

whatever. Her world had been voided of feeling and meaning. Nothing any longer felt "real" (or "unreal"). Everything was now "equivalent" or "equal"—the whole world reduced to a facetious insignificance.

I found this somewhat shocking—her friends and family did too—but she herself, though not without insight, was uncaring, indifferent, even with a sort of funny-dreadful nonchalance or levity.

Mrs. B., though acute and intelligent, was somehow not present—"de-souled"—as a person. I was reminded of William Thompson (and also of Dr. P.). This is the effect of the "equalization" described by Luria. . . .

Postscript

The sort of facetious indifference and "equalization" shown by this patient is not uncommon—German neurologists call it *Witzelsucht* ("joking disease"), and it was recognized as a fundamental form of nervous "dissolution" by Hughlings Jackson a century ago. It is not uncommon, whereas insight is—and the latter, perhaps mercifully, is lost as the "dissolution" progresses. I see many cases a year with similar phenomenology but the most varied etiologies. Occasionally I am not sure, at first, if the patient is just "being funny," clowning around, or schizophrenic. Thus, almost at random, I find the following in my notes on a patient with cerebral multiple sclerosis, whom I saw (but whose case I could not follow up) in 1981:

She speaks very quickly, impulsively, and (it seems) indifferently . . . so that the important and the trivial, the true and the false, the serious and the joking, are poured out in a rapid, unselective, half-confabulatory stream. . . . She may contradict

herself completely within a few seconds . . . will say she loves music, she doesn't, she has a broken hip, she hasn't . . .

I concluded my observation on a note of uncertainty:

How much is cryptomania-confabulation, how much frontal-lobe indifference-equalization, how much some strange schizophrenic disintegration and shattering-flattening?

Of all forms of "schizophrenia" the "silly-happy," the so-called "hebephrenic," most resembles the organic amnesic and frontal lobe syndromes. They are the most malignant, and the least imaginable—and no one returns from such states to tell us what they were like.

In all these states—"funny" and often ingenious as they appear—the world is taken apart, undermined, reduced to anarchy and chaos. There ceases to be any "center" to the mind, though its formal intellectual powers may be perfectly preserved. The end point of such states is an unfathomable "silliness," an abyss of superficiality, in which all is ungrounded and afloat and comes apart. Luria once spoke of the mind as reduced, in such states, to "mere Brownian movement." I share the sort of horror he clearly felt about them (though this incites, rather than impedes, their accurate description). They make me think, first, of Borges' "Funes," and his remark, "My memory, Sir, is like a garbage-heap," and finally, of the *Dunciad*, the vision of a world reduced to Pure Silliness—Silliness as being the End of the World:

Thy hand, great Anarch, lets the curtain fall;
And Universal Darkness buries All.

Final Note on a Case of Extreme Isolation

Kingsley Davis

Early in 1940 there appeared . . . an account of a girl called Anna.¹ She had been deprived of normal contact and had received a minimum of human care for almost the whole of her first six years of life. At this time observations were not complete and the report had a tentative character. Now, however, the girl is dead, and with more information available,² it is possible to give a fuller and more definitive description of the case from a sociological point of view.

Anna's death, caused by hemorrhagic jaundice, occurred on August 6, 1942. Having been born on March 1 or 6,³ 1932, she was approximately ten and a half years of age when she died. The previous report covered her development up to the age of almost eight years; the present one recapitulates the earlier period on the basis of new evidence and then covers the last two and a half years of her life.

Early History

The first few days and weeks of Anna's life were complicated by frequent changes of domicile. It will be recalled that she was an illegitimate child, the second such child born to her mother, and that her grandfather, a wid-

owed farmer in whose house her mother lived, strongly disapproved of this new evidence of the mother's indiscretion. This fact led to the baby's being shifted about.

Two weeks after being born in a nurse's private home, Anna was brought to the family farm, but the grandfather's antagonism was so great that she was shortly taken to the house of one of her mother's friends. At this time a local minister became interested in her and took her to his house with an idea of possible adoption. He decided against adoption, however, when he discovered that she had vaginitis. The infant was then taken to a children's home in the nearest large city. This agency found that at the age of only three weeks she was already in a miserable condition, being "terribly galled and otherwise in very bad shape." It did not regard her as a likely subject for adoption but took her in for a while anyway, hoping to benefit her. After Anna had spent nearly eight weeks in this place, the agency notified her mother to come to get her. The mother responded by sending a man and his wife to the children's home with a view to their adopting Anna, but they made such a poor impression on the agency that permission was refused. Later the mother came herself and took the child out of the home and then gave her to this couple. It was in the home of this pair that a social worker found the girl a short time thereafter. The social worker went to the mother's home and

¹Final Note on a Case of Extreme Isolation" by K. Davis, 1947. *American Journal of Sociology*, 52, pp. 432-437. Reprinted by permission of the author.

pleaded with Anna's grandfather to allow the mother to bring the child home. In spite of threats, he refused. The child, by then more than four months old, was next taken to another children's home in a near-by town. A medical examination at this time revealed that she had impetigo, vaginitis, umbilical hernia, and a skin rash.

Anna remained in this second children's home for nearly three weeks, at the end of which time she was transferred to a private foster-home. Since, however, the grandfather would not, and the mother could not, pay for the child's care, she was finally taken back as a last resort to the grandfather's house (at the age of five and a half months). There she remained, kept on the second floor in an attic-like room because her mother hesitated to incur the grandfather's wrath by bringing her downstairs.

The mother, a sturdy woman weighing about 180 pounds, did a man's work on the farm. She engaged in heavy work such as milking cows and tending hogs and had little time for her children. Sometimes she went out at night, in which case Anna was left entirely without attention. Ordinarily, it seems, Anna received only enough care to keep her barely alive. She appears to have been self-dom moved from one position to another. Her clothing and bedding were filthy. She apparently had no instruction, no friendly attention.

It is little wonder that, when finally found and removed from the room in the grandfather's house at the age of nearly six years, the child could not talk, walk, or do anything that showed intelligence. She was in an extremely emaciated and undernourished condition, with skeletonlike legs and a bloated abdomen. She had been fed on virtually nothing except cow's milk during the years under her mother's care.

Anna's condition when found, and her subsequent improvement, have been described in the previous report. It now remains to say what happened to her after that.

Later History

In 1939, nearly two years after being discovered, Anna had progressed, as previously reported, to the point where she could walk, understand simple commands, feed herself, achieve some neatness, remember people, etc. But she still did not speak, and, though she was much more like a normal infant of something over one year of age in mentality, she was far from normal for her age.

On August 30, 1939, she was taken to a private home for retarded children, leaving the county home where she had been for more than a year and a half. In her new setting she made some further progress, but not a great deal. In a report of an examination made November 6 of the same year, the head of the institution pictured the child as follows:

Anna walks about aimlessly, makes periodic rhythmic motions of her hands, and, at intervals, makes guttural and sucking noises. She regards her hands as if she had seen them for the first time. It was impossible to hold her attention for more than a few seconds at a time—not because of distraction due to external stimuli but because of her inability to concentrate. She ignored the task in hand to gaze vacantly about the room. Speech is entirely lacking. Numerous unsuccessful attempts have been made with her in the hope of developing initial sounds. I do not believe that this failure is due to negativism or deafness but that she is not sufficiently developed to accept speech at this time. . . . The prognosis is not favorable. . . .

More than five months later, on April 25, 1940, a clinical psychologist, the late Professor Francis N. Maxfield, examined Anna and reported the following: large for her age; hearing "entirely normal"; vision apparently normal; able to climb stairs; speech in the "babbling stage" and "promise for developing intelligible speech later seems to be good." He said further that "on the Merrill-Palmer scale she made a mental score of 19

months. On the Vineland social maturity scale she made a score of 23 months."⁴

Professor Maxfield very sensibly pointed out that prognosis is difficult in such cases of isolation. "It is very difficult to take scores on tests standardized under average conditions of environment and experience," he wrote, "and interpret them in a case where environment and experience have been so unusual." With this warning he gave it as his opinion at that time that Anna would eventually "attain an adult mental level of six or seven years."⁵

The school for retarded children, on July 1, 1941, reported that Anna had reached 46 inches in height and weighed 60 pounds. She could bounce and catch a ball and was said to conform to group socialization, though as a follower rather than a leader. Toilet habits were firmly established. Food habits were normal, except that she still used a spoon as her sole implement. She could dress herself except for fastening her clothes. Most remarkable of all, she had finally begun to develop speech. She was characterized as being at about the two-year level in this regard. She could call attendants by name and bring in one when she was asked to. She had a few complete sentences to express her wants. The report concluded that there was nothing peculiar about her, except that she was feeble-minded—"probably congenital in type."⁶

A final report from the school made on June 22, 1942, and evidently the last report before the girl's death, pictured only a slight advance over that given above. It said that Anna could follow directions, string beads, identify a few colors, build with blocks, and differentiate between attractive and unattractive pictures. She had a good sense of rhythm and loved a doll. She talked mainly in phrases but would repeat words and try to carry on a conversation. She was clean about clothing. She habitually washed her hands and brushed her teeth. She would try to help other children. She walked well and could run fairly well, though clumsily. Although easily excited, she had a pleasant disposition.

Interpretation

Such was Anna's condition just before her death. It may seem as if she had not made much progress, but one must remember the condition in which she had been found. One must recall that she had no glimmering of speech, absolutely no ability to walk, no sense of gesture, not the least capacity to feed herself even when the food was put in front of her, and no comprehension of cleanliness. She was so apathetic that it was hard to tell whether or not she could hear. And all this at the age of nearly six years. Compared with this condition, her capacities at the time of her death seem striking indeed, though they do not amount to much more than a two-and-a-half-year mental level. One conclusion therefore seems safe, namely, that her isolation prevented a considerable amount of mental development that was undoubtedly part of her capacity. Just what her original capacity was, of course, is hard to say; but her development after her period of confinement (including the ability to walk and run, to play, dress, fit into a social situation, and, above all, to speak) shows that she had at least this capacity—capacity that never could have been realized in her original condition of isolation.

A further question is this: What would she have been like if she had received a normal upbringing from the moment of birth? A definitive answer would have been impossible in any case, but even an approximate answer is made difficult by her early death. If one assumes, as was tentatively surmised in the previous report, that it is "almost impossible for any child to learn to speak, think, and act like a normal person after a long period of early isolation," it seems likely that Anna might have had a normal or near-normal capacity, genetically speaking. On the other hand, it was pointed out that Anna represented "a marginal case, [because] she was discovered before she had reached six years of age," an age "young

enough to allow for some plasticity."⁷ While admitting, then, that Anna's isolation may have been the major cause (and was certainly a minor cause) of her lack of rapid mental progress during the four and a half years following her rescue from neglect, it is necessary to entertain the hypothesis that she was congenitally deficient.

In connection with this hypothesis, one suggestive though by no means conclusive circumstance needs consideration, namely, the mentality of Anna's forebears. Information on this subject is easier to obtain, as one might guess, on the mother's than on the father's side. Anna's maternal grandmother, for example, is said to have been college educated and wished to have her children receive a good education, but her husband, Anna's stern grandfather, apparently a shrewd, hard-driving, calculating farmowner, was so penurious that her ambitions in this direction were thwarted. Under the circumstances her daughter (Anna's mother) managed, despite having to do hard work on the farm, to complete the eighth grade in a country school. Even so, however, the daughter was evidently not very smart. "A schoolmate of [Anna's mother] stated that she was retarded in school work; was very gullible at this age; and that her morals even at this time were discussed by other students." Two tests administered to her on March 4, 1938, when she was thirty-two years of age, showed that she was mentally deficient. On the Stanford Revision of the Binet-Simon Scale her performance was equivalent to that of a child of eight years, giving her an I.Q. of 50 and indicating mental deficiency of "middle-grade moron type."⁸

As to the identity of Anna's father, the most persistent theory holds that he was an old man about seventy-four years of age at the time of the girl's birth. If he was the one, there is no indication of mental or other biological deficiency, whatever one may think of his morals. However, someone else may actually have been the father.

To sum up: Anna's heredity is the kind that *might* have given rise to innate mental deficiency, though not necessarily.

Comparison with Another Case

Perhaps more to the point than speculations about Anna's ancestry would be a case for comparison. If a child could be discovered who had been isolated about the same length of time as Anna but had achieved a much quicker recovery and a greater mental development, it would be a stronger indication that Anna was deficient to start with.

Such a case does exist. It is the case of a girl found at about the same time as Anna and under strikingly similar circumstances. A full description of the details of this case has not been published, but in addition to newspaper reports, an excellent preliminary account by a speech specialist, Dr. Marie K. Mason, who played an important role in the handling of the child, has appeared.⁹ Also the late Dr. Francis N. Maxfield, clinical psychologist at Ohio State University, as was Dr. Mason, has written an as yet unpublished but penetrating analysis of the case.¹⁰ Some of his observations have been included in Professor Zingg's book on feral man.¹¹ The following discussion is drawn mainly from these enlightening materials. The writer, through the kindness of Professors Mason and Maxfield, did have a chance to observe the girl in April, 1940, and to discuss the features of her case with them.

Born apparently one month later than Anna, the girl in question, who has been given the pseudonym Isabelle, was discovered in November, 1938, nine months after the discovery of Anna. At the time she was found she was approximately six and a half years of age. Like Anna, she was an illegitimate child and had been kept in seclusion for that reason. Her mother was a deaf-mute, having become so at the age of two, and it appears that she and Isabelle had spent most of their time together in a dark room shut off from

the rest of the mother's family. As a result Isabelle had no chance to develop speech; when she communicated with her mother, it was by means of gestures. Lack of sunshine and inadequacy of diet had caused Isabelle to become rachitic. Her legs in particular were affected; they were so bowed that as she stood erect the soles of her shoes came nearly flat together, and she got about with a skittering gait.¹²

Her behavior toward strangers, especially men, was almost that of a wild animal, manifesting much fear and hostility. In lieu of speech she made only a strange croaking sound. In many ways she acted like an infant. "She was apparently utterly unaware of relationships of any kind. When presented with a ball for the first time, she held it in the palm of her hand, then reached out and stroked my face with it. Such behavior is comparable to that of a child of six months."¹³ At first it was even hard to tell whether or not she could hear, so unused were her senses. Many of her actions resembled those of deaf children.

It is small wonder that, once it was established that she could hear, specialists working with her believed her to be feeble-minded. Even on nonverbal tests her performance was so low as to promise little for the future. Her first score on the Stanford-Binet was 19 months, practically at the zero point of the scale. On the Vineland social maturity scale her first score was 39, representing an age level of two and a half years.¹⁴ "The general impression was that she was wholly uneducable and that any attempt to teach her to speak, after so long a period of silence, would meet with failure."¹⁵

In spite of this interpretation, the individuals in charge of Isabelle launched a systematic and skillful program of training. It seemed hopeless at first. The approach had to be through pantomime and dramatization, suitable to an infant. It required one week of intensive effort before she even made her first attempt at vocalization. Gradually, she began to respond, however, and, after the first

hurdles had at last been overcome, a curious thing happened. She went through the usual stages of learning characteristic of the years from one to six not only in proper succession but far more rapidly than normal. In a little over two months after her first vocalization she was putting sentences together. Nine months after that she could identify words and sentences on the printed page, could write well, could add to ten, and could retell a story after hearing it. Seven months beyond this point she had a vocabulary of 1,500-2,000 words and was asking complicated questions. Starting from an educational level of between one and three years (depending on what aspect one considers), she had reached a normal level by the time she was eight and a half years old. In short, she covered in two years the stages of learning that ordinarily require six.¹⁶ Or, to put it another way, her I.Q. trebled in a year and a half.¹⁷ The speed with which she reached the normal level of mental development seems analogous to the recovery of body weight in a growing child after an illness, the recovery being achieved by an extra fast rate of growth for a period after the illness until normal weight for the given age is again attained.

When the writer saw Isabelle a year and a half after her discovery, she gave him the impression of being a very bright, cheerful, energetic little girl. She spoke well, walked and ran without trouble, and sang with gusto and accuracy. Today she is over fourteen years old and has passed the sixth grade in a public school. Her teachers say that she participates in all school activities as normally as other children. Though older than her classmates, she has fortunately not physically matured too far beyond their level.¹⁸

Clearly the history of Isabelle's development is different from that of Anna's. In both cases there was an exceedingly low, or rather blank, intellectual level to begin with. In both cases it seemed that the girl might be congenitally feeble-minded. In both a considerably higher level was reached later

on. But the Ohio girl achieved a normal mentality within two years, whereas Anna was still marked inadequate at the end of four and a half years. This difference in achievement may suggest that Anna had less initial capacity. But an alternative hypothesis is possible.

One should remember that Anna never received the prolonged and expert attention that Isabelle received. The result of such attention, in the case of the Ohio girl, was to give her speech at an early stage, and her subsequent rapid development seems to have been a consequence of that. "Until Isabelle's speech and language development, she had all the characteristics of a feeble-minded child." Had Anna, who, from the standpoint of psychometric tests and early history, closely resembled this girl at the start, been given a mastery of speech at an earlier point by intensive training, her subsequent development might have been much more rapid.¹⁹

The hypothesis that Anna began with a sharply inferior mental capacity is therefore not established. Even if she were deficient to start with, we have no way of knowing how much so. Under ordinary conditions she might have been a dull normal or, like her mother, a moron. Even after the blight of her isolation, if she had lived to maturity, she might have finally reached virtually the full level of her capacity, whatever it may have been. That her isolation did have a profound effect upon her mentality, there can be no doubt. This is proved by the substantial degree of change during the four and a half years following her rescue.

Consideration of Isabelle's case serves to show, as Anna's case does not clearly show, that isolation up to the age of six, with failure to acquire any form of speech and hence failure to grasp nearly the whole world of cultural meaning, does not preclude the subsequent acquisition of these. Indeed, there seems to be a process of accelerated recovery in which the child goes through the mental stages at a more rapid rate than would be the

case in normal development. Just what would be the maximum age at which a person could remain isolated and still retain the capacity for full cultural acquisition is hard to say. Almost certainly it would not be as high as age fifteen; it might possibly be as low as age ten. Undoubtedly various individuals would differ considerably as to the exact age.

Anna's is not an ideal case for showing the effects of extreme isolation, partly because she was possibly deficient to begin with, partly because she did not receive the best training available, and partly because she did not live long enough. Nevertheless, her case is instructive when placed in the record with numerous other cases of extreme isolation. This and the previous article about her are meant to place her in the record. It is to be hoped that other cases will be described in the scientific literature as they are discovered (as unfortunately they will be), for only in these rare cases of extreme isolation is it possible "to observe *concretely separated* two factors in the development of human personality which are always otherwise only analytically separated, the biogenic and the sociogenic factors."²⁰

Notes

1. K. Davis (1940, January), "Extreme social isolation of a child," *American Journal of Sociology*, 45, 554-565.
2. Sincere appreciation is due to the officials in the Department of Welfare, Commonwealth of Pennsylvania, for their kind co-operation in making available the records concerning Anna and discussing the case frankly with the writer. Helen C. Hubbell, Florentine Hackbusch, and Eleanor Mecklenburg were particularly helpful, as was Fanny L. Matchette. Without their aid neither of the reports on Anna could have been written.
3. The records are not clear as to which day.
4. Letter to one of the state officials in charge of the case.
5. *Ibid.*
6. Progress report of the school.
7. Davis (1940), p. 564.

11. J. A. L. Singh & R. M. Zingg (1941), *Wolf-children and feral man*. New York: Harper & Bros., pp. 248-251.

12. Maxfield (no date).

13. Mason (1942), p. 299.

14. Maxfield (no date).

15. Mason (1942), p. 299.

16. Mason (1942), pp. 300-304.

17. Maxfield (no date).

18. Based on a personal letter from Dr. Mason to the writer, May 13, 1946.

19. This point is suggested in a personal letter from Dr. Mason to the writer, October 22, 1946.

20. Singh & Zingg (1941), pp. xxi-xxii, in a foreword by the writer.

8. The facts set forth here as to Anna's ancestry are taken chiefly from a report of mental tests administered to Anna's mother by psychologists at a state hospital where she was taken for this purpose after the discovery of Anna's seclusion. This excellent report was not available to the writer when the previous paper on Anna was published.

9. M. K. Mason (1942), "Learning to speak after six and one-half years of silence," *Journal of Speech Disorders*, 7, 295-304.

10. F. N. Maxfield (no date), "What happens when the social environment of a child approaches zero." Unpublished manuscript. The writer is greatly indebted to Mrs. Maxfield and to Professor Horace B. English, a colleague of Professor Maxfield, for the privilege of seeing this manuscript and other materials collected on isolated and feral individuals.