## This Week's Citation Classic

Heston L L. Psychiatric disorders in foster home reared children of schizophrenic mothers. *Brit. J. Psychiat.* 112:819-25, 1966.
[Univ. Oregon Med. Sch., Psychiat. Genet. Res. Unit, Maudsley Hosp., London, England]

Fifty persons whose mothers had schizophrenia were compared as adults with 47 controls whose mothers had no psychiatric history. All subjects were reared by adoptive or foster parents. Schizophrenia appeared in five persons born to schizophrenic mothers but in none of the controls, a highly significant difference. [The Science Citation Index<sup>®</sup> (SCI<sup>®</sup>) and the Social Sciences Citation Index<sup>®</sup> (SSCI<sup>™</sup>) indicate that this paper has been cited over 230 times since 1966.]

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"This study had its beginning in 1962 when as a new resident in psychiatry, I made a clinical presentation to my faculty and several visiting physicians. The case presented was that of a paranoid schizophrenic whose father and two of his three siblings were also schizophrenic. I also presented a review of the genetic literature which I hoped would open for discussion the whole question of genetics and schizophrenia. The result was most disquieting. Most of the audience strongly held the view that schizophrenia was due to some catastrophic psychic trauma in early childhood, most likely produced by the mother. I was urged to forget genes and explore this possibility. However, I had become acquainted with the mother of my patient: she seemed to be an

uncomplicated, basically optimistic person who was doing her very best to provide some semblance of family life. I thought that having a schizophrenic husband and three schizophrenic children was a heart wrenching burden, for which she had carried responsibility for many years. To accuse her of causing the illness of her children, even if this were done implicitly in 'therapy,' seemed mindlessly cruel. Moreover, the then current theories of the etiology of schizophrenia, the 'schizophrenic mother' and the 'double-bind' which I heard a lot about during the discussion of my case seemed post hoc and quite unsupported by evidence. I began to think through ways to resolve the issue and soon had decided to study adopted children. Doing this presented major problems of course, for example, locating persons who had been adopted years before, and indeed, federal granting agencies refused to support the project. 'Impossible to do,' was the verdict. But I did get the help and support of two of my teachers, George Saslow and Duane Denney, and the work was done.

"This study has been cited often for several reasons. It was one of the first to use adoptive children as experiment of nature and the methodology attracted attention. It also was often cited as proving a genetic contribution to schizophrenia. That was wrong. What was actually done was to eliminate the environment that had been thought to schizophrenia. produce Once that environment had been excluded it seemed to many that genes were the only cause left. Of course such views reflected extremely naive environmentalism or. less often, naive geneticism which ignored the extremely complex interplay between genes and environment. Psychiatry's notion of causality has become more sophisticated since this article was published and I like to think of that as one of the happy results of it."