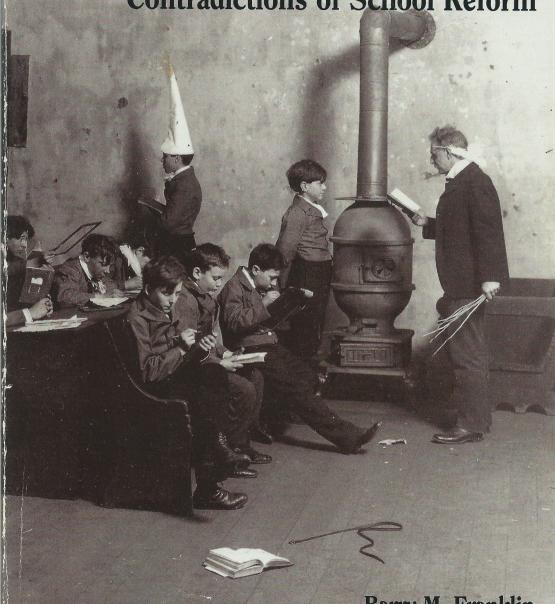
## From "Backwardness" to "At-Risk"

Childhood Learning Difficulties and the Contradictions of School Reform



Barry M. Franklin

would spend the next two decades exploring this issue and in the process fundamentally transform our understanding of low-achievement.

## II.

Established in 1927, the Wayne County Training School served children in Wayne County and the city of Detroit who were categorized in the language of the day as "high grade mental defectives with delinquent tendencies and in need of social supervision." These were children who were sent to the Training School by public school authorities, by the courts, or by social welfare agencies because they were "difficult to handle" or because their living conditions were thought to be inadequate. In 1937 the Training School's Superintendent, Robert Haskell, invited two German refugees, the psychiatrist Alfred Strauss and the psychologist Heinz Werner, to join Wayne County's Research Department to continue work they had begun independently in Germany on brain-injured children.

In a paper that Strauss presented to the 1939 annual meeting of the American Association on Mental Deficiency, he described a difference that Werner and he had noticed between two groups of mentally retarded children enrolled at the Training School. The records of one group, which they had referred to as being endogenously retarded, pointed to a family history of mental deficiency. The records of the second group, which they labeled exogenously retarded, indicated no family history of retardation. But the information that the parents of this latter group supplied suggested the likelihood that these children may have at sometime in their lives received a brain injury. In addition, these children exhibited neurological signs that Strauss saw as evidence of brain injury. Such signs included involuntary rapid eye movement, paralysis of certain cranial nerves, and the Babinski phenomenon or the extension of the large toe when the sole of the foot was stimulated.

Strauss then went on to note that the experiences of these two groups of children differed at the Training School. During their stay, endogenous children showed a small increase in their I.Q. scores, while the exogenous children showed a small decrease. The endogenous children exhibited no behavioral abnormalities, while the exogenous children engaged in behavior that he described as disturbed, unrestrained, and volatile.<sup>3</sup>

The basis for Strauss and Werner's claim that the so-called exogenous group of children were brain damaged was their acquaintance with the work of two physicians, Henry Head, an Englishman, and Kurt Goldstein, a German, who had treated World War I veterans with gunshot wounds to the brain. Strauss, in fact, had served as an assistant to Goldstein at the University of Frankfurt Neurological Institute between 1924 and 1925. Head noted that these soldiers, after undergoing surgery to repair their wounds, typically exhibited deficits in their receptive and expressive language abilities. Over time as their wounds healed, he pointed out that these defects tended to disappear. Yet these veterans never completely regained their former language abilities.

Goldstein described a similar phenomenon. After surgery, the soldiers whom he treated displayed a range of behavioral abnormalities. First, they exhibited an excessive or catastrophic reaction when confronting frustrating or difficult tasks. They might approach these tasks with anger, aggression, or anxiety. Or they would in other instances approach them in a disorganized and disoriented manner. Second, they appeared to be distractible. In tasks requiring perceptual ability, they often found it difficult to attend to relevant stimuli or to distinguish the figure of a perceptual display from the background in which it was embedded. Third, these soldiers seemed unable to shift easily from one task or activity to another. They perseverated or, in other words, continued in a seemingly involuntary manner to repeat the same behavior over and over again.<sup>6</sup>

The children whom Strauss and Werner labeled exogenous, as it turned out, exhibited virtually the same behaviors as did Head and Goldstein's patients. Consequently, Strauss and Werner argued that these children, too, were brain-injured. Brain injury, Strauss and Werner concluded, was the cause of

these children's mental deficiency. In reaching this conclusion, Strauss and Werner were only offering indirect and inconclusive evidence. Goldstein, in fact, had noted that it was difficult, if not impossible, to obtain "direct proof" of the existence of a brain injury. The best investigators could hope for was to observe behavioral changes in the individual that were suggestive of brain injury. To do this, Goldstein went on to argue, researchers would have to use their skills to identify the key areas of damage to the brain that account for these changes. This was, he believed, a difficult task. Investigators, he pointed out, have to be careful so as not to be deceived by what appears obvious at first glance. They have to avoid being so committed to one explanation that they refuse to change their views in light of new evidence.

Strauss and Werner were mindful of Goldstein's caveat. In a paper they presented to the 1942 annual meeting of the American Psychiatric Association in Boston, they noted that there were in fact differences between their exogenous mentally defective children and brain-injured adults. It was, they stated, "still an open question whether the concrete behavior of the brain-injured child can be directly compared to the concretism of the brain-injured adult or whether in the latter we are dealing with a deviation from a genetic trait of behavior." Yet in later years Strauss, particularly, seemed to forget Goldstein's warning and his own earlier cautionary remarks.

In comparing endogenous and exogenous children on a diverse array of perceptual-motor and cognitive tasks, Strauss and Werner noted numerous differences between the seemingly two groups of children. One such experiment, which they reported in a 1930 article, involved the copying of patterns constructed from marbles placed on a mosaic board onto a second blank board. These two groups of children, Strauss and Werner argued, approached the task in quite different ways. The endogenous children employed a "global strategy" in which they constructed the patterns using one uninterrupted motion. The exogenous children, on the other hand, used an "incoherent strategy" in which they constructed the patterns unsystematically using many motions. Based on their different strategies, Strauss and Werner concluded that the mental

deficiency exhibited by the two groups of children was different in nature. 10

In a second set of experiments, Strauss and Werner had these two groups of mentally defective children perform such tasks as repeating rhythmic patterns on an electronic oscillator and identifying pictures of objects presented sequentially on flash cards. The exogenous children in both instances, Strauss and Werner reported, exhibited more perseverations or persistent repetitions than did their endogenous peers.<sup>11</sup>

And in another study, Werner and Doris Carrison examined the tendency of exogenous and endogenous children to bestow lifelike qualities on inanimate objects. Questioning both types of children about whether certain inanimate objects, natural events, plants, and animals were alive or dead, they concluded that brain-injured mentally defective children were more likely than hereditarily mentally defective children to attribute lifelike qualities to inanimate objects and events. This indicated, they believed, that exogenous children were more likely to engage in animistic thinking than were endogenous children.<sup>12</sup>

Of the approximately twenty-five studies that Strauss and Werner published comparing endogenous and exogenous children, the two that are most often cited involved an examination of figure-background relationships and a study of conceptual thinking. Writing in 1941, they reported the results of a number of tests they administered at the Training School involving figure-background relationships. In one test, children were shown nine cards containing black and white drawings of common objects that were embedded in backgrounds of either wavy and jagged lines, squares, or crosses. Using a tachistoscope, the children were exposed to each picture for one-fifth of a second. The three groups of children studied included a group with normal intelligence, one composed of the endogenously retarded, and one made up of the exogenously retarded. While the normally intelligent and the endogenous children were relatively successful in identifying the objects on the cards, the exogenous children were not. They either ignored the objects on the cards and described the backgrounds, or offered vague and often incorrect descriptions of these objects.

A second test involved the use of geometric figures constructed of large circular dots that were placed within a variety of background figures composed of small dots. Using a tachistoscope, two groups of students, one composed of hereditarily retarded children and the other of brain-injured children, were presented with a half-second exposure to each of the geometric figures. After each exposure, the children were shown three cards and asked to select the card that was most like the figure presented with the tachistoscope. One card contained only the background of the original figure. The second card contained the original background with a different geometric figure. The third card contained the original figure with a different background. While over half the exogenous children chose the card showing simply the background, only one-quarter of the endogenous children made this choice.

A third series of tests involved the use of two marble boards that contained punched holes that formed a structured background. Using one of the boards and a set of marbles, Strauss and Werner constructed a series of five marble patterns. After they constructed each pattern, the children were then asked to use the other board to copy that pattern. The copies made by the endogenous children tended to be oversimplifications of the models presented. The brain-injured children, on the other hand, tended to make changes in their copies, which indicated that they were confused by the background figures.

The results of these three tests, Strauss and Werner argued, showed that the performance of hereditarily retarded and brain-injured children on tasks involving figure-background relationships differed. The hereditarily retarded children tended to complete the tasks in approximately the same way that intellectually normal children had. The exogenous children were unable to distinguish the figure from the background. The problem, according to Strauss and Werner, was due to the inability of brain-injured children to adequately organize their perceptual field or to their inability to attend to the relevant stimuli in that field.<sup>13</sup>

A year later, in 1942, Strauss and Werner published their study comparing the conceptual abilities of endogenous and

exogenous children. The study included three tests, two requiring the appropriate sorting of objects and one requiring the matching of pictures and objects. In the first test, fifty-six common objects, including a glass bottle, a hairpin, a small metal key, and a paper clip, to name but a few, were presented to two groups of children, one endogenous and the other exogenous. They were asked first to name the objects and then to group those that belonged together. After they completed the task, the children were asked to explain why they formed the groups they did. In a second sorting test, again involving a group of endogenous and exogenous children, a single object was placed on a table in front of the children with three objects placed directly opposite this first object. The children were asked which of the objects "goes best" with the object in front of them. The groups selected by the children in both sorting tests were of two types, combinations based on similar features or functions and combinations based on some "unessential or accidental functional relationship" among the objects. Endogenous children, for the most part, tended to make groups of the first type, while exogenous children formed those of the second type. One brain-injured child, for example, grouped a bell and a whistle together because they both sounded loud. Another exogenous child placed a picture of a bell and a ping-pong ball together because they both began with the letter b.

On the third test, the two groups of children were shown two pictures pasted on white cardboard, a picture of a supposedly drowning boy engulfed by waves and one of a building on fire with firemen attempting to put out the fire. Placed near the two pictures were eighty-six toy objects, including human and animal figures, toy cars and trucks, and various utensils. The children were asked to select those objects that went with each of the pictures and to place them near those pictures, and to set those objects that went with neither picture off to the side. As in the previous tests, the hereditarily retarded children selected objects that had a clear functional relationship with the pictures, while the brain-injured children selected objects whose relationships with the pictures was unclear or odd. One brain-injured child, for example, took a light bulb and placed it

near the picture of the burning building. He stated that this was the bulb that blew out a fuse thereby starting the fire. Another brain-injured child placed a bar of soap near the picture of the drowning boy and stated that this was to wash the child when he came out of the water.

These three tests, Strauss and Werner argued, required children to select objects "on the basis of their belongingness either to a another object or to a pictured situation." They were, in other words, tests of the relationships between concepts. On all of the tests, the brain-injured children were more likely than the hereditarily retarded children to make uncommon groups and to group objects according to their nonessential and unimportant attributes. As part of this experiment, Strauss and Werner also administered the second and third tests to a group of intellectually normal children at University Elementary School in Ann Arbor, Michigan. They found that these normal children tended to make selections that were more similar to those of the hereditarily retarded children than to those of the brain-injured children.14

## FROM "BACKWARDNESS" TO "AT-RISK"

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"Barry M. Franklin's history of low-achieving, troubled, innocent children is sometimes chilling. For all their ostensible attempts to help children, America's public schools have frequently clipped the wings of youth. With a poet's eye but historian's sensibility, Franklin deftly recovers missing pages of the past. He provides the reader with valuable historical perspective on current policy debates on at-risk children."

— from the Foreword by William J. Reese

This book examines the joint effort of twentieth-century public school administrators and private philanthropy to initiate reforms to provide for children with learning difficulties. The author explores the development of these reforms from the establishment of special classes for backward children at the beginning of the century to the creation of programs for learning disabled children. He considers what this history tells us about current efforts to provide for at-risk students. He looks at both the way school administrators conceptualized childhood learning difficulties and the institutional arrangements which they introduced to accommodate these students, and pays particular attention to the preference of school administrators throughout this century for accommodating low achieving children in segregated classes and programs.

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