

Follow-up Study of Eleven Autistic Children Originally Reported in 1943

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The destinies of the eleven children first reported in 1943 as suffering from autistic disturbances of affective contact are brought up to date. Their life histories are summarized succinctly in terms of developmental data, family constellations, clinical observations in the course of the years, the varieties of professional planning, and present status. Attention is called to the subsequent scientific studies of early infantile autism with ever-increasing facilities for research in nosology, biochemical and general systemic implication, and therapeutic amelioration. The need for continued follow-up studies of autistic children is emphasized.

The June 1943 issue of the now extinct journal *The Nervous Child* carried a paper entitled "Autistic disturbances of affective contact"; the first 24 pages told about 11 children who had in common a pattern of behavior not previously considered in its startling uniqueness; this was followed by 9 pages of discussion and comment. An introductory paragraph concluded with the sentence: "Since none of the children of this group has as yet attained an age beyond 11 years, this must be considered a preliminary report, to be enlarged upon as the patients grow older and further observation of their development is made."

Twenty-eight years have elapsed since then. The periodical in which the article was printed has been out of circulation for a long time.²

The patients were between 2 and 8 years old when first seen at the Children's Psychiatric Clinic of the Johns Hopkins Hospital. What has become of them? What is their present status?

¹Requests for reprints should be sent to Scripta Publishing Corp., 1511 K Street, N.W., Washington, D.C. 20005.

²The article was subsequently reprinted in *Acta Paedopsychiatrica*, 1968, 35, 100-136 and again in J. G. Howell (Ed.), *Modern Perspectives in International Child Psychiatry*, Edinburgh: Oliver & Boyd, 1969, 617-648.

Under the auspices of Dr. Alejandro Rodriguez, the present director of the Clinic, Miss Barbara Ashenden, head social worker since 1931, undertook the task of learning about their whereabouts, functioning levels, and interim destinies. The results will be presented in the sequence of the original presentation, preceded in each instance by a synopsis of the status found at first acquaintance.

Case I

Donald T.'s arrival on October 14, 1938, was heralded by a 30-page history in which the father gave an excellent account of the child's background. Donald was born normally at term on September 8, 1933. Breastfeeding until the eighth month was followed by frequent changes of formulas. He walked alone at 13 months. Dentition proceeded satisfactorily.

"At one year, he could hum and sing many tunes accurately. . . . He was encouraged by his family in reciting short poems and even learned the 23rd Psalm and 25 questions and answers of the Presbyterian Catechism. . . . He very soon knew an inordinate number of pictures in a set of *Compton's Encyclopedia*. . . . He quickly learned the whole alphabet backwards and as well as forwards and to count to 100. But he was not learning to ask questions or answer questions unless they pertained to rhymes or things of that nature. . . . He seems to be self-satisfied. He has no apparent affection when petted. He does not notice when anyone comes or goes. He seems to draw into his shell and live within himself. He seldom comes when called but has to be picked up and carried or led wherever he has to go. When interfered with, he has temper tantrums during which he is destructive. . . . At 2 years, he developed a mania for spinning blocks and pans and other round objects, but at the same time he had a dislike for self-propelling vehicles. He is still fearful of tricycles and seems to have almost a horror of them when he is forced to ride."

In August 1937, he was placed in a preventorium (State Institution for the Prevention and Care of Tuberculosis) "in order to provide for him a change of environment." While there, "he displayed an abstraction which made him oblivious to everything about him. He seems to be always thinking and to get his attention almost requires one to break down a mental barrier between his inner conscience and the outside world." The family physician suggested an appointment at our Clinic. The director of the preventorium was against it, stating that Donald "is getting along nicely" and "it looks that now he is going to be perfectly all right"; his advice was "to let him alone." When the parents insisted and asked him to send us a report, he did so on less than half a page,

referring to Donald as "a concentrated child mentally" and surmised that "he might have some glandular disease."

The father, whom Donald resembled physically, was "a successful, meticulous, hardworking lawyer, who takes everything very seriously. . . . When he walks down the street, he is so absorbed in thinking that he sees nothing and nobody and cannot remember anything about the walk." The mother, a college graduate, was a calm, capable person to whom her husband felt superior. A second child, a boy, was born on May 22, 1938.

At the Clinic, Donald was found to be in good physical condition. He was placed for 2 weeks at the Child Study Home of Maryland for an intensive observation by Drs. Eugenia S. Cameron and George Frankl. After this, Donald came back three times for a checkup. Space does not allow our even coming close to the minutely recorded data in the Clinic files and in the frequent letters sent by and to the mother who, while her husband had functioned as a reliable historian, became the active participant in the child's management. Suffice it to say that the father's description could be confirmed. Donald wandered about smiling, making stereotyped movements with his fingers, shaking his head from side to side, humming the same three-note tune. He spun with great pleasure anything he could seize upon to spin. Most of his actions were repetitious, carried out the same way each time. He kept parroting what he had heard said to him, using the personal pronouns for the persons quoted, even to the point of imitating their intonation.

In 1942, his parents placed him on a tenant farm about 10 miles from their home. When I visited there in May 1945, I was amazed at the wisdom of the couple who took care of him. They managed to give him goals for his stereotypies. They made him use his preoccupation with measurements by having him dig a well and report on its depth. When he kept collecting dead birds and bugs, they gave him a spot for a "graveyard" and had him put up markers; on each he wrote a first name, the type of animal as a middle name, and the farmer's last name, e.g.: "John Snail Lewis. Born, date unknown. Died, (date on which he found the animal)." When he kept counting rows of corn over and over, they had him count the rows while plowing them. On my visit, he plowed six long rows; it was remarkable how well he handled the horse and plow and turned the horse around. It was obvious that Mr. and Mrs. Lewis were very fond of him and just as obvious that they were gently firm. He attended a country school where his peculiarities were accepted and where he made good scholastic progress.

The rest of the story is contained in a letter from the mother, dated April 6, 1970:

"Don is now 36 years old, a bachelor living at home with us. He had an acute attack of rheumatoid arthritis in 1955. Fortunately, this lasted only a few

weeks. Physically, since that time, he has been in perfect health. . . . Since receiving his A.B. degree in 1958, he has worked in the local bank as a teller. He is satisfied to remain a teller, having no real desire for promotion. He meets the public there real well. His chief hobby is golf, playing four or five times a week at the local country club. While he is no pro, he has six trophies won in local competition. . . . Other interests are Kiwanis Club (served as president one term), Jaycees, Investment Club, Secretary of Presbyterian Sunday School. He is dependable, accurate, shows originality in editing the Jaycee program information, is even-tempered but has a mind of his own. . . . He owns his second car, likes his independence. His room includes his own TV, record player, and many books. In College his major was French and he showed a particular aptitude for languages. Don is a fair bridge player but never initiates a game. Lack of initiative seems to be his most serious drawback. He takes very little part in social conversation and shows no interest in the opposite sex.

“While Don is not completely normal, he has taken his place in society very well, so much better than we ever hoped for. If he can maintain status quo, I think he has adjusted sufficiently to take care of himself. For this much progress, we are truly grateful. . . . Please give Dr. Kanner our kindest regards. Tell him the couple Don lived with for 4 years, Mr. and Mrs. Lewis, are still our friends. We see them quite often. Don has never had any medication for his emotional trouble. I wish I knew what his inner feelings really are. As long as he continues as he is now, we can continue to be thankful.”

Case 2

Frederick Creighton (“Wikky”) W. was seen on May 29, 1942, one week before his sixth birthday. This is an abstract of his mother’s complaint statement:

“He has always been self-sufficient: I have never known him to cry demanding attention. He was never very good with cooperative play. Until last year, he acted as if people weren’t there. About a year ago, he began showing more interest in observing them, but usually people are an interference. To a certain extent he likes to stick to the same thing. On one of the bookshelves we had three pieces of a certain arrangement. Whenever this was changed, he always rearranged it in the same pattern. . . . He had said at least two words before he was 2 years old. Between 2 and 3 years, he would say words that seemed to come as a surprise to himself. One of the first words he said was ‘overalls’. . . . At about 2½ years, he began to sing. He sang about 20 or 30 songs, including a little French lullaby. In his fourth year, I tried to make him ask for things before he’d

get them. He was stronger willed than I was and held out longer; he would not get it but he would never give in. . . . Now he can count up in to the hundreds and can read numbers, but he is not interested in numbers as they apply to objects. He has great difficulty in learning the proper use of personal pronouns. When receiving a gift, he would say to himself: "You say, 'Thank you.'"

He was delivered by elective Caesarean section 2 weeks before term because the mother had "some kidney trouble." He was well at birth. Feeding presented no problem. His mother never saw him assume an anticipatory posture when she came to pick him up. He sat up at 7 months and walked alone at 18 months.

Wikky was an only child. His father, a plant pathologist, was "a patient, even-tempered man" who as a child did not talk "until late" and was "delicate." The mother, "healthy and even-tempered," had been a secretary, a purchasing agent, and at one time a teacher of history. She was 34 and her husband was 38 years old when their son was born.

The paternal grandfather, whose autobiography (published in 1943) was dedicated "to my family of 11 children and grandchildren," had disappeared in 1911, his whereabouts remaining obscure for 25 years, during which he had married a British novelist (without obtaining a divorce from his wife). He had two listings in *Who's Who*—one under his real name and one under an assumed name. He has had several careers on four continents, which include manganese mining, directorship of an art museum, deanship of a medical school, and organization of medical missions. His (legal) wife was a "dyed-in-the-wool missionary." He had five children, of whom Wikky's father was the second. One son was a newspaper man, one a science fiction writer, one worked for a TV network; a daughter was a singer. Of the maternal relatives the mother said: "Mine are very ordinary people."

Wikky was well-nourished; occiput and frontal region were prominent. He had a supernumerary nipple in the left axilla. X-ray of the skull was normal. Tonsils were large and ragged.

In the office, he wandered aimlessly about for a few moments, then sat down, uttering unintelligible sounds, and abruptly lay down, smiling. Questions and requests, if reacted to at all, were repeated in echolalia fashion. Objects absorbed him, and he showed good attention in handling them. He seemed to regard people as unwelcome intruders. When a hand was held out before him so that he could not possibly ignore it, he played with it as if it were a detached object. He promptly noticed the wooden form boards and worked at them spontaneously, interestedly, and skillfully.

In September 1942, he was enrolled at the Devereux Schools, where he remained until August 1965. A close contact was maintained between the

Schools and our Clinic. In 1962, a report from Devereux stated: "He is, at 26 years, a passive, likeable boy whose chief interest is music. He is able to follow the routine and, though he lives chiefly within his own world, he enjoys those group activities which are of particular interest to him." He was a member of the chorus in the Parents' Day program and was in charge of the loud speaker at the annual carnival. He went on weekend trips to town unaccompanied and made necessary purchases independently.

Wikky, now addressed as Creighton, has been with his parents for the past 5 years. He is now 34 years old. After leaving Devereux, the family spent a year in Puerto Rico where "he picked up a lot of Spanish and worked out a schedule of studying language lessons on records at 4 o'clock every afternoon." The family then moved to Raleigh. The parents report: "We settled into a new home and he did his part in it. He has become acquainted with the neighbors and sometimes makes calls on them. We tried him out in the County Sheltered Workshop and Vocational Training Center. He took right to it, made friends with the teachers, and helped with some of the trainees. Through his relationship there, he took up bowling and he does pretty well. . . . Creighton was suggested by the Workshop for a routine job in connection with running duplicating machines. Since November 25, 1969, he has been working in the office of the National Air Pollution Administration (HEW) every day, and all day." A letter from the Acting Director, dated April 29, 1970, says, "Creighton is an outstanding employee by any standard. Outstanding to me means dependability, reliability, thoroughness, and thoughtfulness toward fellow workers. In each case Creighton is notable."

Case 3

Richard M. was 39 months old when admitted to the Johns Hopkins Hospital on February 5, 1941, with the complaint of deafness "because he did not talk and did not respond to questions." The pediatrician who examined him reported: "The child seems quite intelligent, playing with the toys in his bed and being adequately curious about instruments used in the examination. He seems quite self-sufficient in his play. He will obey commands, such as 'Sit up' or 'Lie down', even when he does not see the speaker. He does not pay attention to conversation going on around him, and although he does make noises, he says no recognizable words."

Richard's father was a professor of forestry, very much immersed in his work, almost to the exclusion of social contacts. The mother was a college graduate. The family, in both branches, consisted of professional people. Richard's younger brother was described as normal and well-developed.

Richard was born normally. He sat up at 8 months and walked at 1 year. His mother began to "train" him at the age of 3 weeks, giving him a suppository every morning "so his bowels would move by the clock." Nutrition and physical growth proceeded satisfactorily.

In September 1940, the mother wrote: "I can't be sure just when he stopped the imitation of word sounds. It seems that he has gone backward mentally. We have thought it was because he did not disclose what was in his head, that it was there all right. Now that he is making so many sounds, it is disconcerting because it is evident that he can't talk. Before, I thought he could if he only would. He gave the impression of silent wisdom to me. . . . One puzzling and discouraging thing is the great difficulty one has in getting his attention."

Richard was found to be healthy except for large tonsils and adenoids, which were removed on February 8, 1941. His EEG was normal.

He had himself led willingly to the office and engaged at once in active play with the toys, paying no attention to the persons in the room. Occasionally, he looked up at the walls, smiled and uttered short staccato sounds. He complied with a spoken and gestural command to take off his slippers. When the command was changed to another, this time without gestures, he again took off his slippers (which had been put on again).

Richard was again seen at 4½ years. He had grown considerably and gained weight. He immediately turned the lights on and off. He showed no interest in the examiner or any other person but was attracted to a small box that he threw as if it were a ball.

At near 5 years, his first move on entering the office was to turn the lights on and off. He climbed on a chair, and from the chair to the desk in order to reach the switch of the wall lamp. He had no contact with people, whom he definitely regarded as an interference when they talked to him or otherwise tried to gain his attention.

The mother felt that she was no longer capable of handling him, and he was placed in a foster home with a woman who had shown a remarkable talent for dealing with difficult children. After two changes of foster homes, he was placed at a State School for Exceptional Children in his home State in May 1946. A report, dated June 23, 1954, said: "The institution accepted him as essentially a custodial problem; therefore, he was placed with a group of similar charges."

Richard is now 33 years old. In 1965, he was transferred to another institution in the same State. The Superintendent wrote on September 29, 1970: "At the time of admission, tranquilizers were pushed to the point of toxicity. After about 3 months, he showed some awareness of his environment and began feeding himself and going to the toilet. He is now being maintained on

Compazine, 45 milligrams t.i.d. . . . He now resides in a cottage for older residents who can meet their own personal needs. He responds to his name and to simple commands and there is some non-verbal communication with the cottage staff. He continues to be withdrawn and cannot be involved in any structured activities."

Case 4

Paul G. was 5 years old when he was brought to the Clinic on March 21, 1941, "for determination of his degree of feeble-mindedness." He had a history of normal birth. Early development milestones had progressed satisfactorily. His enunciation was clear, and he had a good vocabulary.

The father, a mining engineer, had left the family in 1939 "after an unhappy marriage." The mother, a "restless, unstable, irritable woman," who moved from London to the United States, gave a conflicting story of her efforts to make Paul clever by teaching him to memorize poems and songs. At 3 years, "he knew the words of not less than 37 songs and many nursery rhymes."

Paul was a slender, attractive child. He had good manual dexterity. He rarely responded to any form of address, even to the calling of his name. Sometimes an energetic "Don't!" caused him to interrupt his activity but usually, when spoken to, he went on with whatever he was doing. He was always vivaciously occupied with something and seemed to be highly satisfied, unless someone made a persistent attempt to interfere. Then he first tried to get out of the way and, when this met with no success, screamed and kicked in a full-fledged tantrum. . . . There was a marked contrast between his relations to people and to objects. Upon entering the room, he instantly went after objects and used them correctly. He opened a box, took out a toy telephone, singing again and again: "He wants the telephone," and went around the room with the mouthpiece and receiver in proper position. He got hold of a pair of scissors and cut a sheet of paper into small bits, singing "cutting paper" many times. He helped himself to a toy engine, ran around the room holding it up high and singing over and over again: "The engine is flying." Some of his utterances could not be linked up with immediate situations. These are a few examples: "The people in the hotel"; "Did you hurt your leg?" "Candy is all gone, candy is empty." Reproductions of warnings about bodily injury constituted a major portion of his utterances. . . . All statements pertaining to himself were made in the second person, as literal repetitions of things said to him before. He would express his desire for candy by saying: "You want candy." He would put his hand away from a hot radiator and say: "You get hurt."

When the mother came to this country, she deposited Paul with a lady who ran a small home for retarded children. She removed him some time at the end of 1941, wrote friendly sounding letters to the Clinic but did not keep return appointments. She consulted Dr. Walter Klingman in 1941, Dr. Samuel Orton in 1943, applied for Paul's admission to the Devereux Schools in 1945 but decided that this was not the proper place for him. This is where the trail ends. Mother and child could not be located since then.

Case 5

Barbara K. was first seen at the Clinic on February 7, 1942, at the age of 8 years. Her father, a noted physician, stated in a written note:

"First child, born normally October 30, 1933. She nursed poorly and was put on bottle after a week. She quit taking any nourishment at 3 months. She was tube-fed five times daily up to 1 year of age. She began to eat then, though there was much difficulty until she was 18 months old. Since then she had been a good eater, likes to experiment with food, tasting, and now fond of cooking. . . . Ordinary vocabulary at 2 years, but always slow at putting words into sentences. Phenomenal ability to spell, read, and a good writer, but still has difficulty with verbal expression. Can't get arithmetic except as a memory feat. . . . Repetitious as a baby, and obsessive now; holds things in hands, takes things to bed with her, repeats phrases, gets stuck on an idea or game and rides it hard, then goes to something else. She used to say 'you' for herself and 'I' for her mother or me, as if she were saying things we would in talking to her. . . . Very timid, fearful of changing things, wind, large animals, etc. Mostly passive, but passively stubborn at times. Inattentive to the point where one wonders if she hears. (She does!) No competitive spirit, no desire to please her teacher. If she knew more than any member in the class about something, she would give no hint of it, just keep quiet, maybe not even listen. . . . In Camp last summer she was liked, learned to swim, is graceful in water (had always appeared awkward in her motility before), overcame fear of ponies, played best with children of 5 years of age. At camp she slid into avitaminosis and malnutrition but offered almost no verbal complaints."

Barbara's mother is a well-educated, kindly woman. A younger brother, born in 1937, was healthy, alert, and well-developed.

Barbara "shook hands" upon request (offering the left upon coming, the right upon leaving) by merely raising a limp hand in the approximate direction of the examiner's proffered hand; the motion lacked the implication of greeting. During the entire interview, there was no indication of any kind of affective

contact. A pin prick resulted in withdrawal of her arm, a fearful glance at the pin (not the examiner), and utterance of the word "Hurt," not addressed to anyone in particular.

She read excellently, finishing the 10-year Binet fire story in 33 seconds and with no errors, but was unable to reproduce from memory anything she had read. In the Binet pictures, she saw (or at least reported) no action or relatedness between the single items, which she had no difficulty enumerating. Her handwriting was legible. Her drawing was unimaginative and stereotyped. She used her right hand for writing, her left for everything else; she was left-footed and right-eyed.

She knew the days of the week. She began to name them: "Saturday, Sunday, Monday," then said, "You go to school" (meaning, "on Monday"), then stopped as if the performance were completed.

Throughout all these procedures, she scribbled words spontaneously: "oranges," "lemons," "bananas," "grapes," "cherries," "apples," "apricots," "tangerine," "grapefruits," "watermelon"; the words sometimes ran into each other and were obviously not meant for others to read.

Her mother remarked: "Appendages fascinate her, like a smoke stack or a pendulum." Her father had previously stated: "Recent interest in sexual matters, hanging about when we take a bath, and obsessive interest in toilets."

Barbara was placed at the Devereux Schools in the summer of 1942 and remained there until June 1952, when she was admitted to the Springfield State Hospital (Maryland) where she is still residing. She is now 37 years old. A note written by her ward physician October 8, 1970, has this to say, "She still has the stereotyped smile, the little girl-like facial expression with a placid grin, the child-like voice when uttering her parrot-like repetitions. Whenever I pass the ward, she greets me as follows: 'Doctor, do you know I socked you once?' She then usually gets very close to the writer following her to the office. . . . She still shows a total absence of spontaneous sentence production; the same phrases are used over and over again with the same intonation. Her mind is fixed to the same subjects, which vary to some degree with the person she is communicating with. Besides all of this she is childish, impulsive, subject to temper outbursts with stamping her feet, crying loudly and upsetting other patients. Her memory is completely intact. She likes to hum some melodies monotonously; whenever she feels like it she bangs the piano with well-known songs."

Case 6

Virginia S., born September 13, 1931, had resided in a State Training School for retarded children since 1936. Dr. Esther L. Richards, who saw her there

wrote in May 1941: "Virginia stands out from other children because she is absolutely different from any of the others. She is neat and tidy, does not play with other children, and does not seem to be deaf but does not talk. The child will amuse herself by the hour putting picture puzzles together, sticking to them until they are done. I have seen her with a box filled with the parts of two puzzles gradually work out the pieces for each. All findings seem to be in the nature of a congenital abnormality."

Virginia was the daughter of a psychiatrist, who said of himself: "I have never liked children, probably a reaction on my part to the restraint from movement, the minor interruptions, and commotions." Of his wife he said: "She is not by any means the mother type. Her attitude (toward a child) is more like toward a doll or pet than anything else." Virginia's brother, 5 years her senior, when referred to us because of severe stuttering at 15 years of age, burst out in tears when asked how things were at home and he sobbed: "The only time my father has ever had anything to do with me was when he scolded me for doing something wrong." His mother did not contribute even that much. He felt that all his life he had lived in "a frosty atmosphere" with two inapproachable strangers.

In August 1938, the psychologist at the training school observed that Virginia "pays no attention to what is said to her but quickly comprehends whatever is expected. Her performance reflects discrimination, care, and precision." With the non-language test items, she achieved an IQ of 94. "Without a doubt, her intelligence is superior to this. . . . She is quiet, solemn, composed. Not once have I seen her smile. She retires within herself, segregating herself from others. She seems to be in a world of her own, oblivious to all but the center of interest in the presiding situation. She is mostly self-sufficient and independent. When others encroach upon her integrity, she tolerates them with indifference. There was no manifestation of friendliness or interest in persons. On the other hand, she finds pleasure in dealing with things, about which she shows imagination and initiative."

When seen on October 11, 1942, Virginia was a tall, slender, neatly dressed girl. She responded when called by getting up and coming nearer without ever looking up to the person who called her. She just stood listlessly, looking into space. Occasionally, in answer to questions, she muttered: "Mamma, baby." When a group was formed around the piano, one child playing and the others singing, she sat among the children, seemingly not even noticing what went on, and gave the impression of being self-absorbed. She did not seem to notice when the children stopped singing. When the group dispersed, she did not change her position and appeared not to be aware of the change of scene. She had an intelligent physiognomy, though her eyes had a black expression.

Virginia will be 40 years old next September. She has been transferred to the Henryton State Hospital. "She is," the report from there, dated November 2, 1970, says, "in a program for adult retardates, with her primary rehabilitation center being the Home Economics Section. She can hear and is able to follow instructions and directions. She can identify colors and can tell time. She can care for her basic needs, but has to be told to do so. Virginia likes to work jigsaw puzzles and does so very well, preferring to do this alone. She can iron clothes. She does not talk, uses noises and gestures, but seems to understand when related to. She desires to keep to herself rather than associate with other residents."

Case 7

Herbert B. was brought to the Clinic by his mother on February 5, 1941.

Born November 18, 1937, 2 weeks before term by elective Caesarean section, he vomited all food from birth through the third month; then feeding proceeded satisfactorily. He sat up at 8 months but did not try to walk until 2 years old, when he "suddenly got up and walked without any preliminary crawling or assistance by chair." He persistently refused to take fluid in any but an all-glass container. For a time he was believed to be deaf because "he did not register any change of expression when spoken to and made no attempt to speak." He became upset by any change of accustomed pattern: "When he notices change, he is fussy and cries but he himself likes to pull blinds up and down, open and close doors, and tear cardboard boxes into small pieces and play with them for hours."

His parents separated shortly after his birth. The father, a psychiatrist, was described as "unusually intelligent, sensitive, restless, serious-minded, not interested in people, mostly living within himself." The mother, a pediatrician, spoke of herself as "energetic and outgoing, fond of people but having little insight into their problems, finding it easier to accept people rather than try to understand them." Herbert was the youngest of three children. The mother kept voluminous diaries for each of them, especially for her daughter who, born in 1934, for the first few years "wanted to be left alone, ignored persons, reversed personal pronouns, was first declared to be feebleminded, then schizophrenic, but blossomed out after the parents' separation." At the time when Herbert was seen at the Clinic, she attended school, had an IQ of 108, and "though sensitive and moderately apprehensive, was interested in people and got along well with them."

Herbert showed remarkably intelligent physiognomy and good motor coordination. He displayed astounding purposefulness in the pursuit of

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self-selected goals. Among a group of blocks, he instantly recognized those were glued to a board and those that were detachable. He could build a tower of blocks as skillfully and as high as any child of his age or even older. He was annoyed by any interference, shoving intruders away (without ever looking at them), or screaming when the shoving had no effect.

He was again seen at 4½ and at 5 years of age. Both times he entered the office without paying the slightest attention to the people present. He went to the form board and busied himself putting the figures into their proper spaces and taking them out again adroitly and quickly. When interfered with he whined impatiently. When one figure was stealthily removed, he noticed its absence, became disturbed, but promptly forgot all about it when it was back. At times, after he had finally quieted down following the upset caused by the removal of the form board, he jumped up and down with an ecstatic expression. He was completely absorbed in whatever he did. He never smiled but sometimes uttered inarticulate sounds in a monotonous singsong. At one time he gently stroked his mother's leg and touched it with his lips. He often brought blocks and other objects to his lips. There was an almost photographic likeness of his behavior during the two visits.

After a short stay at the Emma Pendleton Bradley Home in Rhode Island and another at Twin Maples ("a school of adjustment for the problem child" in Baltimore, he was placed by his mother with Mr. and Mrs. Moreland who had a farm in Maryland. He seemed happy there from the beginning. He followed the farmer around on his chores and helped him "making things in the barn." Moreland reported in October 1950: "He knows his way around the area of the farm and can go for miles and come back without getting lost. He learned to cut wood, uses the power mower, rakes the lawn, sets the traps perfectly, and in his spare time works jigsaw puzzles. He is a manageable and obedient child. Occasionally he gets upset if there is a sudden change in plans. . . . When his mother comes to visit, he gets himself absorbed and does not come toward her. After Mr. Moreland's death, the widow opened a nursing home for elderly people. Herbert remained with her, took the old ladies out for walks, brought them their trays to their rooms but never talked.

His mother, after serving as a public health officer in Maryland, spent several years (1953-1958) abroad—in Iraq and in Greece. On her return, she took a position in Atlanta, Georgia. She died in 1965.

Herbert is now 33 years. His father wrote on January 5, 1971: "He is still with the people in Maryland. It is several years since I have seen him but I find the word that he is essentially unchanged. More than anything else, he seems to enjoy doing jigsaw puzzles which he can do with the utmost skill."

A letter from his mother, written shortly before her death, contained this lament: "Our marriage seems to have produced three emotionally crippled children. Dorothy, after a disastrous marriage, is at home with her little baby girl and is trying to get on her feet working part time as a nurse in a local hospital. Dave is on the West Coast and has cost me \$450.00 monthly as he gets intensive psychiatric treatment."

Dorothy is Herbert's legally appointed guardian.

Case 8

Alfred L. was brought to the Clinic by his mother in November 1935, at 3½ years with this complaint: "He has gradually shown a marked tendency toward developing one special interest which will dominate his day's activities. He talks of little else while the interest exists, he frets when he is not able to indulge in it and it is difficult to get his attention because of his preoccupation. . . . There has also been the problem of an overattachment to the world of objects and failure to develop the usual amount of social awareness. . . . Language developed slowly; he seemed to have no interest in it. He seldom tells experiences. He still confuses pronouns. He never asks questions in the form of questions (with the appropriate inflection). Since he talked, there has been a tendency to repeat over and over one word or statement. He almost never says a sentence without repeating it. Yesterday, when looking at a picture, he said many times, 'Some cows standing in the water.' We counted 50 repetitions, then he stopped after several more and began over and over. . . . He frets when the bread is put in the oven to be made into toast and is afraid it will get burned and be hurt. He is upset when the sun sets or because the moon does not always appear in the sky at night. He prefers to play alone; he will get down from a piece of apparatus as soon as another child approaches. He like to work out some project with large boxes (make a trolley, for instance) and does not want anyone to interfere."

Alfred was born June 20, 1932. For the first 2 months, "the feeding formula caused much concern but then he gained rapidly and became unusually large and vigorous." He sat up at 5 months and walked at 14 months. First words at one year. At 22 months, he swallowed cotton from an Easter rabbit, some of which lodged in the windpipe; a tracheotomy was performed under local anesthesia.

He was an only child. The father, a chemist and a law school graduate, was described as "suspicious, easily angered, spends his spare time reading, gardening, and fishing, has to be dragged out to visit friends." The mother, a clinical psychologist, "very obsessive and excitable," was the only parent in the Clinic's experience who did not allow notes to be taken when she gave the history. She

left her husband 2 months after Alfred's birth; both lived with the maternal grandparents in a home in which the mother ran a nursery school and kindergarten. The grandfather, a psychologist, was severely obsessive-compulsive and had numerous tics.

Alfred, upon entering the office, immediately spotted a train in the toy cabinet, took it out, and connected and disconnected the cars in a slow, monotonous manner. He kept saying many times: "More train—more train—more train." He "counted" the car windows: "One, two windows, four windows, eight windows." He could not be distracted from the trains. A Binet test was attempted in a room in which there were no trains. It was possible with much difficulty to pierce through his preoccupations. He finally complied in a manner that clearly indicated that he wanted to get through with the particular intrusion. Finally, he achieved an IQ of 140.

The mother did not bring him back after his first visit because of "his continued distress when confronted with a member of the medical profession." In August 1938, she sent upon request a written report from which the following lines are quoted: "He is called a lone wolf. He prefers to play alone and avoids groups of children at play. He does not pay attention to adults except when demanding stories. He avoids competition. He reads simple stories to himself. He is very fearful of being hurt; he talks a great deal about the use of the electric chair."

He was again seen in June 1941. His parents had decided to live together. Prior to that he had been in 11 different schools. He had been kept in bed often because of colds, bronchitis, chickenpox, impetigo, and a vaguely described condition that the mother insisted was rheumatoid fever.

Alfred was extremely tense and serious-minded; had it not been for his juvenile voice, he might have given the impression of a worried little old man. At the same time, he was restless and showed considerable pressure of talk, which consisted of obsessive questions about windows, shades, dark rooms, especially the X-ray room. He never smiled. In between he answered questions, which often had to be repeated. He was painstakingly specific in his definitions. A balloon "is made out of lined rubber and has air in it and some have gas and sometimes they go up and sometimes they can hold up and when they got a hole in it they'll bust up; if people squeeze they'll bust. Isn't it right?" A tiger "is a thing, animal, striped, like a cat, can scratch, eats people up, wild, lives in the jungle sometimes and in the forests, mostly in the jungle. Isn't it right?" He once stopped and asked, very much perplexed, why "The Johns Hopkins Hospital" was printed on the history sheets: "Why do they have to say it?" Since the histories were taken at the hospital, why should it be necessary to have

the name on every sheet, though the person writing on it knew where he was writing? The examiner, whom he remembered from his visit 6 years previously, was to him nothing more nor less than a person who was expected to answer his obsessive questions about darkness and light.

This ended the Clinic's contact with Alfred. The mother started him out on a tour of schools and hospitals, not informing them about preceding evaluations and taking him out after a time, not disclosing the next step she planned to take. We do know that he was at the V.V. Anderson School in Stratsburg-on-Hudson, N.Y. (1948-1950); the Taylor Manor in Ellicott City, Md. (July to October 1954); and the Philadelphia Hospital Department for Mental and Nervous Diseases (March 3 to April 20, 1955). Some time between the last two, he was for a time on Thorazine; then at a "school for brain damaged children" founded by his mother in October 1954.

Alfred is now 38 years old. So far as can be determined, he is at his mother's "school." Both at Sheppard-Pratt and Philadelphia Hospitals he was interested in the occupational therapy materials and did well with them. When this was brought to the mother's attention, she decided to take him out.

Case 9

Charles N. was brought by his mother on-February 2, 1943, with the chief complaint: "The thing that upsets me most is that I can't reach my baby."

Charles was born on August 9, 1938. He was a planned and wanted child. He sat up at 6 months; at 14 months "he stood up and walked one day." As a baby, he was "slow and phlegmatic." He would lie in his crib "almost as if hypnotized." Thyroid extract medication had no effect.

He was the oldest of three children. Mr. N., a high school graduate clothing merchant, was described as a "self-made, gentle, and placid person"; his relatives were said to be "ordinary, simple people." Mrs. N., "of remarkable equanimity," had a successful business record, running a theatrical booking office. Her "dynamic and forceful" mother had done some writing and composing. Mrs. N. had a brother, a psychiatrist, who had great musical talent, a sister who was "very brilliant and psychoneurotic," and a sister who was referred to as "the Amazon of the family."

The mother prefaced her story thus: "I am trying hard not to govern my remarks by professional knowledge which has intruded in my own way of thinking now." In this she succeeded. This is a brief abstract of her report: "His enjoyment and appreciation of music encouraged me to play records. When he was 1½ years old, he could discriminate between symphonies. He recognized the

composer as soon as the first movement started. He would say 'Beethoven.' At about the same age, he began to spin toys and lids of bottles and jars by the hour. He would watch it and get excited and jump up and down in ecstasy. Now he is interested in reflecting light from mirrors and catching reflections. When he is interested in a thing, you cannot change it. . . . The most impressive thing is his detachment and his inaccessibility. He lives in a world of his own where he cannot be reached. No sense of relationship to persons. He went through a period of quoting another person; never offers anything himself. His entire conversation is a replica of whatever has been said to him. He used to speak of himself in the second person, now he uses the third person at times. . . . He is destructive; the furniture in his room looks like it has hunks out of it. He will break a purple crayon into two parts and say, 'You had a beautiful purple crayon and now it's two pieces. Look what you did.' . . . He developed an obsession about feces, would hide it anywhere (for instance, in drawers), would tease me if I walked into the room: 'You soiled your pants, now you can't have your crayons! . . . As a result, he is still not toilet trained. He never soils himself in the nursery school, always does it when he comes home. The same is true of wetting. He is proud of wetting, jumps up and down with ecstasy, says; 'Look at the big puddle he made.' "

Charles was a well-developed, intelligent looking boy, who was in good physical health. When he entered the office, he paid no attention to the people present. Without looking at anyone, he said: "Give me a pencil," took a piece of paper from the desk and wrote something resembling a figure 2 (a large desk calendar prominently displayed a figure 2, the day was February 2). He had brought with him a copy of *Readers' Digest* and was fascinated by a picture of a baby. He said: "Look at the funny baby," innumerable times, occasionally adding: "Is he not funny? Is he not sweet?" When the book was taken away from him, he struggled with the hand that held it, without looking at the person who had taken the book. When he was pricked with a pin, he said: "What's this?" and answered his own question: "It is a needle." He looked timidly at the pin, shrank from further pricks, but at no time did he seem to connect the pricking with the person who held the pin. When the *Readers' Digest* was put on the floor and a foot placed over it, he tried to remove the foot as if it were a detached and interfering object, with no concern for the person to whom the foot belonged.

When confronted with the Seguin form board, he was interested in the names of the forms before putting them into their appropriate holes. He often spun the forms around, jumping up and down excitedly while they were in motion. He

knew names, such as "octagon," "diamond," "oblong block," but nevertheless kept asking: "What is this?"

He did not respond to being called and did not look at his mother when she spoke to him. When the blocks were removed, he screamed, stamped his feet, and cried: "I give it to you!" (meaning: "You give it to me").

Charles was placed at the Devereux Schools on February 10, 1943. Early in 1944, he was removed, spent 3 months (from March to June) at Bellevue Hospital; was admitted on June 22, 1944, to New Jersey State Hospital at Marlboro; transferred to Arthur Brisbane Child Treatment Center on November 1, 1946; transferred to Atlantic County Hospital, February 1, 1951; transferred to the State Hospital at Ancora on October 14, 1955. He is still there, now 32 years old. This means that he has been a State Hospital resident from the age of 5 years and 10 months. Inquiries by the Clinic, if responded to at all, yielded meager general statements about continuing deterioration. One note of December 1953, said something about "intensive psychotherapy." The last note, dated December 23, 1970, said: "This patient is very unpredictable in his behavior. He has a small vocabulary and spends most of the time singing to himself. He is under close observation and is in need of indefinite hospitalization."

Case 10

John F. was first seen at the Clinic on February 13, 1940, at 28 months of age.

His father said: "The main thing that worries me is the difficulty in feeding. That is the essential thing, and secondly his slowness in development. During the first days of life he did not take the breast satisfactorily. After 15 days he was changed from breast to bottle. There is a long story of trying to get food down. We have tried everything under the sun. He has been immature all along. At 20 months he first started to walk. He sucks his thumb and grinds his teeth quite frequently and rolls from side to side before sleeping. If we don't do what he wants, he will scream and yell."

John was born September 19, 1937. There was frequent hospitalization because of the feeding problem. The anterior fontanelle did not close until he was 2½ years of age. He suffered from repeated colds and otitis media, which necessitated bilateral myringotomy.

John was an only child until February 1943. The father, a psychiatrist, was "a very calm, placid, emotionally stable person, who is the soothing element in the family." The mother, a high-school graduate, worked as a secretary in a pathology laboratory before marriage; she "saw everything as a pathological specimen; throughout the pregnancy, she was afraid she would not live through the labor."

John was brought to the office by both parents. He wandered about the room constantly and aimlessly. Except for spontaneous scribbling, he never brought two objects into relation to each other. He did not respond to the simplest commands.

At the end of his fourth year, he was able to form a limited kind of affective contact. Once a relationship was established, it had to continue in exactly the same channels. He formed grammatically correct sentences but used the pronoun of the second person when referring to himself. Language was mainly a repetition of things he heard, without alteration of the personal pronoun. There was marked obsessiveness. Daily routine must be adhered to rigidly; any change called forth outbursts of panic. He had an excellent rote memory and could recite many prayers, nursery rhymes, and songs; the mother did a great deal of stuffing in this respect and was very proud of these "achievements": "He can tell victrola records by their color, and if one side of the record is identified, he remembers what is on the other side."

At 4½ years, he began to use pronouns adequately. He wanted to make sure of the sameness of the environment literally by keeping doors and windows closed. When his mother opened the door, he became violent in closing it again and finally, when again interfered with, burst helplessly into tears, utterly frustrated.

He was extremely upset upon seeing anything broken or incomplete. He noticed two dolls to which he had paid no attention before. He saw that one of them had no hat and became very much agitated, wandering about the room to look for the hat. When the hat was retrieved from another room, he instantly lost all interest in the dolls.

At 5½ years, he had good mastery of the use of pronouns. He had begun to feed himself satisfactorily. He saw a group photograph in the office and asked his father: "When are they coming out of the picture and coming in here?" He was serious about this. His father said something about the pictures they have at home on the wall. John corrected his father: "We have them *near* the wall." (*On* meant to him "above" or "on top"). His father whistled a tune and John instantly and correctly identified it as "Mendelssohn's Violin Concerto." Though he could speak of things as big or pretty, he was incapable of making comparisons. ("Which is the bigger line? Prettier face?")

In December 1942, and January 1943, he had two series of predominantly right-sided convulsions, with conjugate deviation of the eyes to the right and transient paresis of the right arm. Neurologic examination showed no abnormalities. His eyegrounds were normal. An EEG indicated "focal disturbances in the left occipital region."

After attending a private nursery school, John was at the Devereux Schools (1945-1949), then at the Woods Schools, then at Children's House (June 1950), and attended Town and Country School in Washington, D.C. An inquiry about him came from Georgetown Hospital in 1956.

Dr. Hilde Bruch, who saw him in 1953, remarked on his "exuberant emotional expression with no depth and variation and with immediate turnoff when the other person withdraws the interest."

John died suddenly in 1966 at 29 years of age.

Case 11

Elaine C. was brought by her parents on April 12, 1939, at the age of 7 years because of "unusual development." She doesn't adjust. She stops at all abstractions. She doesn't understand other children's games, doesn't retain interest in stories read to her, wanders off and walks by herself, is especially fond of animals of all kinds, occasionally mimics them by walking on all fours and making strange noises."

Elaine was born on February 3, 1932. She appeared healthy, took feedings well, stood up at 7 months and walked at less than a year. She could say 4 words at the end of her first year but made no progress in speech for the following 4 years. Deafness was suspected but ruled out. Because of a febrile illness at 13 months, her increasing difficulties were interpreted as possible postencephalitic behavior disorder. Others blamed the mother, who was accused of inadequate handling of the child. Feeble-mindedness was another diagnosis. For 18 months, she was given anterior pituitary and thyroid preparations. "Some doctors thought she was a normal child and said that she would outgrow this."

At 2 years, she was sent to a nursery school, where "she independently went her way, not doing what the others did. She, for instance, drank the water and ate the plant when they were being taught to handle flowers." She developed an early interest in pictures of animals. Though generally restless, she could for hours concentrate on looking at such pictures.

When she began to speak at 5 years, she started out with complete, though simple sentences that were "mechanical phrases" and knew especially the names and "classifications" of animals. She did not use pronouns correctly, but used plurals and tenses well. "She could not use negatives but recognized their meaning when others used them. . . . She could count by rote. She could set the table for numbers of people if the names were given her but she could not set the table 'for three.' If sent for a specific object in a certain place, she could not bring it if it was somewhere else but still visible. . . . She was frightened by noises and anything moving toward her. She was so afraid of the vacuum cleaner that

she would not even go near the closet where it was kept, and when it was used, ran out into the garage, covering her ears with her hands."

Elaine was the older of two children. Her father had studied law and the liberal arts in three universities (including the Sorbonne), was an advertising copy writer, "one of those chronically thin persons, nervous energy readily expended." The mother, a "self-controlled, placid, logical person," had done editorial work for a magazine before marriage.

Physically Elaine was in good health. Her EEG was normal. When examined in April 1939, she shook hands with the physician upon request, without looking at him, then ran to the window and looked out. She automatically heeded the invitation to sit down. Her reaction to questions—after several repetitions—was an echolalia-type reproduction of the whole question or, if it was too lengthy, of the end portion. Her expression was blank, though not unintelligent, and there were no communicative gestures. At one time, without changing her physiognomy, she said suddenly: "Fishes don't cry."

She was placed at the Child Study Home of Maryland, where she remained for 3 weeks. She soon learned the names of all the children, knew the color of their eyes, the bed in which each slept, but never entered into relationship with them. When taken to the playground, she was upset and ran back to her room. She was restless, but when she was allowed to look at pictures, play alone with blocks, draw, or string beads, she could entertain herself for hours. She frequently ejaculated stereotyped phrases, such as, "Dinosaurs don't cry"; "Crayfish and frogs live in children's tummies"; "Butterflies live in children's tummies, and in their panties too"; "Fish have sharp teeth and bite little children"; "There is war in the sky"; "Gargoyles bite children and drink oil"; "Needle head, Pink wee-wee. Has a yellow leg. Cutting the dead deer. Poison deer. Poor Elaine. No tadpoles in the house. Men broke deer's leg" (while cutting the picture of a deer from a book).

Elaine was placed in a private school. The father reported "rather amazing changes: She is a tall, husky girl with clear eyes that have long since lost any trace of that wildness they periodically showed in the time you knew her. She speaks well on almost any subject, though with something of an odd intonation. Her conversation is still rambling, frequently with an amusing point, and it is only occasional, deliberate, and announced. She reads very well, jumbling words, not pronouncing clearly, and not making proper emphases. Her range of information is really quite wide, and her memory almost infallible."

On September 7, 1950, Elaine was admitted to Latchworth Village, N.Y. State School. While there, "she was distractible, assaultive, and talked in an irrational manner with a flat affect. She ran through wards without clothing,

threw furniture about, banged her head on the wall, had episodes of banging and screaming, and imitated various animal sounds. She showed a good choice of vocabulary but could not maintain a conversation along a given topic. EEG did not show any definite abnormality." She was found to have an IQ of 83.

On February 28, 1951, she was transferred to the Hudson River State Hospital. She is still there. A report, dated September 25, 1970, says: "She is up and about daily, eats and sleeps well and is acting quite independent. She is able to take care of her personal needs and is fairly neat and clean. Her speech is slow and occasionally unintelligible and she is manneristic. She is in only fair contact and fairly well oriented. She cannot participate in a conversation, however, except for the immediate needs. If things do not go her way, she becomes acutely disturbed, yelling, hitting her chest with her fist, and her head against the wall. In her lucid periods, however, she is cooperative, pleasant, childish, and affectionate. She has epileptic seizures occasionally of grand mal type and is receiving antiepileptics and tranquilizers. Her general physical condition is satisfactory." She is now 39 years old.

DISCUSSION

Those were the 11 children who were designated in 1943 as having "autistic disturbances of affective contact." They were reported as representing a "syndrome, rare enough, yet probably more frequent than is indicated by the paucity of observed cases." The outstanding pathognomonic characteristics were viewed as (a) the children's inability from the beginning of life to relate themselves to people and situations in the ordinary way, and (b) an anxiously obsessive desire for the preservation of sameness. A year after the first publication, the term early infantile autism was added to psychiatric nomenclature.

Now, 28 years later, after early infantile autism has become a matter of intensive study, after dozens of books and thousands of articles, after active stimulation by concerned parent groups in many countries, after the creation of special educational, therapeutic, and research units, it may be of interest to look back and see how these few children have contributed to the introduction of a concept that has since then stirred professional and lay curiosity.

For quite some time, there was considerable preoccupation with the nosological allocation of the syndrome. The 1943 report had this to say: "The combination of extreme autism, obsessiveness, stereotypy, and echolalia brings the total picture into relationship with some of the basic schizophrenic phenomena. Some of the children have indeed been diagnosed as of this type at one time or another. In spite of the remarkable similarities, however, the

condition differs in many respects from all known instances of childhood schizophrenia." The "uniqueness" or "unduplicated nature" of autism was emphasized strongly then and in subsequent publications. Nevertheless, it has been just recently that this view has been generally accepted. The ultimate concession has come in 1967 from Russian investigators who had the courage to break through the officially sanctioned "line," according to which autism had been assigned the status of "schizoid psychopathy." The message, however, has not quite percolated to the framers of the 1968 Diagnostic and Statistical Manual of Mental Disorders (DSM II) adapted by the American Psychiatric Association. This is a widely used code system in which autism is not included, and children so afflicted are offered item 295.80 ("Schizophrenia, childhood type") as the only available legitimate port of entry.

As for the all-important matter of etiology, the early development of the 11 children left no other choice than the assumption that they had "come into the world with an *innate* disability to form the usual, biologically provided contact with people." The concluding sentence of the 1943 article said, "here we seem to have pure-culture examples of *inborn* autistic disturbances of affective contact." One can say now unhesitatingly that this assumption has become a certainty. Some people seem to have completely overlooked this statement, however, as well as the passages leading up to it and have referred to the author erroneously as an advocate of postnatal "psychogenicity."

This is largely to be ascribed to the observation, duly incorporated in the report, that all 11 children had come from highly intelligent parents. Attention was called to the fact that there was a great deal of obsessiveness in the family background. The very detailed diaries and the recall, after several years, that the children had learned to recite 25 questions and answers of the Presbyterian catechism, to sing 37 nursery songs, or to discriminate between 18 symphonies, furnish a telling illustration. It was noticed that many of the parents, grandparents, and collaterals were persons strongly preoccupied with abstractions of a scientific, literary, or artistic nature and limited in genuine interest in people. But at no time was this undeniable and repeatedly confirmed phenomenon oversimplified as warranting the postulate of a direct cause-and-effect connection. To the contrary, it was stated expressly that the aloneness from the beginning of life makes it difficult to attribute the whole picture one-sidedly to the manner of early parent-child relationship.

The one thing that the 1943 paper could neither acquire nor offer was a hint about the future. Everywhere in medicine, prognosis can be arrived at only through retrognosis. No empirical data were available at the time; the whole syndrome as such was a novelty as far as anybody was aware. Now

we have information about the fate of the 11 children in the ensuing three decades.

We must keep in mind that they were studied before the days when a variety of therapeutic methods were inaugurated, based on a variety of theoretical premises: psychoanalytically oriented, based on operant conditioning, psychopharmacological, educational, via psychotherapy of parents, and combinations of some of them. Sufficient time has not elapsed to allow meaningful long-range followup evaluations. At any rate, no accounts are as yet available that would afford a reasonably reliable idea about the more than temporary or fragmentary effects of any of these procedures intended for amelioration.

Of the 11 children, 8 were boys and 3 (cases 5, 6, and 11) were girls. It was, of course, impossible at the time to say whether or not this was merely a chance occurrence. A later review of the first 100 autistic children seen at the Johns Hopkins Hospital showed a ratio of 4 boys to 1 girl. The predominance of boys has indeed been affirmed by all authors since then. It may be added that the boys were brought to the Clinic at an earlier age (between 2 and 6 years) than the girls (between 6 and 8 years).

Nine of the children were Anglo-Saxon descent, two (cases 9 and 10) were Jewish. Three were only children, 5 were the first-born of two, one was the oldest of three, one the younger of two, and one the youngest of three. Order of birth was therefore not regarded as being of major significance *per se*.

On clinical pediatric examination, all 11 children were found to be in satisfactory health physically. Two had large tonsils and adenoids, which were soon removed. Five had relatively large head circumferences. Several of the children were somewhat clumsy in gait and gross motor performances but all were remarkably skillful with regard to finer muscular coordination. Electroencephalograms were normal in all except John (case 10), whose anterior fontanelle had not closed until he was 2½ years old and who, 3 years after his first visit to the Clinic, began having predominantly right-sided convulsions. Frederick (case 2) had a supernumerary nipple in the left axilla. There were in the group no other instances of congenital somatic anomalies. All had intelligent physiognomies, giving at times—especially in the presence of others—the impression of serious-mindedness or anxious tenseness, at other times, when left alone with objects and with no anticipation of being interfered with, a picture of beatific serenity.

While there were, as is to be expected, individual nuances in the manifestation of some of the specific features, the degree of the disturbance, and in the step-by-step succession of incidental occurrences, it is evident that in the first 4 or 5 years of life the overall behavioral pattern was astoundingly similar, almost

to the point of identity in terms of the two cardinal characteristics of aloneness and sterotype. Now, after 30 or more years, it is also evident that from then on, notwithstanding the basic retention of these two features, major differences have developed in the shaping of the children's destinies.

We do not know about the present status of Paul A. (Case 4) and of Alfred N. (Case 8). Paul's mother went shopping around to a number of specialists, dropping out each time after one or two appointments, and could not be located since 1945, despite many efforts worthy of a competent detective agency. Alfred's mother had him at first in rapid succession in 11 different public and private schools and then in several residential settings. He responded well to occupational therapy but the mother, not considering this adequate, took him out and kept him with her in a "school" founded and run by herself.

Two of the children, John and Elaine (Cases 10 and 11) developed epileptic seizures. John's began about 3 years after his first visit to the Clinic; after sojourns in several residential places, he died in 1966. Elaine's convulsions started in her middle to late twenties and she is now, at 39 years, still "on anti-epileptics and tranquilizers"; her EEG was reported normal in 1950, when she was admitted to the Latchworth Village, N.Y. State School. She was later transferred to the Hudson River, N.Y. State Hospital, where she still resides.

Richard M., Barbara K., Virginia S., and Charles N. (Cases 3, 5, 6, and 9), who spent most of their lives in institutional care, have all lost their luster early after their admission. Originally fighting for their aloneness and basking in the contentment that it gave them, originally alert to unwelcome changes and, in their own way, struggling for the status quo, originally astounding the observer with their phenomenal feats of memory, they yielded readily to the uninterrupted self-isolation and soon settled down in a life not too remote from a nirvana-like existence. If at all responsive to psychological testing, their IQ's dropped down to figures usually referred to as low-grade moron or imbecile.

This fortunately did not happen to the remaining three children. Herbert B. (Case 7), still mute, has not attained a mode of living that one can be jubilant about but has reached a state of limited but positive usefulness. He was placed on a farm, where, following the farmer around on his chores, he learned to participate in some of them. When the farmer died and the widow established a nursing home for elderly people, he learned to perform the functions of a kind, helpful, competent orderly, using his routine-consciousness in a goal-directed, dependable manner.

Donald T. (Case 1) and Frederick W. (Case 2) represent the two real success stories. Donald, because of the intuitive wisdom of a tenant farmer couple, who knew how to make him utilize his futile preoccupations for practical purposes

and at the same time helped him to maintain contact with his family, is a regularly employed bank teller; while living at home, he takes part in a variety of community activities and has the respect of his fellow townspeople. Frederick had the benefit of a similarly oriented arrangement in the framework of the Devereux Schools, where he slowly was introduced to socialized pursuits via his aptitude for music and photography. In 1966, his parents took over. He was enrolled in a sheltered workshop and received vocational training, learning to run duplicating machines. He has now a regular job and is reported by his chief as "outstandingly dependable, reliable, thorough, and thoughtful toward fellow workers."

COMMENT

Such was the fate of the 11 children whose behavior pattern in preschool age was so very much alike as to suggest the delineation of a specific syndrome. The results of the followup after about 30 years do not lend themselves for statistical considerations because of the small number involved. They do, however, invite serious curiosities about the departures from the initial likeness ranging all the way from complete deterioration to a combination of occupational adequacy with limited, though superficially smooth social adjustment.

One cannot help but gain the impression that State Hospital admission was tantamount to a life sentence, with evanescence of the astounding facts of rote memory, abandonment of the earlier pathological yet active struggle for the maintenance of sameness, and loss of the interest in objects added to the basically poor relation to people—in other words, a total retreat to near-nothingness. These children were entered in institutions in which they were herded together with severely retarded coevals or kept in places in which they were housed with psychotic adults; two were eventually transferred from the former to the latter because of their advancing age. One superintendent was realistic enough to state outright that he was accepting the patient "for custodial care." Let it be said, though, that recently a few, very few, State Hospitals have managed to open separate children's units with properly trained and treatment-oriented personnel.

The question arises whether these children might have fared better in a different setting or whether Donald and Frederick, the able bank teller and the duplicating machine operator, would have shared the dismal fate of Richard and Charles in a State Hospital environment. Even though an affirmative answer would most likely be correct, one cannot get away from wondering whether another element, not as yet determinable, may have an influence on the future

of autistic children. It is well known in medicine that any illness may appear in different degrees of severity, all the way from the so-called *forme fruste* to the most fulminant manifestation. Does this possibly apply also to early infantile autism?

After its nearly 30-year history and many bona fide efforts, no one as yet has succeeded in finding a therapeutic setting, drug, method, or technique that has yielded the same or similar ameliorative and lasting results for all children subjected to it. What is it that explains all these differences? Are there any conceivable clues for their eventual predictability?

At long last, there is reason to believe that some answers to these questions seem to be around the corner. Biochemical explorations, pursued vigorously in the very recent past, may open a new vista about the fundamental nature of the autistic syndrome. At long last, there is, in addition, an increasing tendency to tackle the whole problem through a multidisciplinary collaboration. Genetic investigations are barely beginning to be conducted. Insights may be gained from ethological experiences. Parents are beginning to be dealt with from the point of view of mutuality, rather than as people standing at one end of a parent-child bipolarity; they have of late been included in the therapeutic efforts, not as etiological culprits, nor merely as recipients of drug prescriptions and of thou-shalt and thou-shalt-not rules, but as actively contributing cotherapists.

This 30-year followup has not indicated too much concrete progress from the time of the original report, beyond the refinement of diagnostic criteria. There has been a hodge-podge of theories, hypotheses, and speculations, and there have been many valiant, well-motivated attempts at alleviation awaiting eventual evaluation. It is expected, with good justification, that a next 30- or 20-year followup of other groups of autistic children will be able to present a report of newly obtained factual knowledge and material for a more hopeful prognosis than the present chronicle has proved to be.