

The Origins of Alcohol Studies: E. M. Jellinek and the documentation of the alcohol research literature

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Summary

The beginning of a modern field of alcohol studies based on multidisciplinary research and treatment for alcohol problems is described. The role of E. M. Jellinek in the creation of this field is analysed in terms of his activities to identify, gather, and disseminate alcohol research information. This work influenced the direction, and laid the foundation, for alcohol research for the next several decades.

Introduction

Beginning in the mid-1930s and continuing over the next two decades, there was a shift in perspective in the United States regarding public attitudes toward alcohol use and alcohol problems. The 'alcohol problem', which during the heyday of temperance agitation and national prohibition had been approached in chiefly legislative terms, gradually became accepted as a public health problem with both medical and social ramifications. Attention shifted from alcohol as the problem to problems caused by alcohol use, and the approach changed to one of scientific research. Many individuals and organizations were involved in the transformation to this new 'scientific approach' to alcohol problems, but perhaps the most important figure was E. M. Jellinek. He was one of the early pioneers in research and publication on the physiological and psychological effects of alcohol on the individual. He became identified with the disease conception of alcoholism—the idea that alcoholism was a progressive medical disease with a distinctive symptomatology. This idea was the nucleus around which the modern alcoholism movement coalesced.

Jellinek's most significant contribution, however,

was one that has received far less attention than his research, publications, or educational efforts. He directed a project to systematically review and document the existing international scientific literature on alcohol use and alcohol problems. The development of this literature base provided the foundations for an academic and scientific field which became known as alcohol studies. It also exposed gaps in knowledge, thus pointing the way for future directions in research. In short, E. M. Jellinek helped define and shape a field of study. While others made vital contributions to research on alcohol, Jellinek was at the center of that research effort. He performed the literature reviews that determined research directions in the field for a generation. "It was Jellinek," wrote his friend and colleague Mark Keller, "who imaginatively created the tools, projected the researches, stimulated the studies, guided the analyses, enriched the reporting, which made the scientific approach a reality" (p. xv).¹ This study will examine the importance of Jellinek's documentation efforts in the creation of alcohol studies as an academic and scientific field, and it will look at the influence of this field on the development of a modern alcoholism movement

geared toward the prevention and treatment of the disease of alcoholism.

The Nation After Repeal

In 1933 the Twenty-first Amendment repealed national prohibition and, in so doing, "ended America's only experiment with a national alcohol use policy" (p. 188)² based on legal controls and personal abstinence. Repeal offered no guidelines to fill this national void; nor did it necessarily reflect a failure of the prohibition alternative. Mark Keller has speculated that

"there was probably more popular support for prohibition than most of its opponents and denigrators have been willing to concede. There was much hopeful if naive sentiment for putting an end to the evils of the saloon and of alcohol by national prohibition" (p. 18).³

In fact, prohibition was remarkably successful in terms of significant decreases in alcohol consumption, alcohol-related arrests, and hospitalizations for alcoholism and associated diseases.⁴ Several noticeable changes in drinking patterns also occurred during prohibition. While alcohol consumption decreased significantly among the lower-middle and working classes, drinking became more acceptable among the higher income groups, and there was some increased consumption by middle- and upper-class women and youth.⁵ Also the saloon, against which the temperance movement had directed much of its wrath, effectively disappeared as the hub of lower-middle and working class drinking during prohibition. After repeal, the alcohol beverage industry wisely dissociated itself from the saloon business, and such establishments never came back on a pre-prohibition scale (pp. 174-175).⁶

Yet in spite of its successes, the 'noble experiment' lasted scarcely more than a decade. By the late 1920s public opinion was running against national prohibition due primarily to poor enforcement of the Volstead Act and related local legislation, the sensationalization of illegal liquor activities, and the skillful lobbying of the Association Against the Prohibition Amendment (pp. 154-157).^{6,4} Not all Americans had changed their minds about alcohol use, however. As economist Clark Warburton noted:

"This reversal of public sentiment does not represent a unanimity of public opinion. The return to the states of the alcohol problem by repeal of the Eighteenth Amendment is not the final solution of the matter. Public opinion is still

divided in respect to the use of alcoholic beverages and the extent to which their use should be discouraged or forbidden by law" (p. 508).⁷

Thus, the aftermath of repeal was a period of confusion and anxiety among Americans regarding the use of beverage alcohol. Just as drinking practices had changed, attitudes toward drinking had begun to change also. American society enveloped a variety of cultures with a diversity of drinking customs and patterns that began to resurface after repeal. Total abstinence had been discredited to a large extent by prohibition, and many allies of the temperance movement began to fall away from a hard-line abstinence position. From a study of pro- and anti-alcohol literature including temperance literature and alcohol industry publications, Dwight Anderson estimated that out of approximately 100 million people of drinking age (about half of whom drank), 1/3 preferred abstinence while the other 2/3 had no strong convictions wet or dry.⁸ A survey of churches published in 1946 noted that many churches had softened their views toward (legislative) prohibition, focusing instead on personal abstinence, temperance education, and governmental control of the liquor traffic.⁹ The Presbyterian Church omitted abstinence from its official alcohol policy statement in 1946 while calling for aid to victims of alcohol problems and alcohol education in the church.¹⁰ Beginning with the DuPont Company in 1943, businesses and industries began to respond to the new focus on problems caused by alcohol (rather than alcohol as the problem) by establishing programs to rehabilitate the alcoholic worker as an alternative to dismissal (p. 188).⁶

Not only did the general public move in the direction of a public health model of alcohol use and alcohol problems, but most importantly the scientific community took a leadership role in this shift of public attitudes. Independent scientists (primarily psychiatrists) had been treating and researching alcohol-related problems in the early decades of the twentieth century,¹¹ but it was not until after repeal in the 1930s that scientists began to come together in more formal groups to exchange ideas and concerns about alcohol problems. In spite of the successes of prohibition, it was soon obvious that alcohol problems had not disappeared. After the failure of legislative controls, science offered a fresh approach—unbiased, based on empirical truths—to an old problem which had heretofore defied public solutions.

The Scientific Approach to Alcohol Problems

The scientific approach that began to gather a following in the 1930s was loosely defined as the need to apply scientific thinking to alcohol problems. As E. M. Jellinek described it:

"The scientific view is one in which aspects of the alcohol problem are evaluated in the light emanating from all other aspects which are subject to scientific method. The evaluation must come not from limited evidence—let us say the evidence of a physiologist or psychologist—but must represent the integration of all scientific evidence" (p. 3).¹²

Jellinek's definition was based on two concepts: the use of the scientific method and a multidisciplinary approach to uncover the facts about alcohol use and alcohol problems. The scientific approach was not new, however, to the 1930s; its antecedents reached well back into the nineteenth century. Many temperance workers had accepted the disease concept of alcoholism, and temperance campaigns frequently used 'scientific facts' (i.e. observed medical consequences) to show that alcohol was a medical as well as a social and moral problem (pp. 119–120).⁶ The Woman's Christian Temperance Union organized a successful campaign to introduce 'scientific temperance instruction' into the public schools in the latter part of the nineteenth century. "Scientific temperance instruction" relied heavily on visual representations of the physical damage allegedly caused by alcohol" (p. 110).⁶ This scientific 'proof' was then coupled with the 'lessons of history' to show that alcohol had consistently been a problem over time.¹³

While scientific temperance was no doubt remiss in applying objective scientific criteria to its findings, there were other individuals and organizations who were more rigorous in their use of science with regard to alcohol problems. By the mid-nineteenth century, acceptance of "chronic drunkenness as a disease . . . became rather generally diffused in the medical community . . ." (p. 19).⁶ In 1870 a group of physicians founded the American Association for the Cure of Inebriates (renamed the Association for the Study of Inebriety), whose purpose was to advocate treatment and research on addictions as a medical speciality (p. 120).⁶ The Association published a journal, the *Quarterly Journal of Inebriety*, as a means of communicating their research findings to others in the medical and scientific community.

Whereas the Association for the Study of Inebriety was primarily concerned with the medical

aspects of alcohol problems, the Committee of Fifty, formed in 1893, embodied a truly multidisciplinary approach. The Committee consisted of "a group of scholars organized for the purpose of investigating and publishing reports on the various aspects of the alcohol problem in the United States" (p. 27).¹⁴ There were four subcommittees, each of which was assigned a particular aspect of the 'alcohol question' to study and report: physiological, legislative, economic, and ethical. Committee members were charged with getting the facts about alcohol and were not to express any opinion or advance any cause in their findings. After publishing four volumes and a summary of its findings, the Committee disbanded in 1905.¹⁵ Scarcely more than a decade later, national prohibition was passed, and publications on alcohol problems virtually disappeared from the medical literature (p. 60).⁴

It was not until repeal made alcohol problems visible again that the scientific approach was rejuvenated. There were several explanations for this return to science. First, the United States no longer had a national policy toward alcohol. The legislative approach had been unsuccessful, and many temperance workers gladly embraced the 'new' scientific approach as their only hope of achieving abstinence as the societal norm toward alcohol. Secondly, the time was ripe for approaching social problems from a multidisciplinary perspective. By the 1930s the dispute between natural and social scientists over the causes of human behavior had led many in the scientific community to view environment and heredity as distinct but interdependent variables, both of which must be considered in any study of human behavior.¹⁶ Chronic drunkenness clearly represented a behavior problem with a variety of ramifications—medical, psychological, economic, social—and many scientists felt that this problem warranted a multidisciplinary approach. Thirdly, prohibition had been the result largely of an alliance between middle- and upper-class reformers in the progressive movement with business leaders and temperance workers.⁴ Many business leaders defected by the early 1930s, and reformers were dismayed by the poor and inconsistent enforcement of prohibition legislation. Science offered another opportunity to bring order to society—this time through the application of scientific principles to the solution of social problems.

Closely connected with this desire to bring order through science was the idea of the social responsibility of science. By the end of the nineteenth century, increased funding for graduate universities

had made it possible for scientists to pursue independent investigations and to develop their own professional identities as scientists (rather than as members of a particular institution) (p. 110).¹⁶ Influenced by the rising momentum of the progressive movement and the increasing number of problems linked to industrialization, scientists began to see their role as operating within a social context. As Jellinek noted, "The scientist is discovering his social responsibility and society is discovering the utility of his specialized knowledge" (p. 10).¹⁷ With this new relationship between science and society, the study of alcohol problems moved one step beyond being merely an academic or scientific field of inquiry. For science not only assumed the responsibility of getting the facts about alcohol, it also made them available to the public. Science, in fact, stepped into a new role as an advocate of treatment and rehabilitation for alcohol problems as opposed to a single-minded focus on legislative control of alcohol use. As one temperance leader noted in 1945, "A scientific attack on the personal and social problems inherent in the widespread use of alcoholic beverages is at last underway" (p. 3).¹⁸ From this advocacy role the modern alcoholism movement was born, loosely encompassing all those "organizations and individuals engaged in alcoholism treatment and research and in their administrative support..." (p. 376).¹⁹

The Research Council on Problems of Alcohol

In the summer of 1937 a group of scientists and educators, upset by the confusion and dearth of knowledge regarding alcohol use and by the lack of "intelligent social policy amounting almost to chaos," (p. 433)²⁰ organized the Research Council on Problems of Alcohol, formally incorporated in 1938. The purpose of the Council was to "conduct and promote fact-finding studies" which would "make available accurate information regarding the effects of alcohol on the individual and society, and to disseminate the results of such studies."²¹ The Council intended to raise money for its own studies and for the funding of scientific research on alcohol by other organizations. The membership represented a variety of scientific disciplines and a number of well-respected researchers, including Walter B. Cannon of Harvard, Frank B. Jewett of Bell Laboratories, Forrest Moulton of the American Association for the Advancement of Science, Hans T. Clarke of Columbia University, and Howard W. Haggard of Yale. As a further sign of the scientific

community's support, the Research Council was designated an associated society of the American Association for the Advancement of Science, which meant that the Council's program was approved by and was under the general direction of the Association.²²

The Research Council was governed by an Executive Committee of which two thirds of the members were required to be scientists. Additional standing committees were created to carry out the Council's goals. By far the most important of these was the Scientific Committee, which had full authority over all scientific work performed by the Council; this committee's findings were not subject to review or change by the Council as a whole.²⁰ Membership in the Research Council, while at first limited to persons in scientific or educational vocations, was broadened in 1940 to include anyone interested in the study of alcohol problems.²³

The research program that the Council envisioned was an ambitious one. In 1938 the Council identified 24 topics for possible study, including the role of alcohol in liver cirrhosis, toxic factors in alcoholism, a critical review of all studies done up to that time on the effects of alcohol on the individual, the relation of alcohol to poverty, and the social and economic background of alcoholics.²⁴ Of these proposed areas of study, only a few were actually funded, and the most significant, in terms of funding and impact on the scientific community, was the literature review project. Members of the Council felt that the review of the existing scientific literature was "the Council's major and most basic study" and that "the development of a well rounded research program" would have to "await the completion of this basic study" (p. 1).²⁵ The study was intended to reveal not only what research had already been done on alcohol's effects on the individual but also what findings were invalid or contradictory, what gaps existed in the scientific knowledge, and what new research was needed. In other words, the study would establish a sound literature base as a prerequisite for future scientific research.

In 1939 the Council was successful in obtaining a grant from the Carnegie Corporation in New York City for \$25,000 to finance the literature review project for approximately a year and a half.²⁶ This project marked the beginning of a continuing effort to document the scientific and academic literature on the study of alcohol; it laid the foundation for alcohol research and study over the next few decades.

E. M. Jellinek and the Documentation of Alcohol Research

The literature review project of the Research Council on Problems of Alcohol was formally entitled 'The Study of the Effects of Alcohol on the Individual', and the Council named Norman Jolliffe as its medical director. As head of the medical service of the Psychiatric Division at Bellevue Hospital in New York, Jolliffe had done a good deal of research on diseases associated with alcoholism, and he felt strongly that single-discipline research on alcohol problems was inadequate. He had the support of Karl Bowman, director of the Psychiatric Division at Bellevue, who was selected as psychiatric director of the literature review project.²⁷ It was Jolliffe who selected E. M. Jellinek as the project's executive director.

E. M. (Elvin Morton) Jellinek was born in New York City in 1890. He studied in Germany and France, receiving a master's degree in education and later an honorary Sc.D. (Doctor of Science) from the University of Leipzig. He made his career as a biometrician, working first in plant research in Sierra Leone and then moving to the United Fruit Company in Honduras before joining the neuroendocrine research project in schizophrenia at Worcester State Hospital in Massachusetts. He later became associate director of research at the project (p. 251).²⁸

Jellinek came to the College of Medicine at New York University where the review project was being housed in 1939 and had the project underway by September 1 of that year. The goal of the project was to identify and abstract all significant international scientific literature on the effects of alcohol on the individual, and Jellinek efficiently organized and directed this ambitious effort. Non-scientific materials—such as temperance tracts, popular literature, and ephemera—were excluded. Although no date restrictions were used, the review staff attempted to find earlier reliable surveys on alcohol topics from which to begin their work. Abstracts were subject to review by a Committee in Charge composed of scientists representing the fields of biochemistry, internal medicine, neuropsychiatry, pathology, physiology, psychology, and public health.²⁹ Jellinek devised a system for classifying the abstracted literature into topical areas. He also created a system for subject retrieval of this literature by punching the topical codes onto cards containing the bibliographic references; abstracts were filed separately using corresponding serial numbers.³⁰ By the end of the project in 1941 some

3,000 items had been abstracted and indexed by means of Jellinek's code.

Several publications resulted from 'The Study of the Effects of Alcohol on the Individual'. The first, by Jellinek & Jolliffe, was a review of the scientific literature published in 1939 on the effects of alcohol on the individual.³¹ This was quickly followed by an 'Analysis of Psychological Experiments on the Effects of Alcohol', by Jellinek & Ross McFarland.³² The authors reviewed procedures used to investigate psychological changes in experimentally-induced alcohol intoxication, evaluated the results, and identified a number of areas in which research was needed. The major publication of the literature review project, however, was *Alcohol Addiction and Chronic Alcoholism*, edited by E. M. Jellinek. This book contained lengthy review essays with extensive bibliographies on "the etiology and treatment of abnormal drinking" and the "mental and bodily disorders of chronic alcoholism" (p. xvi).³³ Most of the essays were also published in the *Quarterly Journal of Studies on Alcohol* (volumes 1 and 2). *Alcohol Explored*, by Howard W. Haggard & E. M. Jellinek, was based on much of this material with some additional information about alcohol consumption and problems.³⁴ It was published in 1942 for the American Association for the Advancement of Science and was intended to bring this information to the attention of the public at large.

Alcohol Studies at Yale

Well before the review project had been completed, Jellinek realized the value of continuing the documentation effort. In addition to a sound literature base, scientific research required an ongoing effort to make new research findings and concerns available to the scientific community in a timely manner. Through the Research Council, Jellinek had become acquainted with Howard W. Haggard, director of the Laboratory of Applied Physiology at Yale University. Haggard also felt that communication of alcohol research was vitally important, and he invited Jellinek to join the Laboratory at Yale in 1941.

Alcohol research at Yale had begun in the Laboratory of Applied Physiology, established in 1923 under the Division of Biological Sciences by Yandell Henderson, a noted physiologist whose major work was in the area of human respiration. Around 1930 he and Howard W. Haggard began conducting experiments on the physiology of alcohol, including the metabolism of alcohol and factors

modifying its absorption and oxidation. Haggard assumed the directorship of the Laboratory upon Henderson's retirement in 1938, and he began to work toward an integrated science and social science research program on alcohol problems. Yale was fertile ground for this type of multidisciplinary research toward social problems. Under President James R. Angell, several socially-oriented programs had been established at Yale during the 1920s including a nursing school, an Institute of Psychology, and the Institute of Human Relations, which was designed to use social and biological sciences to solve problems of human behavior. Angell was also interested in the work of the Research Council and was a keynote speaker at one of their early conferences.²²

In 1940 Haggard founded the *Quarterly Journal of Studies on Alcohol* as an international forum for the publication of scientific research on all aspects of alcohol use. When he brought Jellinek to Yale he added him to the editorial staff of the *Quarterly Journal*, and in 1943 Haggard formally established a Section of Alcohol Studies within the Laboratory with Jellinek as its first director. Jellinek also got permission from the Research Council to bring with him to Yale the files from the review project. At Yale he was able to continue the research documentation effort, which was renamed the Classified Abstract Archive of the Alcohol Literature (CAAAL).²⁷ Documents continued to be abstracted and indexed according to Jellinek's classification scheme, and beginning around 1952 the abstracts and citations were printed together on the same edge-notched cards for easier subject retrieval. Many of the abstracts were also published in the *Quarterly Journal of Studies on Alcohol*, and until 1983 the *Quarterly Journal* (later renamed the *Journal of Studies on Alcohol*) was the major abstracting tool for alcohol research literature. In 1941 the *Quarterly Journal* began offering a service to supply its subscribers with CAAAL abstracts on specific subjects. Later this service was expanded to provide bibliographies on request.

Jellinek left Yale in 1951 to work as a consultant on alcoholism for the World Health Organization, but he continued his interest in the documentation of the alcohol literature. In 1952 he obtained funding from the World Health Organization to duplicate the fast-growing CAAAL collection and to establish additional depositories for the CAAAL collection in the United States and around the world. In 1953 the first *Manual of the Classified Abstract Archive of the Alcohol Literature*³⁵ was

published to guide researchers, librarians, and archivists in the use of the subject classification scheme for items in the collection. Twelve years later a new manual was published that included an alphabetical index key to sorting to facilitate subject retrieval. The CAAAL collection continued to serve as a current tool for researchers until it closed in 1978; it has remained a valuable tool for retrospective searching since that time. Abstracting continued in the *Journal of Studies on Alcohol* until 1983.

Another valuable and unique by-product of the review project was the compilation of a master bibliography of alcohol literature. The literature review project concentrated primarily on the biological and psychological effects of alcohol, but Jellinek felt there was a need for a more complete bibliography that would abolish "disciplinary and professional as well as nationality, geographic and linguistic boundaries..." (vol. 1, p. xx).³⁶ Two earlier bibliographies, one compiled for the Works Progress Administration and donated by Merrill Moore and the other compiled by E. Abderhalden in Germany in 1904, were found to contain too many blind references and inaccuracies to be of much use. The project proceeded on a part-time, irregular basis over a number of years with staff from the Section of Alcohol Studies (later renamed the Center of Alcohol Studies). Funding was scarce, and volume 1 of the *International Bibliography of Studies on Alcohol*, covering references from 1901-1950, was not published until 1966; it included over 25,000 entries. Volume 2, containing the subject index for the first volume, was published in 1968, and volume 3, containing references and indexes for 1951-1960, was issued in 1980.³⁷

Significance of the Alcohol Documentation Effort

The creation of a literature base for the systematic study of alcohol was the first and most significant step in the formation of a scientific and academic field of alcohol studies. Before scientific progress could be made in the treatment and prevention of alcohol problems, it was important to ascertain both what was written and what was proven about alcohol use and its effects—not only to avoid wasteful duplication of effort but also to determine where knowledge was lacking or inaccurate. An ongoing documentation effort made possible the timely communication of research findings to the scientific community, and it helped insure that new research was subjected to critical review and analy-

sis by scientists in a variety of disciplines encompassing all aspects of alcohol use. And because it exposed gaps in existing knowledge, the documentation project pointed the way for future alcohol research.

Jellinek himself outlined and prioritized the areas most in need of research after the initial literature review project was completed.³⁸ Over the next few decades a knowledge explosion occurred in alcohol studies, stimulated by the findings of the review project and focused in the areas that Jellinek had identified for new research. By the time the CAAAL system closed in 1978, over 350 research bibliographies had been prepared by staff of the Center of Alcohol Studies (which moved to Rutgers University in 1962). Most of the topics fell within the research areas suggested by Jellinek—physiological and psychological effects of alcohol, etiology and treatment of alcoholism, socio-cultural aspects of alcohol use—and the references indicated a significant increase in research performed after the publication of the literature reviews in 1941. In Jellinek's survey of attitudes toward alcoholism as a disease, he investigated different etiological theories of alcoholism (physiological, psychological, pharmacological), citing the work of a variety of researchers; all but a few published their work after 1941.³⁹

The documentation project provided support for Jellinek's own research, most notably his work on phases of alcohol addiction,⁴⁰ estimation of the number of alcoholics (the Jellinek estimation formula),⁴¹ and the disease concept of alcoholism.³⁹ His work on the disease concept inspired an entire generation of research. In a CAAAL bibliography on the disease concept, compiled and updated over a 20-year period (1959–1979), there were 123 references, with the earliest by Bowman & Jellinek in 1941.⁴² Jellinek also actively encouraged others to investigate areas where he felt research was needed. For example, he enlisted the talents of Selden D. Bacon (Ph.D., sociology) to research the connections between sociology and alcohol problems—an area that had been neglected in the literature review project. Bacon later succeeded Jellinek as director of the renamed Center of Alcohol Studies.

Conclusion

The impact of E. M. Jellinek's role in the documentation of alcohol research should not be underestimated. Although he may well have been in the right place at the right time, what he did in that place has

had major ramifications for alcohol research and treatment up to the present time. The alcohol documentation system that he developed has been described as "a world-embracing achievement of scholarship and scientific progress" (p. xii).¹ Its significance was threefold: (1) by gathering and evaluating the existing knowledge on alcohol use, the project created a sound literature base from which new research could build. The literature base also provided a measure of scientific legitimacy for the study of alcohol; (2) Jellinek's classification scheme for codifying the alcohol literature not only allowed for subject retrieval but also provided a means of managing and controlling the explosion of multidisciplinary alcohol research literature that began in the 1940s; and (3) from the literature reviews, Jellinek identified those areas most in need of research. His own work and the research of others over the next few decades clearly followed those same paths.

In essence, Jellinek shaped the direction of alcohol research for the next generation. As historian Mark Lender noted, "... It is not too much to say that for the last quarter of a century, the work of this extraordinary individual has framed most aspects of the current debate on the nature of alcoholism and its treatment" (p. 361).⁴³ His research became the basis of the modern understanding and approach to alcohol problems. Jellinek has often been called "the father of the modern concept that alcoholism is a treatable disease..." Much of what the world knows today about the nature of [alcohol] problems is due to his astoundingly rich work" (p. xviii).⁴⁴ It was Jellinek's documentation system that laid the scientific foundation for a field of study and a modern approach to the treatment and prevention of alcohol problems.

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