Comparative Studies of the Prevalence of Mental Disease Among Relatives of Patients and Among the General Population

In the preliminary discussion concerning the prevalence of tainted heredity among patients with mental disease, we stressed a fundamental flaw in all of the early literature. This consisted in the failure to compare the family statistics of mental patients with a standard, such as the expectation of mental disease in the general population. The first study to attempt such a logical comparison was that of Dr. Jenny Koller, whose contribution was published in 1895. A comparison was made on a much larger scale by Dr. Otto Diem, whose results were published in 1905. In our analysis of these investigations, we stressed two sources of possible error. We questioned, in the first place, whether the population used as a norm, really represented a random selection from the general population. We also indicated a possible source of confusion in the failure to deal with homogeneous groups of patients. It is possible for heredity to be an important factor in the causation of dementia praecox, for example, whereas its influence in the causation of general paralysis might be negligible. To eliminate these objections we limited our analysis to two groups of patients, both admitted to the Utica State Hospital within a prescribed interval. One group consisted of patients with dementia praecox, the other of patients with manic-depressive psychoses. With respect to nature of disease, and geographical selection, each group was therefore homogeneous. The incidence of mental disease in the several degrees of relationship was then compared with the expected incidence for such a group if the latter were selected randomly from the general population of New York State. The results, given in detail in Chapter I and III, indicate that the family incidence of disease (especially in the case of the siblings) is greater than the expected incidence.
So far as known to the writers, Wagner von Jauregg was the only other investigator to suggest the importance of using the expectation of mental disease as a standard of comparison with the families of mental patients, but he did not, himself, proceed to such an analysis. In the past two decades, however, there has been a systematic attempt on the part of Ernst Rüdin and his co-workers in the Deutsche Forschungsanstalt für Psychiatrie in Munich to arrive at normal rates of mental disease in the general population, with which the rates in specific family groups may be compared.

The theoretical basis underlying the work of this school is set forth at length by Luxenburger in his important monograph entitled "Demographische und psychiatrische Untersuchungen in die engeren biologischen Familie von Paralytikerehegatten (Versuch einer Belastungsstatistik der Durchschnittsbevölkerung)." He writes:

"What is required as comparative material for use in modern investigations in biological inheritance is a statistical enumeration of taints in the general population. We must investigate the kindred of probands, who were obtained through pure chance, and in a manner which does not lead us à priori to fear either a positive or negative selection; the probands should, wherever possible, be old persons, in order that we may be able to deal with the appearance among their relatives of those anomalies whose period of exposure falls within advanced ages; and in order that we may obtain figures to be used in comparison with statistics of inheritance among descendants; the material must become very great in the course of time in order that one may be sure to come across rare anomalies; the investigation must include all classes of relatives among both the immediate and remote blood relatives; the investigation must include a discussion, as complete as possible, of all those characters that have a relation to the modern problem; it must therefore deal principally with things whose correlative significance is already known, or which lie at the basis of established hypotheses; it must serve in the analysis of the problems of mental and physical types; it must . . . also give special consideration to general demographic problems. Many of these criteria must naturally remain as ideal requirements for the time being. Should we succeed in obtaining a