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Critical Explanations—Biological, Psychological, and Social—of Drinking Patterns and Problems from the Alcohol-Related Longitudinal Literature

Critiques and Strategies for Future Analyses on Behalf of the World Health Organization

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1. INTRODUCTION

Generalization of scientific findings is contingent on replication of results. This is particularly critical for research concerning the correlates and prediction of human behavior where cultural and temporal factors may alter findings. Alcohol-related longitudinal research is rich and bountiful; it permits exploration of the degree to which replication of findings has taken place, particularly replication across differing cultural and temporal frames, and the development of research strategies that might provide tests of replication.

The longitudinal research design, itself, is a persuasive technique for examining a number of research questions with regard to human behavior in general and alcohol-related behavior in particular. This design can (1) determine the antecedents of particular behaviors, (2) assess and describe the incidence and chronicity/remission of behaviors and their correlates, and (3) differentiate in the timing of antecedents and correlates of behaviors (Clausen, 1978). Longitudinal research designs using normal representative populations are ideal for shedding light on the understudied and little-understood issues of incidence, chronicity, and remission of given drinking patterns and alcohol problems over the life course and their correlates and antecedents, for assessing social change as it

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influences individual lives, for assessing the relationship of alcohol use to morbidity and mortality, and for disentangling biological, social, and personality factors (and their possible interactions) as they contribute to the incidence, chronicity, and remission of drinking patterns and problems.

This chapter deals with three major research findings emerging from the alcohol-related longitudinal literature, which has used, for the most part, general population samples. The three general research findings are: (1) an antecedent to serious alcohol problems is youthful antisocial behavior (conduct disorder); (2) an antecedent to serious alcohol problems is a genetic predisposition to them; (3) environmental change on the aggregate level can govern the incidence, chronicity, and remission of serious alcohol problems on the individual level.

This chapter considers the degree to which these findings have actually been replicated across existing studies, the degree to which the studies suffer from methodological weaknesses, and the degree to which the subjects in these studies represent culturally and historically distinct groups of people, thereby contributing to stronger statements regarding generalization. Further, the chapter not only is oriented toward a critical appraisal of the research findings as they now exist, but also proposes new research strategies which would systematically replicate findings and correct methodological weaknesses.

2. RESEARCH FINDING 1: AN ANTECEDENT TO SERIOUS ALCOHOL PROBLEMS IS YOUTHFUL ANTISOCIAL BEHAVIOR (CONDUCT DISORDER)

A tradition of studies from the 1950s sought to locate behaviors in childhood and youth that would ultimately predict alcohol-related adult behaviors. Although not all of them focused on "deviant" youth, many did. For instance, Robins utilized a longitudinal design of white, child-guidance-clinic patients (Robins, 1966); the McCords used delinquency-prone boys (McCord and McCord, 1962); Vaillant used a sample of Harvard students and also a sample of inner-city boys (Vaillant, 1983); and Monnelly and his colleagues used a sample of boys in residential treatment for youth with behavioral problems (Monnelly et al., 1983). On the other hand, Jones's sample (1968, 1971) was white and middle class, while Amundsen's sample consisted of all 19-year-old boys screened for the military in Norway (Amundsen, 1982).

The ages of measurement for these studies differed as well: Robins measured males between ages 13 and 46; the McCords measured boys between a mean age of 8 until they reached their 30s; Vaillant's college students were measured first at age 18 and then at age 59 and his inner-city boys at 16 and 47; Monnelly et al.'s boys were under age 16 at Time 1 and over 60 at Time 2; Jones's sample was 10 years old at first measurement and 43 at last measurement; Amundsen's universe of boys was first measured at age 19 and last measured at age 50.

Taken together, these studies suggest that boys exhibiting antisocial behavior at first measurement tend to become alcoholic more often than boys who do not. Further, they tend to experience other problems in adulthood (see Robins, 1984, for a review of