such veteran's chosen program of education within such time period because of a physical or mental disability which was not the result of such veteran's willful misconduct" (38 U.S.C. Section 1662(a)(1) [1982]). The VA's refusal was based on its conclusion that alcoholism and the resulting inability of the claimants to complete their education during the allotted time resulted from their "willful misconduct." The VA took the view that some people simply choose to drink too much (primary alcoholism) while others drink too much as a secondary effect of an acquired psychiatric disorder (secondary alcoholism). The former are denied time extensions for benefits because their conditions presumably result from "willful misconduct," while the latter are granted extensions because it is believed that they do not willfully contract these psychiatric disorders.

The Supreme Court decision (April 20, 1988), however, did more than provide an interpretation of Section 504, which prohibits the denial of benefits to anyone "solely by reason of his handicap" (29 U.S.C. Section 794 [1982]). Protestations by the Court to the contrary notwithstanding, this decision amounted to official recognition that except for those suffering from an identifiable underlying mental illness, all other "alcoholics" may be conclusively presumed to have a willfully incurred disability. While noting the lack of agreement in the medical literature on the nature of "alcoholism," and explicitly refusing to address whether or not it is a disease, the logic of the majority opinion necessarily leads to the following conclusions: (a) "primary alcoholics" drink too much by choice, and (b) volitional conduct cannot logically constitute disease, although its *consequences*, of course, can – as in lung cancer resulting from smoking or cirrhosis resulting from drinking. Probably due to the highly publicized Supreme Court case and the Fingarette (1988) publication, many popular press articles in 1988, for the first time, make reference to the existence of an ongoing controversy regarding whether alcoholism is an illness (see footnote 4).

Research Consequences – Historical

More subtle but potentially more significant than the social and legal consequences of the confusing conceptualization of alcoholism concerns the effect on the very process by which our knowledge of "alcoholism" is acquired: scientific research on "alcoholism." If there is no scientifically meaningful con-

cept of "alcoholism," the result must be the production of flawed scientific research. Fingarette (1988) examines the scientific evidence underlying the widely held public belief that excessive drinking may be meaningfully thought of as a disease, and he argues that most of the major assumptions of the alcoholism-as-disease ideology (e.g., the alcoholics' lack of control, the inexorable fall after an alcoholic takes one drink, the *medical* nature of alcoholic treatment, and the belief that the scientific community consensually recognizes alcoholism as a disease) are without scientific validity. He especially singles out assumptions concerning ability to control the consumption of alcohol. What makes Fingarette's contribution most noteworthy is his reliance on conventional medical sources and respected establishment "alcoholism" researchers (e.g., Donald Goodwin and George Vaillant) for proof of some of his contentions.[5]

For over two decades, psychiatrist and psychiatric critic Thomas Szasz has written on the myth of alcoholism as a disease (Vatz and Weinberg, 1983). For example, Szasz (1972) questioned the same myths addressed by Fingarette, including the argument that it is a *post hoc, ergo prompter hoc* fallacy by which the problems and failures of "alcoholics" – such as criminality, homelessness, job difficulties, and divorces – are assumed to be caused by drinking, and not vice-versa.

The new threat to the public's virtually unquestioned acceptance of the disease model of alcoholism made possible by changes in popular press reporting, rather than by new research discoveries, presages a new emphasis in research on alcoholism – genetic markers which can "prove" there is a "disease" of heavy drinking. For if "crises" generate the emergence of novel theories in science (Kuhn, 1970), then alcohol interests must soon find a mystifying escape from the new skepticism regarding alcoholism as a disease (Vatz and Weinberg, 1989). Thus, it is likely that there will be more frequent announcements of scientific "discoveries" to once again authenticate alcoholism as a disease (for a typical example, see Kolata, 1987a; "New Blood," 1988). These studies, as we will see below in our examination of current research, still plagued by the apparently inescapable conceptual problems in alcohol research, do not address the volitional question. In a recent issue of *The New England Journal of Medicine* (Vatz and Weinberg, 1988) the present authors have criticized one such typical and widely publicized study (published in that same journal) purporting to find a "genetic marker" for "alcoholism." In the study in question, "alcoholism" is never distinguished from any other kind

[5]George Vaillant, highly-respected among alcohol researchers, sees alcoholism as a "disease," but expresses skepticism as to whether "loss of control over the ingestion of alcohol [is either] a necessary or sufficient criterion for diagnosing alcoholism" (1983, p. 308), although he concedes, drinkers with "alcohol-related problems" perceive themselves as such (p. 308). Vaillant derides the notion of willpower as a method of controlling drinking (p. 196).

of heavy drinking, so the authors may be identifying at most a possible risk for heavy drinking, or, perhaps, as they themselves concede, a marker only for the *effects* of heavy drinking (Tabakoff et al., 1988). Yet, the lead author, scientific director of NIAAA, argues explicitly that his and other alcohol research demonstrates that "a biological predisposition to alcoholism exists in many individuals" (Tabakoff, 1987, p. A26).

Most of the private and public support, sympathy, and spending on alcohol-related problems are grounded in the alcoholism-as-disease assumption, an assumption which is historically characteristic of alcohol research in general. "Most alcoholism treatment programs," as Bower (1988) points out, "operate on the assumption that people seeking their help have a disease" (p. 88). Adoption of the view that heavy drinking is controllable behavior might result in the weakening of the support systems – medical, familial, business, and government – that lessen the penalties which society exacts from irresponsible drinkers.

Research Consequences – Current

Liskow and Goodwin (1986) acknowledge that "The clinical course of alcoholism is obscured by . . . a lack of agreement on the definition of the illness" (p. 197). But the increasing challenges to the illness model (for history and analysis of the "illness model" in psychiatry, see Conrad and Schneider, 1980) and attendant conceptual problems are only sporadically acknowledged in current alcohol research. For example, Klerman (1989) states the current view in *The New England Journal of Medicine*: "There has been gradual acceptance of the concept that alcoholism is a disease, as manifested in policy statements by the American Medical Association and the creation by Congress of the National Institute of Alcohol Abuse and Alcoholism as part of the Public Health Service" (p. 394).

Medical establishment publications have not yet reflected the logic that if control is necessarily central to the concept of alcoholism, then control should be addressed in all research designs. But if control cannot be measured, then valid research is not possible. Whether recognized or ignored, conceptual problems plague alcoholism research. And it is our contention that these problems therefore vitiate much of extant alcoholism research. To examine this contention we have reviewed major representative research on alcoholism published in 1988.

Based on our prior work (Vatz and Weinberg, 1988), our expectation was that the definitional debate, conceptual fuzziness, and frequent examples of illogic which have characterized the public and legal discussion of alcoholism and alcoholics would be evident in the current medical/scientific literature as well. Because of the centrality of the volition criterion for alcoholism, we

sought to examine specifically the current handling of the issue of whether the concept of alcoholism entails the idea that afflicted individuals are impaired in their ability to choose not to drink. Our expectation on this issue, fueled by our general familiarity with research on alcoholism over the years, was that researchers would either acknowledge the importance of this issue but gloss over it because it cannot be measured, or, more likely, they would ignore volition, thus making it unnecessary to distinguish among different types of excessive drinkers and therefore beg the question of the need to establish the volitional component which is the critical and necessary factor for differentiating alcoholics from heavy drinkers. In the likely case of the latter situation, we expected to find either no effort to define "alcoholic" beyond the state of being a patient in an alcohol treatment program or, alternatively, where the effort is made, it would involve heavy reliance on the criteria for alcoholism in DSM-III-R, criteria which themselves do not address the volition issue except indirectly by inference from financial, legal or familial problems (APA, 1987, pp. 165–168). In order to more fully explore these expectations, we compiled a list of journals based upon a review of the journals cited most frequently by prominent defenders and attackers of the disease concept of alcoholism. These included: *Alcoholism: Clinical and Experimental Research, American Journal of Psychiatry, Archives of General Psychiatry, British Medical Journal, British Journal of Addiction, British Journal of Psychiatry, International Journal of the Addictions, Journal of Studies on Alcohol, Journal of the American Medical Association*, and *New England Journal of Medicine.*

We then reviewed the tables of contents of all of the issues of these journals for 1988 and identified all titles which specifically included the terms "alcoholism" or "alcoholic." From this list we chose for the most part major articles or original articles rather than commentaries, correspondence, or research notes. By focusing on articles which used the terminology "alcoholic" or "alcoholism," we eliminated the many pieces which address the impact of alcohol intake on various bodily functions and diseases. Our goal was not to examine all articles on alcohol, only articles expressly concerned with "alcoholism" or "alcoholics." We do not doubt the dangers of excessive drinking, nor do we criticize the research examining social or behavioral correlates of excessive drinking. However, we do argue that studies explicitly examining "alcoholism" or "alcoholics" should provide explicit definitions of these terms, and definitions that engage the volition issue. Yet, our review of the scientific literature in 1988 reveals disturbingly little discussion of the definition of "alcoholism" or "alcoholic." What follows are brief summaries and analyses of the manner in which the issue of volition and/or its measurement is dealt with or avoided in selected articles from 1988 alcohol research.

Hill, Steinhauer, Zubin, and Baughman (1988) attempt to explore whether a marker can be helpful in identifying those at risk "for developing alcohol-

ism" (p. 545). In addition, however, Hill et al. report, "Those who agreed were sent a confirming letter asking them to refrain from using all alcohol and drugs . . . for 48 hours before coming into the laboratory" (p. 547), a request which concedes that the subjects of the study could, at least for 48 hours, choose not to drink. This dramatic point is made without argument or explanation as to its significant implications regarding volition and, therefore, the meaningfulness of the concepts "alcoholism" or "alcoholic."

In a companion article arising out of the same research (Hill, Aston, and Rabin, 1988), the same conceptual problems are evident. Hill et al. attempt here to show that "alcoholism is transmitted genetically" (p. 811) by looking for the "genetic linkage of an alcoholism susceptibility (AS) gene(s) to a well-defined polymorphic marker" (p. 811). Yet the subjects of the study were simply those who met the DSM-III-R criteria along with the Feighner criteria for alcoholism. Both the Feighner criteria (Feighner et al., 1972, pp. 60–61) and the DSM-III-R criteria, as indicated earlier, use the criterion of inability to control drinking, but neither provides a way to distinguish volitional heavy drinkers from non-volitional heavy drinkers. At best, therefore, Hill et al. might have demonstrated some evidence to show that heavy drinkers are more likely than the general population to have a particular blood marker which, in turn, might be linked to genetic make-up. However, like Tabakoff et al. (1988) and most other researchers, failing to compare volitional heavy drinkers with non-volitional heavy drinkers seriously weakens any claim to have found, as the title implies, "suggestive evidence of genetic linkage between alcoholism and the MNS blood group" (p. 811).

O'Sullivan, Rynne, Miller, O'Sullivan, Fitzpatrick et al.(1988) attempt to trace the drinking behavior of several types of alcoholics following discharge from the hospital. Such studies, of course, are contaminated at the outset in that they select for study those individuals who have been admitted for detoxification treatment at the hospital. No effort is made to measure volition among those in need of detoxification, and again there is no differentiation made between "alcoholics" and heavy drinkers.

Cyr and Wartman (1988) argue that many outpatients are alcoholics and that the asking of simple questions can identify them. Doctors should, according to Cyr and Wartman, routinely ask patients two questions which Cyr and Wartman's research purports to show to be effective measures of alcoholism. This is demonstrated by comparing answers to these questions to answers given on the *Michigan Alcohol Screening Test* (MAST) which is used to identify alcoholics. The two questions, which are not specifically asked on the MAST, are "Have you ever had a drinking problem?" and "When was your last drink?" Cyr and Wartman recommend "the routine incorporation of these . . . into the medical history" (p. 51). Again, however, the MAST standard by which Cyr and Wartman identify alcoholics may in fact only

identify heavy drinkers and, at best, identifies heavy drinkers whose drinking poses problems for them and for their families. It, too, cannot distinguish volitional from non-volitional heavy drinkers.

The research reported by Schuckit, Risch, and Gold (1988) purports to show that currently non-alcoholic sons of alcoholic fathers have "less intense responses to ethanol" (p. 1391), a finding which suggests that the children of alcoholics may process alcohol differently than the children of non-alcoholics. This would lend support to the belief that inherited biochemical factors may play a role in drinking behavior. The methodology employed here to define "alcoholism," however, is flawed substantially beyond the lack of engagement of the criterion of volition. First, the very existence of an alcoholic father is determined only on the basis of questionnaire responses and follow-up interviews of students who claim that their biological fathers "met the DSM-III criteria for alcoholism" (p. 1392). Apparently, direct contact was not made with these fathers. Second, since sons who themselves "fulfilled the DSM-III criteria for alcoholism, drug abuse, or any major psychiatric disorders or who had any major medical disorders were excluded from the sample" (p. 1392), the finding that such individuals process ethanol differently from others ignores the necessary components for even a lay discussion of "alcoholism"; that is, the propensity to drink at all, let alone to drink to excess.

Ciraulo, Sands, and Shader (1988) review the literature concerning the abuse of benzodiazepine among "alcoholics" (p. 1501). The literature seems to indicate that while effective, this drug is more likely to create dependency problems among "alcoholics" than among recipients of the drug in general population. The authors raise three methodological concerns with the literature: inconsistent terminology variously purporting to study "abuse potential," "addictiveness," and several other conditions; inconsistent operational definitions of whatever terms are used; and a failure to distinguish among the types of benzodiazepines being prescribed to patients (p. 1502). Ironically, even to those expressing sophisticated sensitivity to aspects of the research method and design of the subject under examination, the issue of what is meant by the term "alcoholic," and what various operationalizations have been employed in the literature under review is not even mentioned. If the earlier studies claim that they have examined the effect of the drug on alcoholics, then it is accepted without question that all of these researchers meant the same thing by the term and that they all measured it in precisely the same manner.

Consistent with E. Fuller Torrey (1988) and others who argue that the homeless are overwhelmingly alcoholic and/or mentally ill, Koegel and Burnam (1988) examined "alcoholism" in a sample of homeless adults and compared them to a matched sample of Los Angeles residents. They found more alcoholism among the homeless and many more "mental illnesses" among the

homeless alcoholics than among those alcoholics residing at home. Unlike the other studies reviewed, Koegel does address the definition of alcoholism and, interestingly, states that "our estimates of the prevalence of alcohol use disorder are based on the presence of either alcohol abuse or alcohol dependence. The term alcoholism, in this report, is likewise used to refer to people with either alcohol abuse or alcohol dependence" (p. 1013).

If Koegel and Burnam are using the term "alcoholism" to include all types of heavy drinkers, then they are tacitly admitting that volition is irrelevant to the diagnosis of alcoholism. The use of this broadened notion of the term "alcoholic" makes it indistinguishable from "heavy drinker" and contradicts even the much less rigorous popular conceptions of "alcoholism," as well as scientific or medical definitions. If their use of the term "alcoholism" is meant to convey a sense of uncontrollable drinking, the authors have failed to make any effort to measure it either in the homeless or resident populations under examination.

Ettorre (1988) presents data on Alcoholism Treatment Units in Britain and makes no attempt to explain the use of the term "alcoholism" or to suggest whether these units distinguish among relative levels of volitional drinking. We found that British journals and researchers appear in general even less cognizant of or concerned with the definitional conundrum than their American counterparts.

Our review demonstrates that the great preponderance of research articles published in the leading journals in the fields of medicine, psychiatry and alcohol studies continue to make two major errors. First, they study as "alcoholics" or those suffering from "alcoholism" patients receiving treatment for alcohol intoxication, while not examining the hospital admission criteria or diagnosis. Second, if they do attempt to classify subjects themselves rather than relying on hospitalized heavy drinkers, researchers employ DSM-III-R criteria which do not successfully address the question of volition, an element which constitutes the *sine qua non* for meaningfully and consistently conceptualizing "alcoholism" or "alcoholic."

The literature is uniform neither in its use nor its type of confusion over the concepts of "alcoholic" and "alcoholism." Indeed, many such articles make no reference to "alcoholism" or "alcoholic." For example, Shaper, Wannamethee, and Walker (1988) examined relationships between groups of drinkers ranging from none/occasional to heavy and the mortality rates in general and cardiovascular mortality rates in particular. Again, no methodological problem arises regarding the need to address volition in a study simply analyzing alcohol intake and its consequences. Studies such as this one have no bearing on our primary claim: those who do purport to be studying "alcoholism" and/or "alcoholics" make major and damaging conceptual and methodological errors.

Conclusion

That both sophisticated scientific researchers and journalists are consistently inattentive to the issues we have raised should once again alert us to the dangers of science being locked into extant paradigms. We do not intend by our efforts to minimize the human suffering experienced by heavy drinkers and their families, nor do we intend to denigrate the efforts made by medical and other professionals to alleviate that suffering. We do, however, seek to move both the scientific and public debates in the direction of rigorous engagement of important issues and away from passive acceptance of conventional assumptions.

In the end, decisions regarding the allocation of resources for research and/or for helping people should result from scientifically valid and honest debate on the relative merits of the claims of those seeking financial support from public sources. The evidence which we have presented in this paper of the low level of professional and public discourse about the problem of heavy drinking suggests that no such debate can be possible without clear, consistent and meaningful use of alcohol research concepts.

References

American Psychiatric Association. (1982). *American Psychiatric Association statement on the insanity plea.* Washington, D.C.: American Psychiatric Association.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd edition, revised). Washington, D.C.: American Psychiatric Association.

Blakeslee, S. (1984, August 14). Scientists find key biological causes of alcoholism. *The New York Times*, pp. C1, C3.

Blume, S. (1983). The disease concept of alcoholism. *Journal of Psychiatric Treatment and Evaluation*, *5*, 471–478.

Bower, B. (1988, August 6). Intoxicating habits: Some alcoholism researchers say they are studying a learned behavior, not a disease. *Science News*, *134*, 88–89.

Ciraulo, D.A., Sands, B.F., and Shader, R.I. (1988). Critical review of liability for benzodiazepine abuse among alcoholics. *American Journal of Psychiatry*, *145*, 1501–1506.

Conrad, P., and Schneider, J.W. (Eds.). (1980). *Deviance and medicalization: From badness to sickness.* St. Louis: C.V. Mosby Company.

Corbett, A. (1987, April 6). The alcoholics' legacy. *The Washington Post*, p. C5.

Craig, J.M. (1987). Psychiatry – Medicine [Review of *The Medical Basis of Psychiatry*]. *Journal of the American Medical Association*, *258*, 1396–1397.

Cyr, M.G., and Wartman, S.A. (1988). The effectiveness of routine screening questions in the detection of alcoholism. *Journal of the American Medical Association*, *259*, 51–54.

Ettorre, B. (1988). A follow-up study of alcoholism treatment units: Exploring consolidation and change. *British Journal of Addiction*, *83*, 57–65.

Feighner, J.P., Robins, E., Guze, S.B., Woodruff, R.A., Winokur, G., and Munoz, R. (1972). Diagnostic criteria for use in psychiatric research. *Archives of General Psychiatry*, *26*, 57–63.

Fingarette, H. (1988). *Heavy drinking: The myth of alcoholism as a disease.* Berkeley: University of California Press.

Goodwin, D.W. (1979). Alcoholism and heredity. *Archives of General Psychiatry*, *36*, 47–61.

Hill, S.Y., Aston, C., and Rabin, B. (1988). Suggested evidence of genetic linkage between alcoholism and the MNS blood group. *Alcoholism: Clinical and Experimental Research*, *12*, 811–814.

Hill, S.Y., Steinhauer, S.R., Zubin, J., and Baughman, T. (1988). Event-related potentials as markers for alcoholism risk in high density families. *Alcoholism: Clinical and Experimental Research, 12*, 545–548.

Holden, C. (1987). Alcoholism and the medical cost crunch. *Science, 235*, 1132–1133.

Jellinek, E.M. (1960). *The disease concept of alcoholism.* New Haven: Hillhouse Press.

Klerman, G.L. (1989, February 9). Treatment of alcoholism. *The New England Journal of Medicine, 320*, 394–395.

Koegel, P., and Burnam, M.A. (1988). Alcoholism among homeless adults in the inner city of Los Angeles. *Archives of General Psychiatry, 45*, 1011–1018.

Kolata, G. (1987a, November 10). Alcoholism: Genetic links grow clearer. *The New York Times*, pp. C1–C2).

Kolata, G. (1987b, December 13). Alcoholism: The judgment of science is pending. *The New York Times*, p. 26E.

Kuhn, T.S. (1970). *Structure of scientific revolutions* (2nd edition). Chicago: University of Chicago Press.

Liskow, B.I., and Goodwin, D.W. (1986). Alcoholism: In G. Winokur and P. Clayton (Eds.), *The medical basis of psychiatry* (pp. 190–211). Philadelphia: W.B. Saunders Company.

Lord, L.J. (1987, November 30). Coming to grips with alcoholism. *U.S. News and World Report*, pp. 56–63.

New blood test can identify alcoholics. (1988, January 21). *The Washington Post*, p. A16.

Niven, R.G. (1984). Alcoholism – A problem in perspective [Editorial]. *Journal of the American Medical Association, 252*, 1912–1914.

Nurnberger, J.I., Jr., Goldin, L.R., and Gershon, E.S. (1986). Genetics of psychiatric disorders. In G. Winokur and P. Clayton (Eds.), *The medical basis of psychiatry* (pp. 486–521). Philadelphia: W.B. Saunders Company.

O'Sullivan, K., Rynne, C., Miller, J., O'Sullivan, S., Fitzpatrick, V., Hux, M., Cooney, J., and Clare, A. (1988). A follow-up study on alcoholics with and without co-existing affective disorder. *British Journal of Psychiatry, 152*, 813–819.

Powell v. Texas, 392 U.S. 514 (1968).

Robinson v. California, 370 U.S. 660 (1962).

Schuckit, M.A., Risch, S.C., and Gold, E.O. (1988). Alcohol consumption, ACTH level, and family history of alcoholism. *American Journal of Psychiatry, 145*, 1391–1395.

Shaper, A.G., Wannamethee, G., and Walker, M. (1988, December). Alcohol and mortality in British men: Explaining the U-shaped curve. *The Lancet*, pp. 1267–1273.

Szasz, T. (1972, July). Bad habits are not diseases: A refutation of the claim that alcoholism is a disease. *The Lancet*, pp. 83–84.

Tabakoff, B. (1987, December 17). Alcoholism: A treatable disorder [Letter to the editor]. *The Washington Post*, p. A26.

Tabakoff, B., Hoffman, P.L., Lee, J., Saito, T., Willard, B., and De Leon-Jones, F. (1988). Differences in platelet enzyme activity between alcoholics and nonalcoholics. *The New England Journal of Medicine, 318*, 134–139.

Torrey, E.F. (1988). *Nowhere to go: The tragic odyssey of the homeless mentally ill.* New York: Harper and Row.

Traynor versus Turnage and McKelvey versus Turnage, 108 S. Ct. 372 (1988).

Vaillant, G.E. (1983). The natural history of alcoholism. Cambridge: Harvard University Press.

Vatz, R.E., and Weinberg, L.S. (Eds.). (1983). *Thomas Szasz: Primary values and major contentions.* Buffalo: Prometheus Books

Vatz, R.E., and Weinberg, L.S. (1988). Correspondence. *The New England of Medicine, 319*, 179.

Vatz, R.E., and Weinberg, L.S. (1989, March 7). There's a new skepticism toward alcoholism as a disease. *The Washington Post*, p. WH6.