

Kaspar Hauser's Recovery and Autopsy: A Perspective on Neurological and Sociological Requirements for Language Development¹

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The feral children literature has frequently been cited for relevance to understanding historical antecedents of autism. Kaspar Hauser, who appeared in Nuremberg, Germany in 1828, is one of these children, raised under conditions of extreme deprivation. His case history and gradual acquisition of language after age 17 years are summarized. There is strong evidence that he was the prince of Baden, abducted from his cradle in 1812. Findings of postmortem examination, conducted after his assassination, are discussed. Hauser's postadolescent recovery of language contradicts the notion of a "critical period" for language development.

INTRODUCTION

Kaspar Hauser was 19th-century Europe's most famous child (Peitler & Ley, 1927). To date his may be the only case of prolonged isolation during childhood in which language and cognitive development were carefully documented subsequent to the isolation period and an autopsy of the brain was performed. Kaspar Hauser's renown spread rapidly soon after he was found, abandoned, outside Nuremberg in 1828. As it happens this was the same year that Victor (the wild boy) of Aveyron died (Lane, 1976). Nearly 30 years earlier Victor had been captured in the forests of southern France. His failure to develop language and civilized behavior had been

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movingly attributed by Itard (1801/1972), his devoted teacher and guardian, to his lack of human contacts during early development. The controversy over whether Itard's pupil was mentally defective was never resolved (Cohen, 1976); a postmortem examination of the brain was never performed. Nevertheless, Lane (1976) has maintained (a) that his brain was normal and (b) that Victor never acquired language because he was abandoned before the "critical age" for language development. There is no evidence for either assumption.

Bettelheim (1959) proposed that the nonhuman behavior of children like Victor is the result of parental neglect suffered long before abandonment in the wild. He based this notion on his observations of autistic children and his conclusion that autism results from emotional rejection of the child by his parents. Reports of so-called feral children like Victor are often cited as early case histories of children who were actually autistic (Wing, 1976; Schopler, 1976). Kaspar Hauser is, however, a counterexample to most of the reports of children thought to have been abandoned in the wild at an early age, or kept in isolation. His case is the exception that casts doubt on the interpretations of writers such as Bettelheim (1959) and Lane (1976), who maintain that early environmental deprivation causes an irreversible disruption of development, especially language development.

There are two English-language accounts of Kaspar Hauser's arrival in Nuremberg and his development during his 5 years as a member of a civilized community. The first is by Evans (1892). The second is Linberg's translation of von Feuerbach's (1832/1833) vivid personal account. Von Feuerbach was a jurist in the Bavarian court of appeals, and a highly acclaimed legal scholar who took on the task of gathering evidence and bringing criminal charges against those responsible for Kaspar Hauser's long imprisonment. Linberg's translation of von Feuerbach is reprinted in Singh and Zingg (1942/1966) along with translations of footnoted comments by Pies (1925), the most diligent 20th-century scholar of the Kaspar Hauser mystery. Both von Feuerbach's and Evans's accounts make very interesting reading; what follows here is by necessity a condensed version of information taken from these two sources. It must be acknowledged that the historical nature of these records does not permit us to establish all of the facts with scientific rigor. Nonetheless, the information they provide is relevant to our understanding of the historical antecedents of autism.

CASE HISTORY

Arrival in Nuremberg

Kaspar Hauser was first noticed at Nuremberg's Haller Gate during the Whitsun Holidays on May 26, 1828. He gave the appearance of a

drunken peasant who seemed neither to know where he was nor to understand anything said to him. When asked what he wanted, who he was, where he came from, he would only repeat the last few words of each request. Or he would break into tears, responding with moans and unintelligible sounds. Sometimes he answered by reciting over and over the phrases: "Ä Sechtene möcht ih wähn, wie mei Vottä wähn is" ("I want to be a soldier, like my father"), "Reutä wähn, wie mei Vottä wähn is" ("Want to be a rider, like my father"), or "woas nit" ("don't know"). He held in his hand a letter addressed to the captain of the Chevaux Legers. The author of this letter claimed to have cared for Kaspar since October 7, 1812, after finding the infant boy on his doorstep. Enclosed was another note, supposedly written by the infant's mother. It stated that his name was Kaspar, gave his birth date as April 30, 1812, and said that his dead father had been a member of the Chevaux Legers, and that he should be sent to Nuremberg at age 17.

The stranger was placed in custody of the police. According to von Feuerbach (1832/1833), "He appeared neither to know nor to suspect where he was. He betrayed neither fear, nor astonishment, nor confusion; he rather showed an almost animal-like dulness, which either leaves external objects entirely unnoticed, or stares at them without thought" (p. 7). When questioned by the police, he responded to everything, again, with one of his phrases, "Ä Reutä wähn . . .," etc., "woas nit," or "Hoam weissa" ("know home"). He was 4 feet 9 inches tall; the first signs of a beard were beginning to appear around his lips and chin, but his wisdom teeth had not yet erupted (they first appeared in 1831, 3 years later). There were inoculation scars on both arms, usually a sign of high birth. The soles of his feet were lacking calluses; they were as soft as the palms of the hand and covered with blood blisters (which remained visible for several months). One of the officers decided to test him with pen and paper. With a sudden expression of delight, the stranger took the pen and wrote, to everyone's surprise, legibly and in a firm hand, *Kaspar Hauser*. The police officials concluded that he had a defective or demented mind and could not be released. He was confined in the tower at the Vestner Gate, the usual place of detention for felons and vagabonds.

During his first days in prison, Kaspar frequently cried out, "Ross" (horse). One of the tower guards brought him a toy horse. With tears of joy, Kaspar sat down on the floor beside the horse, stroked it, patted it, and kept his eyes fixed on it. He was soon given more toy horses and trinkets to play with. When observed through a concealed opening in the door, he was always found sitting on the floor in the same position, legs outstretched in front of him, decorating his toy horses with ribbons, strings, coins, bells, and bits of paper, or dragging them back and forth at his side. According to the guards, he spent every hour of the day engaged in this activity, without paying the least attention to anyone or anything else around him.

Adjustment to Civilization

After 4 or 5 days, the superintendent of the prison, whose name was Hiltel, took Kaspar into his own quarters in the tower. Kaspar remained with the Hiltel family for about 2 months. During this time, 11-year-old Julius Hiltel became especially attached to Kaspar, and it was he who, with great zeal, first taught Kaspar to speak and to attach concepts to his utterances. Within 1 month Kaspar had acquired enough rudiments of speech to express, to some degree, his thoughts and previous experiences. Von Feuerbach first visited Kaspar on July 11, 1828, and described his speech as telegraphic and deficient in syntax, especially conjunctions, participles, and adverbs. The pronoun *I* occurred very rarely; he usually referred to himself in the third person or as *Kaspar*. He also addressed others by name rather than by the second-person pronoun. In speaking to him, one could not use the pronoun *you* (*du*) but had to say *Kaspar* to be immediately understood. The words that he could say were clearly enunciated without hesitation or stammering, although formulation of coherent speech was still beyond his capabilities. Often he would repeat a phrase over and over in an effort to extract its meaning (Pies, 1925).

On July 18, 1828, Kaspar was placed in the care of Professor Daumer, a young teacher in the Gymnasium (high school). Daumer dedicated himself to the education of Kaspar in much the same way that Itard had devoted himself to teaching Victor of Aveyron (Daumer, 1873; Pies, 1925). But, unlike Victor, Kaspar soon displayed an astonishing memory and an immense curiosity, and he applied himself to learning with an almost inflexible perseverance. Writing and drawing soon took the place of the toy horses with which he had occupied his days in prison.

In February of 1829, 9 months after his arrival in Nuremberg, Kaspar began to write his own story. This brief autobiography is reprinted in Pies (1925, vol. 2, pp. 187-212); the vocabulary and style are simple enough to be easily read by anyone just beginning to learn German. In it Kaspar described how, for as long as he could remember, he had always lived in a small, dark room. Coarse dark bread and water were his only nourishment. Sometimes after awakening he would find he had a clean shirt on and his fingernails had been cut. He had two toy horses and had always whiled away his time by running them back and forth at his side. Shortly before Kaspar was taken to Nuremberg, his caretaker brought some paper and a pencil into his dungeon and guided his hand through the motions of forming letters and words. From then on, copying the figures on paper replaced Kaspar's interest in his toy horses. Most interesting is Kaspar's description of how he reacted when his caretaker spoke to him for the first time. His companion pointed to his horses and said, "Ross." The man repeated this

several times and Kaspar listened intently. Suddenly it occurred to Kaspar to try to imitate this sound himself. It took seven or eight attempts before he could begin to say it clearly. The man later taught him to recite the phrases, "Ä sechtene möcht ih wähn . . .," etc. The man spoke these phrases over and over to Kaspar on several visits. When he was alone, Kaspar would practice by talking to his toy horses. Then, one day his caretaker carried him out of his prison. They began the journey to Nuremberg. Kaspar spent most of the way learning to walk, which was very painful and tiring, and practicing his phrases. Shortly before his caretaker left him outside of Nuremberg, the man changed Kaspar's clothes. Then he placed the letter in Kaspar's hand and disappeared.

Newspaper reports that Kaspar was preparing these memoirs for publication led to the first attempt on his life in October 1829 in the cellar of Daumer's house (Pies, 1925). After this attempted murder, Kaspar was transferred to the home of a city councilor and kept under police guard. Because of the progress he had made with Daumer, Kaspar was sent to the Gymnasium to continue his schooling. There he experienced great difficulty both with his studies, Latin in particular, and in his relationships with the other students. In 1830, Kaspar was transferred to the guardianship of Baron von Tucher, with whom he enjoyed an excellent relationship for over a year.

In December 1831 Kaspar was officially adopted by Lord Stanhope, a well-to-do Englishman, who had him transferred to the home of a schoolmaster named Meyer in Ansbach. Kaspar never established the kind of close relationship with Meyer that he had with his previous guardians, Daumer and von Tucher. Stanhope and Meyer are thought to have been possible co-conspirators in the cover-up of Kaspar's past (Evans, 1892). Meyer's opinions can be read in Pies (1925, vol. 1, pp. 281-301; 1928, pp. 18-21, 99-112). In October 1832 Kaspar began religious instruction with a Lutheran pastor named Fuhrmann, whose home became more and more a refuge for him. Fuhrmann's account (reprinted in Pies, 1925, vol. 2, pp. 105-152) contains interesting examples of Kaspar's struggles to understand such concepts as original sin and free will and how to abide by the Ten Commandments. Kaspar was confirmed in May 1833. A few days later von Feuerbach died unexpectedly while on an excursion with a party of friends during the Whitsun holidays. This happened to be the fifth anniversary of Kaspar Hauser's appearance in Nuremberg. Von Feuerbach's unexplained and sudden death led many people to suspect that he was poisoned; according to Evans (1892), he may have been close to the solution of the mystery surrounding Kaspar Hauser's early imprisonment.

On Saturday, December 14, 1833, Kaspar spent the afternoon with Pastor Fuhrmann's family making Christmas gifts. Fuhrmann (Pies, 1925,

vol. 2, pp. 137-144) described the events of this final day in great detail. After leaving the pastor's house, Kaspar went to the public park, apparently to meet a man who claimed to have a document explaining his past. The man handed him a small purse containing a piece of paper with a riddle scribbled on it; then he stabbed him in the chest and fled. Kaspar died 78 hours later on December 17.

Postmortem Examination

The medical reports concerning Kaspar Hauser's death and autopsy can be found in two published sources, Heidenreich's (1834) article and Pies's (1928) collection of legal transcripts. Heidenreich's article is also reprinted in Pies (1925, vol. 2, pp. 153-184). The postmortem examination was undertaken on December 19, by an officially appointed commission, 35 hours after death. First a thorough investigation of the extent of the stab wound was made. Both the tip of the heart and the left lung had been penetrated. Examination of the abdominal cavity revealed an unusually enlarged liver, the substance of which was very soft. The wound had pierced the diaphragm and penetrated the liver at least 2 inches. The wound also grazed the stomach wall and a quantity of digested food had escaped into the abdominal cavity. This was noted as the cause of death. Examination of the cranial cavity revealed unusually thick skull bones. The brain was examined by taking away successive layers. The cortical substance as well as the white matter appeared normal. There was a barely perceptible increase in fluid in the lateral ventricles. The cerebellum, cut in two, appeared normal as did the cerebrum (Pies, 1928).

Heidenreich's (1834) description of the brain is somewhat more detailed and suggestive of possible pathology. Heidenreich states:

On the whole, the brain was small but there were no noticeable abnormalities. However, the *cerebellum* ["das kleine Hirn"] appeared, in comparison with the *cerebrum* ["das grosse Hirn"] rather large and well developed; the *occipital lobe* ["hinter(e)n Lappen"] of the cerebrum did not cover the cerebellum as is usually the case. The cerebrum appeared in this respect somewhat small. Nothing particularly abnormal was seen on horizontal sections. The *corpus callosum* ["grosse Commissur"] was fully developed, as were the *thalami* ["Sehhügel"]. The plexus chorioidei were normal. The *corpora quadrigemini* ["Vierhügel"] were very small. Convolutions of the cerebellum were clear and numerous. Nothing unusual or deviant was noted about the base of the brain or the cranial nerves. The separation between the *cerebral hemispheres* ["mittlere Hirnlappen"] at the bony base of the skull was, however, striking. These lay as in a rounded, deepened nest, because of the especially high *petrosal bone* ["Felsenbein"] and the equally very high sword-like continuation of the *sphenoid bone* ["Keilbein"] above. These bony formations were not symmetric; the depressions and elevations were larger and more pronounced on the right than on the left side. The cortical gyri did not appear very numerous or distinct, but were on the contrary, more compact and coarse. Single

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masses such as the corpus callosum, thalami, etc. appeared large and well developed. On the whole, however, the brain appeared not to have an especially fine and intricate structure (pp. 110-111).²

One is impressed by how much was already known in the early 19th century about the structure of the brain, despite the crudeness of the methods available at the time.

DISCUSSION

One major theory (Evans, 1892; Pies, 1925; Singh & Zingg, 1942/1966) is that Kaspar Hauser had been born heir to the Duchy of Baden on September 29, 1812. As part of a scheme devised by his grandfather's second wife, he was kidnapped a little more than 2 weeks after his birth to make way for the succession of her own sons. The abducted prince was kept alive rather than put to death so that he could be produced as an embarrassment to his uncle, who might later claim more direct lineage to the throne. If this was the case, then for only the first 2 weeks after birth was he cared for in his own family. If not downright hostile, his environment from earliest infancy would have lacked the security of a warm maternal protector. That this was the case has far more support (Evans, 1892) than can be advanced for the theory that Victor of Aveyron had been abandoned before the *critical age* for language development (4 to 5 years of age).

Kaspar Hauser's enlarged liver provides substantial evidence that he had indeed been subjected to malnutrition and to prolonged confinement. Dr. Albert, who was head of the autopsy commission, pointed out in his court testimony (Pies, 1928) that Kaspar Hauser's enlarged liver was like that of geese kept in confinement to produce plump livers for good pâté. Although he was only 4 feet 9 inches tall when he first arrived in Nuremberg, the fact that he grew 2 inches taller after meat was added to his diet (von Feuerbach, 1832/1833) is further evidence that his small stature was due more to malnutrition than to heredity. Although the neuroanatomical data are crude, the pathology of the brain is also consistent with a history of malnutrition during childhood. Aside from the corpora quadrigemini, other subcortical centers, such as the thalamus, were well developed. The cerebral cortex, on the other hand, had fewer than normal gyri, which appeared somewhat shrunken and coarse. This pattern of pathology is consistent with normal prenatal development (normal subcortical growth), but selective

²For the italicized Latin and English translations of the older German anatomical terms, I referred to Flechsig (1883), Pfeifer (1911), and Schüller (1905).

retardation of growth of cortex can follow severe malnutrition in infancy and early childhood (Winick, Rosso, & Waterlow, 1970).

Kaspar's social development was discussed in graphic terms by von Feuerbach (1832/1833):

If Kaspar, who may now be reckoned among civilized and well behaved men, were to enter a mixed company without being known, he would strike everyone as a strange phenomenon. . . . [I]ncapable of uttering a single pleasantry, or even of understanding a figurative expression, he possesses dry, but thoroughly sound common sense, . . . in respect to things which directly concern his person and which lie within the narrow sphere of his knowledge and experience, he shows an accuracy, and an acuteness of judgement, which might shame and confound many a learned pedant. . . . [H]e often utters things, which coming from any other person of the same age would be called stupid or silly; but which coming from him, always force upon us a sad compassionate smile. . . . Neither childish tricks and wanton pranks, nor instances of mischief and malice, can be laid to his charge. . . he possesses too much seriousness (pp. 154-159).

Kaspar Hauser was accused by a few of being a clever swindler; a discussion of these accusations can be found in Daumer (1873) and Evans (1892). The behavior described by von Feuerbach (1832/1833), Daumer (1873), and Fuhrmann (Pies, 1925) might be hard to mimic unless the swindler had had some opportunity to analyze the intellectual and social deficiencies of children recovering from early language handicaps. The evidence supporting minimal brain pathology would also imply that Kaspar probably was not clever enough to perpetrate such a swindle. Kaspar certainly remained somewhat backward. Nevertheless, his development went far beyond that of Victor of Aveyron, despite the underdevelopment of the cerebral cortex, which was most likely due to malnutrition. His ability to learn language past the onset of adolescence does not lend support to the theory of a "critical period" beyond which language cannot develop.

Kaspar Hauser's case is unique, but if any of the studies of abandoned children in history has significance, the carefully compiled records that exist on Kaspar Hauser have special significance. His case cannot properly be ignored in any discussion of the effects of environmental deprivation on later development, especially those that cite the work of Itard with Victor of Aveyron.

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