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*Classic case studies in*  
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 **HODDER**  
EDUCATION

# Chapter 7

## Innocence lost: the story of Genie

One day in early November 1970, a woman called Irene Wiley sought out the services for the blind at her local Los Angeles County Welfare Office. Her 13-year-old daughter accompanied her. Being completely blind in one eye, and with her cataracts causing her 90% blindness in the other, Irene mistakenly led her daughter into the offices for general social services instead. This mistake was to change both their lives forever. As they approached the counter, the social worker stood transfixed, staring at the daughter. At first sight, she appeared to be six or seven years old with a stooped posture and an unusual shuffling gait. A supervisor was called immediately and started an investigation. Finally, after 13 years of neglect, isolation and abuse, the world had become aware of a girl who was subsequently known as 'Genie'.<sup>1 2</sup>

<sup>1</sup> 'Genie' was a scientific alias given to protect her true identity. It was felt to be an appropriate choice, since she appeared to have come from nowhere. However, even at the time of the court case, newspapers reported names and addresses of those involved. It is now also so widely reported on the internet that there would seem little potential harm in revealing her real name to be Susan M. Wiley. Indeed, her brother John gave an interview to ABC News on 19 May 2008, giving further personal details of the case. See <http://abcnews.go.com/Health/story?id=4873347&page=1>

<sup>2</sup> For a more detailed account of Genie, see Rymer, Russ (1993), *Genie: A scientific tragedy*. New York: HarperCollins.

## Family background

A key figure in the story of Genie, and the person who was to spend the most time with her over the coming years, was Susan Curtiss, a linguistics graduate at the University of California. Curtiss wrote and published her doctoral dissertation about Genie<sup>3</sup> and, as she put it, to '*understand this case history, one must understand the family background*'. It was hoped that by exploring Genie's family history, there might be some explanation for the almost unbelievable situation that she had found herself in.

Irene had had an unexceptional upbringing with a working and loving father and a mother who was reported as rather stern and unapproachable. One unfortunate incident in her childhood occurred when she slipped and banged her head on a washing mangle. This caused neurological damage that would later have profound effects. It would cause her blindness in one eye and make it more difficult to look after herself and her dependants. In her early twenties, Irene married Clark Wiley, who was 20 years older than her. Although they met in Hollywood, there was to be no fairytale ending to their union.

At the start of the second world war, Clark easily found work and proved himself an invaluable worker in the aircraft industry, so much so that he continued to work there after the war. Outwardly, Irene and Clark appeared happy and contented, but at home Clark was later described by Irene as being overly protective and rather confining. Irene claimed that her life ended on her wedding day. One thing Clark was certain about: he did not want children. Despite this, after five years of marriage, Irene fell pregnant with their first child. During a stay in hospital to treat injuries sustained from her husband, Irene gave birth to a healthy daughter. Within three months, the child was dead. The cause of death was said to be pneumonia, although it is suggested that the child actually died of exposure having been left in the garage by Clark because he could not stand her crying. Their second child died of blood poisoning soon after birth – again neglect may have been a contributing factor. Their third child, John, was born a healthy boy, but due to neglect developed very slowly. John was helped by his paternal grandmother, Pearl. Pearl feared that her son Clark had serious mental health issues and thus often looked after John for months at a time. On 18 April 1957, their fourth child was born. She was called Susan Wiley (soon to be known to the public as Genie). She survived a difficult birth, thanks to a blood transfusion but, by this time, Pearl was too old to help with her upbringing. Irene and Clark would have to bring up their little girl as best they could. In her first year, during a routine medical examination, their daughter was described as 'slow' and 'retarded'.

A key incident at this time involved Clark's mother. One day on a visit, Pearl was killed by a hit-and-run driver whilst crossing the road to buy an ice cream for her grandson, John. Clark had been very close to his mother and became very depressed soon after the incident. The guilty driver was given a

<sup>3</sup> Curtiss, S. (1977) *Genie: A psycholinguistic study of a modern-day 'wild child'*. New York: Academic Press.

probationary sentence. Clark was outraged; he believed society had treated him badly and he started to become more and more isolated. Clark decided that he could do without such a world and that his family could do the same. He quit his job and became a recluse. Clark moved the family to Pearl's house on Golden West Avenue in Temple City, California. No one slept in Pearl's bedroom and it was left untouched from the day that she died.

Unfortunately, Clark thought that the best way to protect his family was to also keep them at home. Clark used to sit in the evenings with a loaded gun on his lap. He thought he needed to prevent others in an evil world from exploiting their vulnerability. They were, indeed, vulnerable and they were to remain his virtual prisoners for the next decade. Neighbours reported hardly ever seeing the family. Perhaps Clark never realised that he didn't protect them from his own evilness. An evilness far worse than any they might have experienced in the outside world.

## Isolation

On discovery, it was found that Genie had spent virtually her entire life in a small bedroom of their house in Golden West Avenue, Temple City, California. For most of that time she had been restrained on an infant's potty seat attached to a chair. She had a calloused ring of hard skin on her bottom from sitting on the potty for days on end. She could not move anything except her fingers and hands, feet and toes. Sometimes at night she was moved to another restraining device, ostensibly a sleeping bag that had been altered to act as a straitjacket. Genie was then placed in a wire cot with a wire cover overhead for the night.

Genie was actively discouraged from making any sounds and, indeed, her father beat her with a stick if she made any. Clark would only make barking sounds and often growled at her like a dog might. Genie's brother John, under instruction from his father, rarely spoke to her. Indeed, elsewhere in the house, her brother and mother usually whispered to each other for fear of annoying their father. Genie heard hardly any sounds in her isolation. Unsurprisingly, Genie learnt to keep silent. Her visual sense wasn't stimulated either. The room had only two windows, both of which were taped up, except for a few centimetres at the top to let in a little light. She could only see a glimpse of the sky in the outside world.

Occasionally, Genie was allowed to 'play' with two plastic raincoats that hung in the room. Sometimes, she was also allowed to look at edited TV pages with any 'suggestive' pictures having been removed by her father. Empty cotton reels were virtually her only other 'toys'.

Genie was given very little to eat. She was given baby food, cereals and very occasionally a hard-boiled egg. She was fed quickly in silence by her brother so that contact with her was kept to a minimum. If she choked or spat out food, it was rubbed into her face. It is hard to imagine a more cruel and



Rare photo of Genie, Susan Wiley.  
Credit: Bettman/CORBIS

deprived existence for a young child. This regime was maintained by Clark. Soon after Genie's birth a doctor had told Clark that Genie was retarded and would not live very long. He told Irene that if Genie did live for 12 years, they would seek help for her. Perhaps miraculously, Genie did live that long and, when Clark refused Irene's requests for help, she decided to do something about it. After a horrendous fight during which Clark threatened to kill Genie, Irene took the child and left to stay at her parents' home. A few days later they ended up at social services seeking help for her visual impairment and welfare payments for Genie. Genie had been discovered at last.

## Placed in care

During the ensuing investigation, Genie was taken into care in the Children's Hospital in California. Her parents were charged with wilful abuse of a minor and were due in court on 20 November 1970. On that morning, Clark took his Smith and Wesson and fired a bullet clean through his right temple. He had laid his funeral clothes out on the bed, with \$400 for John, and left two suicide notes – one explained where the police could find his son, the other simply read: *'The world will never understand. Be a good boy, I love you.'* Irene was already in court when she heard the news. She pleaded not guilty on the grounds that she had been forced to act the way she did by an abusive husband, and her plea was accepted. It seemed that at last Genie and Irene could begin life again. However, Irene agreed for Genie to become a ward of the state.

Genie was examined at the Children's Hospital and treated for severe malnutrition. She was actually 13 years old but she only weighed 59 pounds and was only 54 inches tall. She was incontinent and couldn't chew solid food. She couldn't swallow properly, salivated excessively and constantly spat. Her clothes were often covered in spit and she often urinated when excited. This meant that she often smelt badly. In addition, she could not focus her eyes beyond 12 feet. What need was there for her eyes to focus beyond the distance of the world she had known in her bedroom? She had two sets of teeth and her hair was extremely thin. She walked with great difficulty and could not extend her limbs properly. She did not seem to perceive heat or cold. She never cried and could barely talk. Although she could understand some words such as 'Mother', 'blue', 'walk' and 'door', she could only say a few negatives, which were rolled into one word, such as 'stopit' and 'nomore'.

## Testing times

James Kent was the Children's Hospital psychologist and began an assessment of Genie's cognitive and emotional abilities. He stated that '*she was the most profoundly damaged child I've ever seen... Genie's life was a wasteland*'. Due to her lack of speech, it was incredibly difficult to assess her intellect. She seemed capable of expressing only a few emotions, such as fear, anger and, surprisingly, laughter. However, her anger was always expressed inward; she would scratch her face, urinate, but never make a sound.

Genie made rapid progress. Even by the third day, she was helping to dress herself and using the toilet. A few months later, she made hitting gestures at a girl in the rehabilitation centre who was wearing a dress that she had previously worn. Her observers were pleased to note that this was the first instance of her directing anger outward. Genie was hoarding various objects such as books. She seemed to be developing a sense of self. A month later, when James Kent was leaving after one of their sessions, she held his hand in order to stop him. She seemed to be developing friendships with some of her adult helpers.

Genie was subjected to various intelligence tests and she showed amazing improvements over the first few months. In some areas, she gained a year in development over a couple of months. She was able to bathe herself to the same level as a nine-year-old and yet her chewing of food was at the level of a one-year-old. There was a 'scatter' in her development; some things she did well; others, badly. Her level of language acquisition remained extremely poor. But she had started to engage in play with others and no longer shrank from physical contact.

She enjoyed going on day-trips from the hospital. To Genie, everything was new and exciting. Generally, people she met were very friendly. She was given things by complete strangers. Curtiss hints that she felt that Genie was a powerful non-verbal communicator. Indeed, Curtiss became convinced that she was witnessing in Genie unspoken communication – a kind of telepathy.

Genie particularly liked shopping and collected 23 plastic beach buckets of different colours. She kept these by her bed. Anything plastic was coveted. It's believed that this obsession dated back to the two plastic raincoats in her bedroom. These were a major source of play; perhaps she continued to associate plastic with play.

Genie had also developed the idea of object permanence: the concept that something exists even when it remains unseen. According to Jean Piaget, children develop this at the end of the sensory-motor stage of development at about the age of two. She was also capable of deferred imitation, that is, the ability to imitate behaviour that has been seen before. She showed this by once barking like a dog she had seen earlier in the day. Genie was also becoming less egocentric. That is, she was beginning to understand that other people could see things from another viewpoint: her way of thinking was not the only possible way of thinking. This ability characterises the pre-operational stage of development from two to seven years.

<sup>4</sup> Rymer, op. cit., p.40.

## The prize

Jay Shurley, a psychiatrist and acknowledged expert on the effects of isolation, was also invited to visit Genie. He described her as having suffered the most long-term social isolation of any child ever described in the literature. Rather worryingly, he noted that, because such cases didn't come along that often, a contest had developed amongst the professionals interested in Genie as to who would conduct treatment and research with her. Far from being a neglected child that no-one took any interest in, Genie had become a prize. She became the centre of a political battle amongst the researchers.

The researchers argued about Genie. Should her therapeutic interests be paramount, above those of the scientific research? It was argued that any scientific findings could help benefit deprived children in the future.

Occasionally, Genie went and stayed overnight at the home of Jean Butler, one of her teachers from the rehabilitation centre. During one of these stays, Butler contracted rubella and, in the interests of all concerned, Genie was quarantined at home with her teacher. Butler became very protective of Genie and began to disagree with other members of the 'Genie Team' (as she referred to them). There were heated arguments as to the best way to proceed. Butler felt that Genie was being experimented on too much and that the research was intruding on her rehabilitation. The research team felt Butler wanted to become famous as the person who had rescued Genie from her isolation. Butler asked for Curtiss to be removed from the team and to no longer have access to Genie.

At this time, Butler applied to be Genie's foster parent. In the end this was rejected on the grounds that it was against hospital policy for patients to be placed in staff homes. With no obvious alternative foster parent, David Rigler, a professor and chief psychologist in the hospital's psychiatry division, agreed to take Genie for a short period. The hospital policy about staff-patient relationships was overturned. Genie stayed with the Righlers for four years.

Unsurprisingly, Genie was not the ideal houseguest. She defecated in Rigler's daughter's wastebasket, took the other children's possessions and continued to spit frequently. However, she did take a great interest in music. Curtiss began playing a piano and Genie loved it. She became transfixed by the music but only if it was classical. Rigler discovered that, during her isolation, a neighbour used to have piano lessons and perhaps this was Genie's only regular source of sound as a child.

Genie was enrolled in a nursery school and then a public school for the mentally retarded, where she could interact with other children. She appeared to be blossoming at the Righlers'. She showed a good sense of humour, she learnt to iron and sew. She enjoyed drawing. Sometimes her drawings allowed her to depict her thoughts when her language failed her. On Gestalt drawing tests, which involve seeing the organisation behind a scattered scene or the whole picture from numerous parts, she scored higher than anyone in the literature. One day in the summer of 1972, Genie was out with Curtiss shopping.

She seemed overjoyed with her experiences. Genie turned to Curtiss and said, '*Genie happy*'.

Meanwhile her mother Irene had had her eyesight restored due to a cataract operation and had moved back to her house on Temple Avenue. She continued to visit Genie. Unfortunately, she didn't feel welcome at the Riglers' and was only invited there three times in four years. She began to distrust the scientists looking after Genie and felt that they looked down on her. She never accepted any part in the abuse of Genie, whereas many of the scientists questioned her passive role. Irene still maintained a friendship with Jean Butler, who also questioned the 'scientific pursuit' of Genie. Butler claimed Genie had actually declined in the Riglers' care.

After four years, a research grant that the Riglers applied for to continue to study Genie was refused. There had been little progress in Genie after the initial few months and very few academic papers had been produced. Rigler argued that the 'anecdotal' nature of his research was at odds with those of the accepted scientific community. He no longer had the funds to look after or study Genie. Within a month, Genie was on the move yet again.

## Back home

Rather surprisingly, she was allowed to move back home to be with her mother. Here she returned to the scene of her abuse. This was not a success. Her mother could not cope and social services again moved Genie to another foster home. This was a disaster. The new parents ran their home in a military fashion, quite at odds with Genie's experiences at the Riglers' and not in accordance with her needs. In response to her new home, Genie regressed. Like her father, she turned inward and shut out the world. She wanted to control her life and she felt the only way to do this was to withhold her faeces and her speech. She became constipated and refused to speak at all for five months. The new foster mother became exasperated by this and once tried to extract her faeces with a lolly stick. The abuse had started again and she had to endure a stay of 18 months with this family. Genie's life was falling apart, as was the academic research.

During this time, Curtiss was the only professional to visit her. She was no longer receiving a grant for the work, but had obviously developed a warm and caring relationship with Genie. Eventually, Genie ended up malnourished and Curtiss persuaded the authorities to readmit her to the Children's Hospital.

Financial wrangles threatened to make matters worse. Genie had been left a small sum of money from her father's estate and Rigler presented a bill for psychotherapy he had given during the time Genie had resided with him. This amounted to more than her small inheritance. The case went to court. Although Rigler won a partial award, he claims that he never saw any of the money. He later stated that he took these legal steps merely to prevent the state from taking her inheritance. However, when Irene became Genie's legal guardian again and took over her estate, the money awarded was missing.



That was just the beginning of a series of court cases surrounding Genie. Irene became upset that Curtiss had included the label 'wild child' in the title of her book. She objected to private conversations being published without her consent. She accused the scientists of testing Genie too often in an insensitive way. She claimed that testing took 60 or 70 hours per week. Curtiss denied this and claimed that Genie enjoyed the tests, many of which were very informal. Both Rigler and Curtiss believed that her friend Jean Butler was the real instigator of the legal suit.

After much legal wrangling, in March 1979 the court case was settled out of court for an undisclosed sum. Irene agreed that scientists might have access to Genie for particular research. Genie was to receive all income from such research and all the royalties from Curtiss's book. Indeed, Curtiss had already set up a trust fund for Genie to this effect. Virtually all the scientists involved in her case appeared to realise that they had failed Genie. The 'Genie Team' broke up and went their separate ways. Many of them became disinclined to talk of their experiences. Most accepted that, although their intentions had been honourable, their methods may have been flawed. Jay Shurley went further. He stated that Genie was exploited by the researchers, of which he was one. He believed that Genie was an exceptionally difficult, unique case and no-one really knew how to act for the best. There was no manual to follow.

## The end of the research

Irene 'hid' Genie away in a home for mentally retarded adults. She never allowed scientists any further access. Curtiss, in particular, was devastated by this and to this day misses Genie. Genie visited her mother for weekends each month. In 1987, Irene sold her house in Golden West Avenue and left no forwarding address. It is believed that Irene Wiley died in 2003 whilst living in California. To all intents and purposes, Genie had vanished once more. In 2008, Genie's brother John Wiley gave an interview to the American news network ABC. John Wiley was 56 and lived in Ohio, earning a living as a painter and decorator. He had also been deeply affected by the abuse he had experienced as a child. Aged 18, John had finally run away from home when Genie was discovered. He had been interviewed by the police in order to provide details of the case but had largely been ignored by the authorities and had never received any counselling or care. No-one blamed John for his lack of action over his sister's abuse. Indeed, it was recognised that he was also a victim of his totalitarian father's iron will. John was frequently beaten by his father with a wooden board. However, John stated that he did put Genie out of his mind because of the shame he felt. After leaving home, John led a troubled life, including brushes with the law, a discharge from the Navy and a failed 17-year marriage. His marriage produced one daughter.

John reported that he had found out that Genie was being well cared for in a good private institution in Southern California. Genie could speak some words and had relearnt much of the sign language that she had been taught by earlier researchers. John has not visited Genie since 1987. There have been

subsequent reports of her life inside the institution. Jay Shurley visited her on her 27th and 29th birthdays. He reported her as being chronically institutionalised, very stooped and without eye contact. She didn't speak much and appeared to be depressed. He describes her as someone who was isolated, lived and experienced the world and all that it offers for a while, and then was placed back in isolation again. The scientific alias given to her was more apt than the researchers could ever have imagined.

In the interview in 2008, John Wiley noticed some comparisons between the Genie case and that of Austrian Josef Fritzl, who kept his daughter and other members of his family incarcerated in the cellar of his home for up to 24 years. Some of the family, when finally discovered, were physically malnourished with stooped statures and suffered from language deficits after years of isolation. It would be refreshing if the psychologists responsible for their future welfare could avoid some of the pitfalls that befell Genie.

## Neurology

From early neurological investigations, it became obvious that Genie performed well on so-called right hemisphere tasks and extremely poorly on left hemisphere tasks. Usually, language is a task that is mainly associated with left hemisphere processing. Each hemisphere of the brain controls the opposite side of the body. This is called contra-lateral control. For example, a stroke in the left hemisphere is likely to lead to some disability on the right side of the body, and vice versa.

In a dichotic listening task, people are asked to listen through a set of headphones to two different messages that are being played to each ear. In this circumstance, the sounds presented to each ear get processed almost entirely by the opposite hemisphere. Using this technique, Curtiss could present information to a specific hemisphere. Curtiss wanted to find out what processing was occurring in Genie's brain. Curtiss found that Genie's brain was processing language on the right hemisphere, whereas usually there is a marked preference for the left. Indeed, Genie's performance on language presented to her left hemisphere was the same as children whose left hemisphere had been surgically removed. Curtiss concluded that our brain development is determined by our environment, more specifically, by our encounter with language before puberty.

## Language acquisition: the unnatural experiment

The way in which humans acquire language has been a matter of much debate amongst both linguists and psychologists. There are broadly two competing schools of thought: nativists, who place the emphasis on innate factors or 'nature', and empiricists, who place an over-riding importance on the effect of experience or 'nurture'. Thus, language acquisition plays a part in the nature–

nurture debate. One way of resolving these arguments might be to take a child and allow them to hear no language at all. Would they still develop some kind of language based on their innate abilities? Pinker (1984) later stated that language acquisition is such a robust process that, *'there is virtually no way to prevent it from happening short of raising a child in a barrel'* (p.29). Of course, it's obvious that no experiment of this type could ever be conducted, but with Genie, researchers felt that they might have found a 'natural' experiment, one in which the suggested manipulation of the environment had 'naturally occurred'. Her unnatural upbringing meant that researchers might be able to test out many of their hitherto untested hypotheses.

The most well-known proponent of the nativist position is Noam Chomsky. Chomsky proposed that language acquisition cannot be explained by simple learning mechanisms alone. Chomsky argues that some portion of language is innate to humans and independent of learning. Empiricists, on the other hand, argue that language can be learnt without any intrinsic or innate ability.

Nativist linguistic theorists believe that children learn language through an innate ability to organise the laws of language, but that this can only occur with the presence of other humans. Other people do not formally 'teach' the child language, but the innate ability cannot be utilised without verbal human interaction. Learning undoubtedly plays a significant role since children in an English-speaking family learn English and so on. But nativists also claim that children are born with an innate language acquisition device (called LAD). The major principles of language are already in place and certain other parameters are set, dependent on the particular language that they learn. On being exposed to a language, the LAD makes it possible to set the appropriate parameters and deduce the grammatical principles underlying the language, whether it be English or Chinese.

This nativist approach to language acquisition remains extremely controversial. There is evidence to support this view. For a start, all children appear to go through the same sequence of language development. A one-year-old speaks a few isolated words, a two-year-old can say a few two- or three-word sentences and a three-year-old can produce many grammatically correct sentences. By the age of four, a child sounds very much like an adult. It is suggested that this consistency across cultures suggests an innate knowledge of language. At the age of 13, it was estimated that Genie had the language development of a one-year-old.

In addition, there is the evidence of a universal grammar structure to all languages. Indeed, languages are similar in a number of different respects. Furthermore, there is evidence that profoundly deaf children, with no exposure to sign language or oral language, develop manual systems of communication that mirror many of the features of spoken language. Brown and Herrnstein<sup>5</sup> conclude, *'one irresistibly has the impression of a biological process developing in just the same way in the entire human species'* (p.479).

<sup>5</sup> Brown, R. and Herrnstein, R. (1975) *Psychology*. Boston: Little, Brown.

Like other innate behaviours, the acquisition of language has some critical periods. Lenneberg<sup>6</sup> states that the crucial period of language acquisition in humans ends around the age of 12 years. (Remember, when Genie was found she was 13 years old.) After puberty, the brain's organisation is complete and it is no longer flexible enough to learn language. Lenneberg claims that if no language is learnt before puberty, it can never be learnt in a normal and fully functional sense. This is known as the 'critical period hypothesis'. Lenneberg never took any interest in studying Genie, believing that there were too many confounding variables in her case to be able to draw any firm conclusions.

The concept of a critical period in nature is not new. Imprinting is a good example. Ducklings and goslings, given the correct exposure, can adopt chickens, people or mechanical objects as their mothers if they encounter them immediately after hatching.

Human infants less than one year old have the ability to distinguish the phonemes of any language (a phoneme is a category of speech sound, such as 'b' for 'boy'). This ability is lost by the end of the first year; for example, Japanese children lose the ability to distinguish 'l' from 'r' (Eimas, 1975).<sup>7</sup> Any child not exposed to any language prior to puberty would provide a direct test of the critical period hypothesis. Genie was one such case. Given a nurturing and enriched environment, could Genie learn language despite having missed out on the critical period of acquisition? If she could, it would suggest that the critical period hypothesis was wrong; if she couldn't, it would suggest that it was correct.

Many psychologists and speech therapists spent years trying to teach Genie to speak. Despite all this work, Genie never really developed language in the normal way. Although her vocabulary developed rapidly, she was unable to learn syntactic constructions, despite very clear instructions from her teachers.

On initial assessment at the Children's Hospital, Genie scored the same as one-year-olds, she seemed to recognise her own name and the word 'sorry'. However, she showed great delight in discovering the world around her and rapidly began to increase her vocabulary. Beginning with one-word utterances, like toddlers do, she soon progressed to put two words together in ways she would not have heard, such as 'want milk' or 'Curtiss come'. By November 1971, she sometimes put three words together, such as 'small two cup' or 'white clear box'. She seemed to be showing encouraging signs of acquiring language. Genie even reported the phrase 'little bad boy' about an incident earlier in the day where a child had fired a toy gun at her. She was using language to describe past events. This continued with horrific phrases such as 'Father take wood. Hit. Cry'; 'Father angry'. She repeated such phrases over and over again. Children who reach this stage of language then experience 'a language explosion' where, within a few months, their speech develops rapidly. Unfortunately, Genie did not experience this explosion.

Curtiss suspected Genie was lazy, always shortening words or combining them. Genie earned the nickname 'The Great Abbreviator'. Her speech did progress beyond simple phrases such as 'No eat bread' to 'Miss have new

<sup>6</sup> Lenneberg, E. (1967) *Biological Foundations of Language*. New York: Wiley.

<sup>7</sup> Eimas, P. (1985) 'Speech perception in early infancy'. *Scientific American*, 252, 46–52.

car'. This shows she could use verbs occasionally and, according to some of her speech therapists, was acquiring some of the rules of grammar. But she never asked questions, she had great difficulty with pronouns ('you' and 'me' were interchangeable and reflected her egocentrism) and her development was painfully slow. This in spite of intensive training using the most advanced methods. Indeed, from this point on her language acquisition stopped and levelled out.

The evidence remains inconclusive, but Genie provides some evidence for the 'critical period hypothesis'. Her case suggests that language is an innate capacity of human beings that is acquired during a critical period between the ages of two and puberty. After puberty, it becomes more difficult for humans to learn languages, which explains why learning a second language is more difficult than learning a first one. However, Genie did acquire some language, so she showed that some language could be acquired after the critical period. Genie never managed to cope with grammar and it is this aspect which Chomsky argued distinguishes human language from animal language. From this viewpoint, Genie failed to develop language after having missed the critical period. In many respects, the argument boils down to what we count as 'language'.

The methodological problem with the study of Genie is that she wasn't *merely* deprived of opportunities to practise and hear language. She was also abused in numerous other ways. She was malnourished and suffered from a lack of visual, tactile and social stimulation. Given the crucial role of language in human interaction and development, it is almost inevitable that anybody deprived of early language stimulation would also be deprived of other opportunities for normal cognitive or social development. Genie most certainly was. How could psychologists disentangle these effects? This proved impossible to do. In the case of Genie, there was also the lingering doubt as to whether she had been born with some biological or congenital retardation. Her father emphasised this throughout her early life and the paediatrician who examined Genie as an infant did mention some early problems. However, Irene stated that Genie had started to make babbling sounds and produce the odd word prior to her father placing her in isolation. This suggests that she might have been developing language at a normal speed prior to the abuse. Of course, this is anecdotal evidence and, as such, cannot be necessarily relied upon. In addition, Curtiss believed that Genie was not retarded. She scored very highly on spatial tests and she developed the ability to see something from another perspective.

Susan Curtiss regarded Genie as refuting a strong version of Lenneberg's critical period hypothesis, that natural language acquisition cannot occur after puberty (Curtiss, 1977, p.37). Genie did acquire some 'language' after puberty and Curtiss claimed that Genie also acquired language from 'mere exposure' (p.208). However, subsequently it has been reported that Curtiss appeared to change her mind fairly radically about linguistic nativism. She suggested that Genie did not provide real evidence of true language development after pu-

berty. Separately, both Sampson<sup>8</sup> and Jones<sup>9</sup> detail the way in which Curtiss's discussions of Genie in later publications contradicted what she wrote in her earliest book, although no fresh evidence was available to her and no explanations for the contradictions were ever given.

## Postscript

What can we say about Genie? Certainly, her father failed her; the system set up to protect children from such abuse failed her; arguably even after her 'discovery', the professionals who set out to care for her failed her. Although Genie became perhaps the most famous case study in psychology, she did not provide conclusive evidence for or against the critical period hypothesis of language acquisition. She did become a focus of debate about the ethics of psychological research and the potential conflict between the demands of the scientist and the participant. With no definitive answer as to whether she was 'retarded' at birth, she was never going to help clarify the nature-nurture debate.

Ultimately, Genie's story can be seen as a catalogue of unfortunate or misguided mistakes. Indeed, she might be seen as the product of man's inhumanity to man. However, her story can also be seen in a different light. Despite the abuse, the lack of care and love, despite all the suffering, mistrust and disinterest she experienced, Genie still reached out to people, touched their hearts, became fascinated in life and showed us the true depth of human forgiveness. In her own special way, Genie remains an inspiring example to us all.

<sup>8</sup> Sampson, G. (1997) *Educating Eve*. London: Cassell.

<sup>9</sup> Jones, Peter (1995) 'Contradictions and unanswered questions in the Genie case: a fresh look at the linguistic evidence'. *Language and Communication*, 15, 261–80.