

Rochester Institute of Technology

## RIT Digital Institutional Repository

---

Theses

---

6-15-2006

### Feral child: the legacy of the wild boy of Aveyron in the domains of language acquisition and deaf education

Wayne Cayea

Follow this and additional works at: <https://repository.rit.edu/theses>

---

#### Recommended Citation

Cayea, Wayne, "Feral child: the legacy of the wild boy of Aveyron in the domains of language acquisition and deaf education" (2006). Thesis. Rochester Institute of Technology. Accessed from

This Master's Project is brought to you for free and open access by the RIT Libraries. For more information, please contact [repository@rit.edu](mailto:repository@rit.edu).

**Feral Child:  
The Legacy of the Wild Boy of Aveyron  
in the Domains of Language Acquisition and Deaf Education**

**MSSE Master's Project**

**Submitted to the Faculty  
Of the Master of Science Program in Secondary Education  
Of Students who are Deaf or Hard-of-Hearing**

**National Technical Institute for the Deaf  
ROCHESTER INSTITUTE OF TECHNOLOGY**

**By**

**Wayne Cayea**

---

**In Partial Fullfillment of the Requirements  
For the Degree of Master of Science**

**Rochester, New York**

**June 15, 2006**

Approved:

\_\_\_\_\_  
Dr. Karen Christie - Project Advisor

\_\_\_\_\_  
Dr. Sara Schley - Project Advisor

\_\_\_\_\_  
Dr. Gerald Bateman – Project Advisor & MSSE Program Director

## **Acknowledgments**

Dr. Rebecca Edwards first introduced me to the mystery of Victor, and started my interest in him and what he might reveal to me about language acquisition and human nature. His story reminded me very much of one of my own students, who in some ways is a modern day Wild Boy.

Drs. Gerry Bateman, Karen Christie and Sara Schley all provided me with mentorship and sage advice, greatly improving this project. I am grateful for their valuable suggestions.

Finally, I would like to thank my wonderful wife Adrienne and my four fabulous sons – Aeddon, Alden, Alwyn and Arian – for their support and patience as I worked on this for what seems longer than should be legally allowed.

## **Abstract**

Language Acquisition has been hotly debated since Chomsky's theory of innate ability in the 1950s. Feral children, i.e., wild children who grow up in extreme isolation, provide a unique opportunity to study the process of language acquisition. What we can learn can have a major impact on what and how we teach our young students, especially deaf students whose language development may be delayed.

Victor, the Wild Boy of Aveyron, a famous feral child, is the focus of this study. He was discovered in the French wilderness in 1800, after three to eight years alone in the forest. After five years of instruction at the Paris Institute for the Deaf, his education was abandoned. Victor never learned to speak and only ever became "half-civilized". Nevertheless, he left a tremendous legacy on the fields of education and language acquisition. His case helped develop many language acquisition theories, and numerous the techniques used in the attempt to educate him are still used in the field of education today.

## Introduction

Language, regardless of the modality, is the key to how we function within the world. Through it, we can express ourselves and interact with the world around us. Without language, it is doubtful that we could function beyond a survival level, except perhaps instinctively. Without language we lack the tools necessary to define the events occurring around us, or possibly even organize our own thoughts. Language is the crux of the metacognitive interpretations that allow us to comprehend the world.

From ancient times, philosophers like Plato and Aristotle have offered their explanations about how children learn language. Language acquisition has many elements, much of which remains beyond human understanding at this point. While it is an important domain of study, perhaps the most important element of human evolution, there is much debate over different theories and it is doubtful that any one theory will ever be able to account for the myriad ways that language components are acquired. Research continues, however, and theories have been created to explain many facets of the process.

And yet, despite the importance of language, in unique scenarios some people have had greatly limited, or no, exposure to language. Famous examples include Victor, the Wild Boy of Aveyron; Genie; Memmi LeBlanc; the Naderi twins; and Kamala and Amala of India. Others have had very limited exposure to language and suffered the consequences of an inability to express themselves to others or make sense of the world.

Often, these children are referred to as “feral”. Traditionally, feral, or wild, children are those who've grown up in harsh situations of depravation with minimal human contact. Perhaps they've had no contact or socialization at all with other human

beings. Common misunderstanding often attributes them to being raised by animals (“by wolves” is said most frequently) in the wild. In more general and recent usage, children who are confined and denied normal social interaction with other people, or those not privileged to typical language acquisition are said to be “feral” (Ward, n.d.).

From Chomsky in the 1950s to today, researchers have theorized about the process of language acquisition, how exactly it is accomplished, and what the specific time frame is for the “critical period” of language acquisition. However, most researchers agree that if a child is not exposed to language at an early enough age, be it a first or additional language, the child will never develop native-like fluency in that language (Brownlee, 1998).

Language acquisition, especially with feral children, and the consequences of late development, is not well documented. Additional information and study is needed, especially with deaf children, although so far opportunities for this research have been rare to nonexistent. The best case study, with enough documentation for serious consideration, is Victor, the Wild Boy. Could a languageless human being hold the clues to learn what is characteristic of being human? A study looking at a child who came from an environment of extreme language deprivation with a resulting severe delay in language acquisition will doubtfully shed any light of significance on the process of language acquisition, but it may give us pause for thought on how we approach the issue within our own sphere of influence as teachers or parents.

In *When the Mind Hears*, Harlan Lane (1984) provides an intimate connection between language acquisition and deafness. While the vast majority of *Mind* deals with the life of Laurent Clerc and his ultimate role in aiding the creation of American Sign

Language and the American School for the Deaf, a portion of the book relates the tale of Victor, the Wild Boy of Aveyron, the National Institution for the Deaf in Paris, France and its involvement in trying to teach Victor to speak after his feral childhood.

It is this potential deprivation of language that is the factor of greatest concern with deaf children. The input of the average deaf student is “impoverished and incomplete”; the vocabularies of deaf students tend to be far less developed than their hearing peers. Language acquisition by deaf children does follow the same development process as hearing children, and signed language is as effective as spoken language if used consistently and appropriately. It is the rate of acquisition that varies, not the order of acquisition (Petitto, 1994). As Sacks’ research will show later, language acquisition also impacts cognitive development.

Feral children, Hottentots, savages, have all intrigued civilized human beings on a number of levels. They represent our unknown past, a clue to what our lives were like before we settled into our modern routines. They offer glimpses into the human psyche, and they play a role in the controversies of education and language acquisition – the so-called “nature versus nurture” debate. Savages, that is, human beings perceived by “civilized” people to be uncivilized, primitive and brutish, were once considered subhuman, a separate species called *homo ferus*. Native Americans, Africans and even the tribes of Celtica have all been stigmatized as ‘savage’ by other cultures who considered themselves superior. After a papal bull in 1537 regarding the humanity of Native Americans, savages were no longer considered inhuman. Still, they were peculiarly regarded as a possible source of information about humanity’s nature.

Throughout the middle ages, stories of feral children and civilized human beings who had reverted to a savage state of existence were common. Some of the more prevalent stories centered around Peter of Hanover, Kaspar Hauser, and Alexander Selkirk. More recently, Helen Keller, with her initial struggle to acquire language after her parents were unable to facilitate her doing so, has continued to fascinate and inspire people with her accomplishments. In our own times we have the story of Genie, a girl who suffered severe isolation and deprivation which harshly impacted her language acquisition. One of the most famous cases of a feral child, and the one we will consider here, is that of Victor, the Wild Boy of Aveyron.

There have been over three hundred documented cases of feral children, those who have lived in extreme isolation and perhaps with animal companions in the wilderness. More recently they have involved neglected children cloistered away in attics and cellars. For all the unanswered questions we have about Victor, the Wild Boy of Aveyron, his case is probably the best documented thanks to the meticulous note-taking of his teacher, Jean-Marc-Gaspard Itard.

In this paper, the story of the Wild Boy will first be summarized, along with some speculation about his afflictions and what obstacles he faced in his acquisition of language. A survey of language acquisition theories will then be reviewed and discussed, with particular attention to deaf children. The final sections will look at the implications of late language acquisition and what it means for the field of Deaf Education. The conclusion will present the legacy of Victor and Itard.

## Victor's Story

Two of the best accounts of the life of Victor, the Wild Boy of Aveyron, come from Harlan Lane's *The Wild Boy of Aveyron* (1976) and Roger Shattuck's book *The Forbidden Experiment: The Story of the Wild Boy of Aveyron* (1994). Both of these draw heavily from long citations of Itard's documentation of Victor's case. The following summary of Victor's story is largely taken from these two works.

When the Wild Boy of Aveyron came out of the woods in early January, 1800, he was all but naked and oblivious to any need for modesty. He would remove any clothes put on him. He could not speak, but only made strange, unintelligible sounds. He was seen to run on all fours at times. Those who discovered him realized he was mute, and believed him to also be deaf, or at least hard-of-hearing. He was completely uninitiated in cultural mores such as using the restroom – he would instead relieve himself whenever he needed to, regardless of location or circumstance. He appeared little more than an animal, and was both reviled and pitied by his finders. He sought every opportunity to escape and return to his beloved forest. Many times he did so, but was recaptured and returned to custody.

Although the name has stuck for two centuries, he was poorly named: “enfant sauvage de l’Aveyron”. He was neither an infant, nor from Aveyron, but from the Tarn region of France. It soon became clear that he wasn’t even a true savage, but a poor soul who had been abandoned in the woods. He was originally named Joseph by his initial caretaker, although most would always refer to him as “the Savage”.

Initially the Wild Boy had fled human contact and was unresponsive to any attempts at communication. All accounts agree that he had survived several winters, as

many as six or eight, in his crude existence in the wilds. It remains a matter of controversy whether Victor was “raised” by the animals of the forest, or if he was abandoned to the wilderness by parents frustrated by a mute, and possibly retarded, child. Perhaps he was a runaway or an abandoned idiot who had wandered for only a few weeks in the woods before being found. However, a feral child of the same description had been sighted many times, and even captured on two occasions, three to six years prior. Additionally, he was covered in scars when found. This speaks to either the abuse he suffered before being abandoned to the forest, the hardships he faced while trying to survive in the wild, or the length of time he existed in the forest. Slowly over time he had become used to his civilized neighbors, and would approach area farms for food. This finally led to his capture.

Victor was blemished by a thick scar slashed across his larynx. Was he not only abandoned in the woods, but nearly murdered there as well by someone too eager to be rid of him? He was rumored to be the illegitimate son of a notary, abandoned at age six due to muteness (Lane, 1976; Shattuck 1994). Itard, the physician who sought to educate him, later rejected the idea that Victor’s vocal chords had been damaged by the slash across his throat as a possible cause of his muteness, as he doubted a deep wound would have healed so well without medical attention. There were no other physical indicators to explain his muteness.

Little effort was made to identify the boy’s background. No parents, relatives nor friends ever came forward to identify the boy. His life prior to abandonment, perhaps as much as five years, must have included some kind of sheltered environment.

Later analysis seemed to indicate that he was probably not deaf, as first believed, but just that he had had no use for certain sounds and learned to shut them out. All of his senses were probably fine and fully functional. The Wild Boy had just used them for different reasons than civilized humans, and needed to be conditioned to use them for purposes other than those pertaining to survival. His desires went no further than his needs for sustenance; what was early mistaken for “fondness” for his initial caretakers was little more than selfish conditioning to easily obtain food.

Shattuck (1994) poses the same questions I asked when I first learned about the Wild Boy:

Did the boy have emotions? Was he happy alone in the woods? How can we know? Do we even know about animals: dogs or horses or birds? He made strange noises and laughed after a fashion. On his terms, whatever they were, he seemed to be satisfied with his lot. He kept to himself and did not want more than to feed his hunger and sleep when he was tired. Anything beyond that had to be thrust upon him (p. 52).

Even more poignant: “His situation seemed to call for the most basic response: live and let live. Doesn’t any other response, any wish to change the boy’s life, reveal the worst in us – presumptuousness, arrogance, idle curiosity, cruelty?” (Shattuck, 1994, p. 53).

But this was an opportunity to perform the “forbidden experiment”, so the Wild Boy couldn’t just be left to his own life of solitude in the woods. Here was the chance to test theories on what knowledge human beings were born with, on language acquisition, and pedagogy. He was a *tabula rasa*, the Latin expression that philosophers use to mean a clean slate waiting to receive input. This conjecture would later be, in some ways, challenged by the works of researchers like Noam Chomsky in the field of language

acquisition and innate abilities. If we are born with inborn capabilities, we cannot truly be blank slates (Shattuck, 1994).

In his report of the Wild Boy – “Historical Notice on the Sauvage de l’Aveyron” – Pierre-Joseph Bonnaterre, the initial caretaker, seems to eloquently prophesize what will become of the Wild Boy. Unlike optimistic and scientific Itard, Bonnaterre (as cited in Lane, 1976) seems to understand how civilized society will corrupt the purity of the Wild Boy:

Go forth, poor youth, on this unhappy earth, go forth and lose in your relations with men your primitiveness and simplicity! You lived in the bosom of ancient forests; you found your nourishment at the foot of oaks and beech trees; you quenched your thirst at crystal springs; content with your meager destiny, limited by your simple desires, satisfied with your way of life beyond which you knew nothing, this usufruct was your sole domain. Now you can have nothing except by the beneficence of man; you are at his mercy, without property, without power, and you exchange freedom for dependence. Thus are poor-born three fourths of the human race: nothing but bitterness was prepared for you in tearing you away from the protective dryads who watched over you. You had only the one need of nourishment. How many others that you will be unable to satisfy will now relentlessly assail you? How many desires will be born in your footsteps, and will grow with the tree of your knowledge and with your social ties? How utterly you will lose your independence, bound with our political shackles, caught in our civil institutions; you should truly weep! The path of your education will be sprinkled with your tears; and when your pristine soul again turns toward the azure vaults of the sky, when you discern the order and the beauty of this vast universe, what new ideas will germinate in your young head! When love at last opens to you the gates to a new way of life, oh how many new and delicious sensations, how many unknown passions will trouble your vulnerable heart! Oh, may you live happily among your countrymen, may you, man without pretension, display the sublime virtues of a generous soul and transmit to future generations this honorable example, as an eternal proof of what can be done by a student of innocent Nature (p. 48).

In some ways, Victor was fortunate to have lived in the time he did. The philosophical ponderings of the Enlightenment were beginning to see practical application in reforms and sensitivity in regard to criminals, the mentally disturbed and

those with disabilities. This was the birth of “philanthropy”. Criminals could be reformed and the mentally ill treated and no longer locked up. A special school for the deaf was established in Paris, offering a language, education and vocational trade for the students there (Shattuck, 1994).

The story of the Wild Boy spread through France like wildfire. Rumors circulated, and several newspapers carried stories about him. Most were quite fanciful and reflected more about Western egocentrism than anything to do with the Wild Boy. The French government and the Society of the Observers of Man, philosophers and scientists interested in human nature, took a keen interest in the Wild Boy as soon as he was discovered, and his transport to Paris for evaluation was ordered. It was expected that he would be trained to speak by the famous teacher of the deaf, Roche-Amboise Sicard, at the Paris Institute for Deaf-Mutes. Sicard was known to have trained deaf-mute children in signed and written French. However, the boy’s trip to Paris was delayed for five and half months due to the weather, sickness and the logistics of travel.

During this time he was semi-acculturated. This would be a mixed blessing for those waiting in Paris. He was “prepped” for the training planned for him, but they would now be unable to observe him in a “natural” state, uncorrupted by cultural practices. Prior to this period, he was likely wilder (Lane, 1976; Shattuck, 1994). The Wild Boy was intended to be “an experiment that would tell us something about what is innate in being human and what is acquired through civilization and culture” (Candland, 1994, p. xix).

A debate raged whether the Wild Boy was an idiot. Evidence from Bonnaterre’s account might indicate the contrary. He was able to shell beans like any shrewd animal

and would hide food for later consumption by burying it in the garden. However, some animals are very cunning and able to do the same things, so this does not necessarily reflect human intelligence.

Because of lack of interest by the Society of the Observers of Man who had an opportunity to learn something from the Wild Boy, we will probably never know one way or the other if the Wild Boy really was an idiot, or just so deprived into his critical period of language acquisition that he was unable to acquire language. We must be left to wonder, was Victor an idiot because he was left in the woods, or was he left in the woods because he was an idiot? It remains unknown whether the Wild Boy had brain, nerve or genetic abnormalities, or if he had suffered an injury as a child that would have caused his condition. In any case, these types of abnormalities are often undetectable and incurable today, much less two centuries ago. In contrast, his language and social retardation may have been functional, a result of his self-upbringing in the wilderness, perhaps an atrophy of the mind or faculties due to lack of use. Simple deficiency of social and mental stimulation for the period endured by the Wild Boy could have been sufficient to cause his “retarded” condition.

Upon arrival at the institute, Sicard decided that the Wild Boy was an incurable idiot and would not train him. Pinel’s report concluded the same, and considered the Wild Boy a waste of everyone’s time. Pinel was a member of the Society of Observers of Man and a physician interested in mental illness. His report is most curious in the fact that he doesn’t try to investigate or explain what could have been wrong with the Wild Boy. Someone of Pinel’s background *should* have been interested in the reason for the Wild Boy’s “idiocy”. So, after all of the excitement and publicity regarding the

discovery of a “noble savage”, and after “acting on its scientific and philanthropic principles in bringing the Wild Boy to Paris, the Society of Observers of Man turned its back on the boy” (Shattuck, 1994, p. 37).

Still, Itard took up the challenge and sought to awaken the Wild Boy’s senses to further education through a series of sense-stimulating exercises. To do so, as a young, unknown physician, when those already established in the field were so against it, was a brave decision. It was Itard who named the Wild Boy Victor. Victor would live in Itard’s home on the institute’s campus, aided by a caretaker, Madame Guérin. Itard’s plan for Victor had five facets:

1. To give the boy the ability to respond to other people
2. To train his senses
3. To extend his physical and social needs
4. To teach him to speak
5. To teach him to think clearly (Shattuck, 1994).

Itard’s interests in Victor did change over time. What began as an experiment in educating a feral child to speak and reason, became a more intimate mentoring of a child’s emotional wellbeing in a harsh world (Candland, 1994).

Victor did learn to read and write very simple noun-verb sentences. Itard taught him to recognize letters by arranging metal cutouts laid to create a “reading board”. He could eventually position letters into some words, and later recognize the same written on a blackboard. Later still, Victor could write letters on the board. Itard taught object names the same way many “foreign” language teachers do today – with cards identifying an object’s name next to it. When scrambled, Victor could soon match the correct card with the appropriate item, although he struggled with identifying the card with the *specific* item used to teach the word. For instance, the word *comb* did not mean any

comb to Victor, but only the exact comb Itard used to teach the word. Substituting another comb would confound him. After some time he did have some success with applying a word to a category of objects, or even parts of a whole. By the end of five years, though extremely crude, Victor could write enough to communicate his wants and needs to others, and read the same (Lane, 1976; Shattuck, 1994).

After more than five years of work, when Itard was thirty-two, and Victor about seventeen, Itard decided it was time to cease the instruction and the Wild Boy's education was abandoned. Victor was seen as no longer being responsive and progressing. Itard was frustrated by his lack of advancement and was perhaps looking forward to new areas of study with deaf students who would hopefully display more evident progress.

When Itard's regimen was completed, Victor was no longer a savage, but was also little more than a quasi-civilized adolescent. It appears he never learned a trade. Madame Guérin would become his state-salaried guardian, paid 150 francs per year to care for him in a house near the institute as Victor would fall from a pinnacle of fame into obscurity. At approximately age forty, in 1828, he died, yet unable to speak, reportedly afraid and still half-wild. There are no records of the cause of death or even where he is buried. After Itard stopped working with him, he was no longer even called Victor – he was just known as the Savage (Lane, 1976; Shattuck, 1994).

### Considerations Regarding Victor

The primary questions regarding Victor are why he didn't progress farther in his intellectual and social development, and why his language acquisition was so stilted, particularly his speech. If Victor had been a normal child, abandoned between the ages

of three to five or so, he would have already learned how to speak French. This leads us to consider his potential deafness, a disability or retardation, or the possibility that speech faculties can completely atrophy if left unused for an extended period of time.

It is uncertain whether Victor's diagnosis of deafness is ever resolved. He was originally believed to be deaf, and that was the reason offered for why he couldn't speak. This explanation later turned to idiocy. Still, in his last report, Itard states that one of the reasons he was unsuccessful in teaching Victor speech was because "he cannot hear the speech of others and learn to speak himself, Victor's education is and will remain incomplete" (Shattuck, 1994, p. 159). It is unclear, then, if Itard meant that Victor was, after all, deaf or hard-of-hearing and couldn't hear speech, or if he *wouldn't* hear speech. Perhaps Victor's years of isolation caused his ability to recognize and mimic speech to atrophy so much that he was just unable to do so any more. We do know from Itard's reports that Victor could discriminate some vowel sounds and produce some vowels and consonants, but he never learned more speech than to recognize tones of voice denoting emotion. We can never know if he had learned speech prior to being abandoned in the forest, but Lane (1976) is tempted to think Victor could have learned speech with the appropriate instruction.

As Victor used and understood gestures, few people spoke to him, outside of Itard's later specific attempts at teaching speech. He seemed a logical candidate for sign language. It is curious that Itard noted Victor's "action language", as he called the Wild Boy's gesturing and mime, but he never considered using sign even when surrounded by it at the institute. Not only was Victor already using gestures and "action language", his initial guardian Bonnaterre, before Itard, notes how well-formed and dexterous his hands

and fingers were – perfect for signing! Itard never even mentions the possibility of sign language in any of his writings about Victor. Perhaps he felt that the successes the school's director, Sicard, had had with the deaf and mute student Massieu through reading and writing, recently published in a book, were the methods to try. If this is the case, that Itard sought to emulate Sicard – the man who had refused to teach Victor – there is a certain sad irony.

Unsuccessful, Itard gave up on Sicard's methods, and tried to develop his own. "Itard started his pupil on a set of exercises so effective that they are used today in kindergartens all over the world" (Shattuck, 1994, p. 102)<sup>1</sup>. Also worthy of note, while his methods to teach Victor to speak were never successful, Itard later used the same techniques to effectively teach other deaf or hard-of-hearing students to speak.

Itard's insistence on speech, and not on language itself, certainly resulted in ultimate communication failure. Sign was used all around Victor and Itard, and yet, it was never tried in the quest to educate the Wild Boy even though he had demonstrated what might be considered a natural propensity for it with his use of "action language". It is also possible that Victor may have had a breakthrough with writing, as he had had limited success in that arena before the training was abandoned by Itard. But "Itard wanted *vocal* speech at all costs and would accept no substitute" (Shattuck, 1994, p. 166).

Itard later came to believe that signing was the natural language of the deaf, whatever their degree of hearing loss, but at the time he worked with Victor Itard was committed to spoken language, so he never used sign with the Wild Boy; "a questionable

---

<sup>1</sup> Footnote added. These exercises were for sensory awareness, color and shape recognition and reading readiness, amongst other activities.

omission before he had abandoned Victor to mutism, it was inexcusable thereafter” (Lane, 1976, p. 170).

One of Itard’s faults was the disastrous equation of speech with language, and perhaps spoken language with being human. Itard was hardly the first to make this error, however. Since Aristotle, many people have made the mistake of equating language with speech (Sacks, 1989). Further, the Great Sign Controversy, the Communication War, in which the merits of oralism and manualism have been debated since the beginning of Deaf Education, was moving into its upswing toward endorsing oralism and speech at this time.

Other reasons cited by Itard for Victor’s failure to learn speech were his egotism and awakening sexual feelings – “raging teenage hormones”, if you will – distracting his focus. There is also the fact that living in isolation of society for so long had forever changed Victor to the point that he would never assimilate civilized customs.

Perhaps Victor was schizophrenic, or plagued with another form of psychosis. In his book *The Empty Fortress*, Bruno Bettelheim (1967) briefly presents the Wild Boy as autistic, not an idiot. Bettelheim considers his range of behaviors and uncommunicative nature as symptomatic of undiagnosed autism. It is not explained by Bettelheim if he believes whether the Wild Boy was abandoned to the wilds because he was autistic, or if his experiences alone in the woods caused his autism. These theories provide potential reasons for his abandonment and his partial recovery under Itard’s instruction. It is doubtful, however, that either a retarded or autistic child could have survived for years alone in the forest. Further, unlike typical autistic children, in his own way Victor was highly communicative.

As Itard himself said, the seven or so years of isolation from all human society is enough of a reason to explain Victor's condition. Itard believed this state to be reversible – the whole premise behind his work with Victor. The simple fact that Itard, the man who knew Victor the best, believed this – and actually put his career on the line to demonstrate it – carries much weight. It was too late for Victor, however. Whatever the cause, his ability to speak was too far gone (Shattuck, 1994).

What could we have learned about language acquisition if Victor had learned to speak, or sign, or write? What would his story have truly been like if he could have communicated it? We can never know; in the end, Victor died an uncommunicative prisoner in our world, a forgotten curiosity like a caged animal at a zoo<sup>2</sup>.

In all documented cases of feral children who suffered from prolonged isolation, all of them suffer from mutism, with little or no recovery once brought into care. Senses are generally only focused in regard to acquiring food. Most seek to avoid human society and look for the first opportunity to escape again into the wild. Shattuck (1994) himself supports this perspective: while alone in the wilderness, the Wild Boy “trained himself in effect to be an animal.”

Shattuck's (1994) explanation of what could have happened to Victor's mind, is worth quoting, at length, as he compares Victor with the more recent case of Genie:

In recent years, scientists have worked out a theory that sounds like a refinement of Locke's and Condillac's *tabula rasa* or wax-tablet figure. Many experiments show that right-handed people learn language, mathematics, and logic with the left hemisphere of their brains, and do other kinds of thinking related to space, vision, and touch with the right hemisphere. Complex cross-circuitry connects the two sides. In left-handed individuals, the sides are reversed. This process of ‘lateralization’ takes place during our early years, perhaps by the age of six - at

---

<sup>2</sup> As suggested by Dr. Karen Christie, what did we miss by not being able to observe Victor in the wild? What could he have taught us about wilderness survival? This certainly taps into the realm of multiple intelligences and reinforces the belief that a truly afflicted child could never have survived long in the wild.

least, before puberty. One theory proposes that once lateralization has been completed, a person is virtually unable to learn a first language. He must do so earlier. In other words, there is a 'critical age' in our genetic code for learning certain skills, after which it is too late to learn them, or learn them fully...

Genie, like the Wild Boy, was discovered at puberty. Tests revealed that lateralization had taken place - but only the right hemisphere had developed. It seemed to fulfill all functions for her. Yet she was right-handed, a fact that would normally point to favoring the left hemisphere. As the theory would lead one to predict, her judgment of space relations was far better than her handling of sequential relations that we use to arrange words into sentences. Like Victor, she soon reached a plateau in language learning. Both learned a good number of words but could arrange them only in very elementary patterns. The fact that both of them learned a little language appears to reinforce rather than undermine the critical-age theory. It begins to look as if one plausible result of prolonged isolation in children might be restriction of mental development to one hemisphere, even in children 'normal' at birth, and a stunting of the capacity to learn speech after this abnormal lateralization.

All this amounts to saying that Victor and Genie probably suffered irreversible functional brain damage from isolation. Yet we should never forget that the impaired mental organization they did achieve was effective enough to allow them to survive many years in a hostile environment without psychosis, autism, or lasting viciousness. And no matter how 'wild' they had become, they responded immediately to treatment and regained a kind of partial humanity. The human mind appears to have a wonderful sturdiness and resiliency (p. 204).

A serious detriment of Itard's methods was that he severely limited Victor's opportunities to socialize with other children his age. We are told by Itard that Victor feared the deaf students of the institute, but this may have changed if he was encouraged to interact with them more. Children learn from a variety of models. Itard and Madame Guérin were certainly his surrogate parents, his primary teachers, but part of the special education philosophy behind mainstreaming is that special needs children learn not only from interacting with their peers, but also by intermingling with non-special needs children. Victor was never given this opportunity, or at least it was never promoted.

Children also learn through play. Victor had little opportunity for this with Itard's rigid five year training program. There is no question that Itard's pedagogy was brilliant

and graced with intuitive insight. It may have benefited more from flexibility and free activity. Victor was taken from a literal isolation in the forest to another one – Itard’s training program where he rarely interacted with others, but instead was chaperoned constantly by either Itard or Madame Guérin. It is unfortunate that Madame Guérin left no reports of her interactions with Victor, for it is she who cared for him, and was responsible for much of his education, formal or not. Itard overlooked Victor’s need to socialize with others of his age and engage in more kinds of spontaneous play. Today we would call this incidental learning, or the “hidden curriculum” – a very important part of education and socialization.

What if Victor had learned to sign? He would have shared a way to communicate with his peers, and this could have shown us a great deal of humanness, and this is what the Society of the Observers of Man really wanted information about. If they had possessed the enlightenment to consider language other than speech, Victor may have bared his secrets and helped us better understand human nature. If the “forbidden experiment” had been less scientifically and more socially oriented, it may have been successful. Language observed in its natural state is about the desire to communicate with others for the sake of interaction, not for the acquisition of sustenance or even lofted learning, however well intended<sup>3</sup>.

Victor’s education came at the same time that he was going through puberty. How this complicated the issue and distracted from the educational process will never be known. It is interesting though, that the critical period of language acquisition to gain native fluency is sometimes said to end at puberty, and Victor’s education began at the

---

<sup>3</sup> This paragraph owes much acknowledgment to comments made by Dr. Karen Christie. “Also imagine if they gave him paints or clay...what would ‘art’ look like or would he do it?”

onset of puberty. Was he fore-doomed to fail? With more perseverance could he have learned the basics of language? Could he have acquired sign language in lieu of (or in addition to) speech if his vocal chords were paralyzed? Or, because of his long years of isolation, was language acquisition of any sort an impossibility for Victor?

In spite of the limited success demonstrated by Victor, Itard himself said in his report that because of Victor's beginnings, it wasn't fair to compare him to other boys his age to determine success. It was only reasonable to observe how far he had progressed – from a being below an animal, a virtual “plant” – to becoming almost a man (Shattuck, 1994).

In the end, can we fault Itard for failure? Probably not. Victor was likely too far gone to ever educate the boy. Perhaps he was an abandoned idiot after all, and had never learned a language. In this case there was nothing to build on and of course Victor would have been a mute. Still, could an idiot survive for years alone in the woods? Accounts vary, but the most common estimates place Victor alone for up to eight years before his removal. Even in his training with Itard he demonstrated ingenuity and strategy, cognitive skills likely beyond any true idiot.

### Language Acquisition

Language is one of the crucial elements of life, and explaining it is a major goal of the human sciences. Many theories have been proposed to explain the process of language acquisition. “Associationism describes the brain as a homogenous network of interconnected units modified by a learning mechanism that records correlations among frequently co-occurring input patterns. Rule-and-representation theories describe the

brain as a computational device in which rules and principles operate on symbolic data structures. Some rule theories further propose that the brain is divided into modular computational systems that have an organization that is largely specified genetically, one of the systems being language” (Pinker, 1991, p. 472).

In 1957 Noam Chomsky of the Massachusetts Institute of Technology, whom Sacks calls the “most revolutionary linguist of our time” (1989, p. 141), devised a new theory on how children acquire language. Previously, the accepted theory had been that children learn language through imitating their parents. Chomsky challenged this, saying that children do not just mimic their parents, but are able to actually create correct language usage that they could have never heard before from their parents. He theorized that children are born with the capacity to learn language and that this ability is specific to human beings. It is something that sets humans apart from other animals. This capacity, linked to a theorized portion of the brain, has been identified as the “language acquisition device” (LAD) (Brownlee, 1998).

Chomsky’s theory was controversial, especially since it had no research to back it up. This controversy spawned a language acquisition debate between those who favored Chomsky’s innate capacity view versus those who favored the traditional interaction/imitation perspective. The new theory and controversy initiated a new field of research – “development psycholinguistics”.

Other theories present first language acquisition as a combination of innateness and input or responses from caretakers. Most language acquisition has taken place by the age of five. Acquisition of language is the same, regardless of modality, and happens at the same ages and paces (Sacks, 1989). A child who doesn’t see or hear a language will

acquire no language. A child will only acquire language through interaction with others. One cannot do so by watching television or listening to a tape, as one will not receive the feedback necessary to modify production (Durkin, 1995).

With further research, it is now known that acquiring language actually begins before birth and the process itself shapes and changes the very structure of the brain. Research since Chomsky's time has shown that children's language skills develop in stages. At each stage the language sophistication grows in complexity and generally corresponds with brain growth in a specific neurological region. Initially, the brains of infants are able to process every conceivable phoneme that is humanly possible. As time passes, they learn only to pay attention to those phonemes that are part of their native language, and ignore foreign sounds. Within a few months babies have started to memorize words without yet knowing their meanings. The earlier a child learns a language, the better. It is generally believed that a child who does not obtain a language by puberty will never use that language with native-like fluency. Deaf children, especially of hearing parents, are often at risk in this regard. Unable to fully process spoken language due to their deafness, they often do not acquire signed language until later in life as well (Newport, as cited in Brownlee, 1998).

At age ten to eleven months, hearing babies can identify a language being spoken, but not yet any specific words. At the age of 18 months a toddler has learned that sentences need to correspond to appropriate verb endings. By the age of three, children have acquired a vocabulary of three thousands words, and are able to use grammatically correct sentences. In spite of the research, how this language acquisition happens is still a mystery (Markman, 1990).

Children learn vocabulary at the rate of about forty-five words per week. By “age six they have learned 9,000-14,000 words which works out roughly to nine new words a day from about eighteen months on. It is still largely a mystery as to how children acquire language at this astonishing rate” (Markman, 1990, p. 154). Victor, though an infant in many ways, never learned vocabulary in anything approaching this rapidity or success.

The basics of language acquisition are in place by about age three, with other specifics, like grammar, being refined over time. Whereas most adults process grammar in their left brain hemisphere, babies and toddlers use their whole brain, that is, both hemispheres, for language. Parts of language related to grammar start to become processed in the left hemisphere near the end of their third year of life. From then on the two hemispheres have separate functions; the left, as noted, controls grammar, and the right is related to spatial responsibilities. This division of language components into the two hemispheres is true whether the language is spoken or signed. The window of opportunity for language acquisition starts to close about age six; it diminishes as time passes after this stage (Brownlee, 1998; Marschark, 2002).

In her research, Gleitman (1990) notes how infants are born ready to gather environmental information using all of their senses in acute detail, all of which prepare the infant for language acquisition. Victor, it seems, was not blessed with this richness, was unable to access it, or at the least, was unable to convey his comprehension of his sensory input.

Children are not taught grammar, but construct it from the input provided to them, through Chomsky’s innate LAD, and it slowly develops until between the ages of twenty-

one and thirty-six months, when children demonstrate a “genius for language”. It slowly diminishes again after this period, until it is all but gone by puberty (Sacks, 1989, p. 83).

There are innate rules to language use and acquisition, not just in the requirements of writing or communicating in a correct fashion like spelling rules in English, but in being able to know, implicitly, that an utterance in one’s native language is grammatically correct upon hearing or seeing it. Often one cannot explain why the utterance violates the language’s grammar (the explicit inaccessible rule theory), but it is just innately *known*. It is the role of Chomsky’s language acquisition device to discover what the rules are. One theory on how the LAD functions is that it hypothesizes about explicit inaccessible rules, which are then confirmed or dismissed based on their ability to account for the input the person receives. “The LAD is presumed to have *innate* knowledge of the possible range of human languages and, therefore, is presumed to consider only hypotheses within the constraints imposed by a set of *linguistic universals*.” The theory is still “hotly debated” and alternative theories exist, including ones that accept the premise of the LAD, but disagree about how it functions (Rumelhart and McClelland, 1986, p. 424).

Children have maturational constraints, i.e., a critical period, during which they can best acquire language; they are, in fact, especially gifted learners in this domain. The later the language is learned, the less it will be native-like in character. This is true of speech or sign. Genie, for instance, who was exposed to language after puberty, was skilled at basic word order but was awkward with its morphology. Further, this function applies to learning a second language as well – even if one mastered a first language at a

young age, that mastery does not extend to learning a second language later in life (Newport, 1990).

Newport compares human language acquisition to how a bird learns to sing. Birds are born with an innate skeletal song, just as humans are born with an innate capacity for language – a skeletal language template. For birds, the songs are species-specific and a bird filters out any other songs that it hears. Humans, in contrast, are born with the potential to learn any language they are consistently exposed to. However, if exposed to an “unnatural language”, it will not be learned. If a child is exposed to a “natural human language” it will be learned easily. Conversely, “created/unnatural languages” like some form of manually coded English (MCE), e.g., Signed Exact English, will not be “readily learned”. Like humans, birds also have a window of opportunity or “critical period”, a specific time that is ideal for language acquisition. If this opportunity is missed in humans or birds, the language or song, respectively, will never be fully learned.

Supalla (1991) theorizes that there is a “biological predisposition” for spatial-based elements to allow visual modality language to be successfully learned. The fact that children learning manually coded English (MCE) encounter so many problems compared to natural sign languages like American Sign Language (ASL) points in this direction: that trying to portray spoken language visually is unsuccessful, and perhaps unnatural.

Children need a “schema”, a framework, upon which to construct an understanding of language, and thereby, the world around them. The process of acquiring a language, especially a second language, and the associated literacy, can be

most successful and meaningful through the process of self-discovery. Before a second language can be acquired, the child's first language must be fully developed, or nearly so, although it is also possible that children can be raised bilingually from birth. The first language is the schema, the bridge needed to access the second language. Deaf children in the United States are often perceived as lacking skills in English compared to their hearing peers, but it should be remembered that in most cases English is a second language for these deaf children, so the comparison is unjust. A more accurate comparison would be between deaf children and other learners of English as a second language (Mahshie, 1995).

There appears to be no real differences in the ways (other than the obvious modes) that signed and spoken languages are acquired. Some have suggested that the brain is programmed to acquire language regardless of modality, not specifically speech. Infants actively seek out language input, indifferent to modality. Worthy of note is the fact that all children gesture, prior to using any spoken words. Up to the end of the critical period, a child may become proficient in any language or languages, even being multilingual. After this stage, there is a gradual diminishment of fluency (Petitto, 1992; Bloom, 1993).

Only five to ten percent of deaf children are born to deaf parents. Deaf children of deaf parents are generally native signers and "outperform the rest of the [deaf] population in academic achievement, including English skills" (Swisher, 1989, p. 253). This means, however, that ninety to ninety-five percent of deaf children are born to hearing parents. As a child's usual first language acquisition comes through interacting with the parents, this is an issue of interest and concern. Growing up fluent in American

Sign Language bridges the languages, to help students learn to read English, but children need to have fluency in a first language before they can learn a second (Padden, 2006).

Sacks, citing Hilde Schlesinger, relates that low-functioning deaf people (i.e., those who failed to get the language acquisition input necessary at a young enough age) struggle with understanding questions, refer only to objects immediately present, cannot understand hypotheses, remoteness or contingency, and in general, function at a concrete, perceptual level. These are the “neurological hazards of congenital deafness” – delayed language development and lower level cognitive functioning, even intellectual arrest. As cognitive development is contingent on language acquisition to help shape the brain’s growth, the brain is actively changed as language development is modified. There is a literal physical restructuring of the brain via this process. Additionally, deaf students often miss incidental learning, and their education is “meager” compared to their hearing peers, due to an overemphasis on teaching speech, which is so intensive it leaves little time for anything else (1989). Victor certainly comes to mind in this regard.

Deafness must be diagnosed early, so that language in the correct modality – sign – can be initiated at as young an age as possible, lest language development be delayed. Fluent signers must model signed language so that the deaf child may acquire native fluency at it, which can happen by age three. Sign can then be used to bridge acquisition of reading, English and speech if it is desired (Sacks, 1989).

There are, sometimes, isolated deaf people who acquire little language of any sort, leading to intellectual, emotional and social disabilities. If “communication goes awry, it will affect intellectual growth, social intercourse, language development, and emotional

attitudes, all at once, simultaneously and inseparably”, and this can frequently happen to deaf children (Sacks, 1989, p. 63).

Sacks (1989) describes “inner speech”, which we use for internal monologue for further development, beyond the basics, to think and establish connections between understandings of the world. Thought, and not just language, must be introduced to children, lest they stagnate at a concrete level of understanding the world. This is often a trap hearing parents of deaf children fall into, as they learn the signs for the names of objects, and only use simplified and basic language to communicate with their child that fails to stimulate the child’s mind.

Deaf children are able to supersede the impoverished input signed to them by their, most often, hearing parents or teachers, and become accurate and fluent native or native-like signers. In other words, children can produce language output which is better than the language they have been receiving. They can somehow systematize the elements of language they receive into a linguistic scheme which is different than the way adults use language. In fact, deaf children who are not exposed to sign at all often develop a gestural system of their own that shares many of the components of an actual signed language, including a lexicon, syntax and morphology (Goldin-Meadow and Mylander, 1990). Thus, with Victor’s predilection to his “action language”, if Itard had tried to learn sign, and use it with Victor, even though his production may have been impoverished due to late learning, there is the *possibility* that Victor could have become skilled in sign. I say possibility because we don’t know if Victor was beyond his critical stage for learning language, or if he was capable of acquiring a language at all due to his afflictions.

Victor's inability to grasp spoken language is somewhat of a foregone conclusion – he was learning it too late in life, and if he did have some sort of hearing loss, Goldin-Meadow and Mylander (1990) point out, it is rare for deaf children with severe to profound hearing loss to acquire spoken language, even with in depth and specialized training, which Itard's methods certainly qualify as. Even then, speech acquisition is noticeably delayed in comparison to the acquisition of speech by hearing children of hearing parents or sign by deaf children of deaf parents.

#### Considerations Regarding Language Acquisition and Its Implications for Deaf Education

Many times, unfortunately, theories remain just that, and are never put into practical application. There is little point in conducting research if the findings will not be utilized in some fashion that will help people advance in whatever area relates to the given research. Language acquisition research is too powerful *not* to have an impact on people's lives. It challenges and contradicts many of the thoughts and practices that have guided language teaching and education from the beginning. How language is perceived and taught must all be re-evaluated, even on an informal level in the home.

The Newport research indicates that children, and here we will focus on deaf children, must be exposed to a language from birth to maximize potential fluency. If the language of choice is to be ASL, then the child must be exposed prior to the critical period. We know that bilingual or even multilingual children are able to develop dual (or greater) fluency without confusion or sacrificing development in another language. Therefore, if we want deaf children to be proficient in both ASL and English, we might think they must be exposed to both from birth. However, herein a problem arises:

Supalla (1991) has shown that MCE is not a natural language, so it is not successfully learned and fluency in English is therefore not achieved. How, then, can English be learned so that it may be acquired as a natural language and developed to native fluency? Is it even possible to convey a spoken language in a visual modality as a true language, and without it being changed into something other than what it originated as?

In Sweden and Denmark, the approach in preschool, and then elementary school, is to expose deaf children to “completely accessible” visual language, i.e., sign language. Unlike the United States, where sign language is often perceived as detrimental to competency in written and spoken English (the majority language), sign is embraced in these two countries as the best way to ensure proficiency in the majority language. In fact, it is now generally accepted by theorists that “there is a form of common underlying proficiency that contributes to competence in more than one language” (Mahshie, 1995, p. 23, 24). Once this proficiency is developed in one language, it serves as the bridge to acquire additional languages.

The model used in Sweden and Denmark utilizes the base language, sign, for all of the academic subjects. In this way, deaf students learn the academic disciplines they need, while simultaneously learning about their sign language. Swedish and Danish are addressed as the students’ second language. These students receive the content required in their first language, increasing the likelihood they will succeed, within the realm of their comfort and confidence. Swedish and Danish are taught through the medium of sign, so that the students slowly learn one of these as their second language, but they do so from a position of familiarity and strength (Mahshie, 1995).

Once students are able to function at a sufficient level to read independently in the second language, they benefit the most by working through the process of figuring out what a word or phrase means themselves related to a topic of personal interest. Achieving this on their own as part of a discovery process, rather than having it handed to them, has much more lasting effects. The objective is to have students figure out for themselves the relationships between their first language and the second language. By doing this, the students develop “pride and confidence” in their own first language, which they learn to recognize as a valid and complex language in itself, not just an ungrammatical or corrupted version of the majority language. The way English and ASL have been handled in the United States, i.e., not being distinctly separated, has often left deaf students thinking that what they have been signing “*was* English grammar”. To write grammatically correct English sentences, one had only to write down what one would sign. They do not always understand that ASL is an independent language itself, not just a form of “ungrammatical English” (Mahshie, 1995).

The methods for teaching second language acquisition in Sweden and Denmark are based on four principles. Students should continue to develop their knowledge and academic skills through the first language. The introduction of the second language should include pictures, experiential context and prior experience at a challenging, yet suitable, level. The students’ first language should be used to explain the second language, allowing for metalanguage to aid comprehension. Finally, the second language must be built upon the students’ schema related to their first language (Mahshie, 1995).

Mahshie’s book was published in 1995, and the references she cites throughout her chapter are from the 1980s and 1990s. This implies that the means for facilitating the

acquisition of second languages has been available for quite some time, but has not been implemented in the United States in any manner beyond what individual teachers or certain non-traditional schools may have attempted. At any rate, it has had little impact on “mainstream” schools. Deaf education in particular, and English as a Second Language (ESL) programs in general, have been stigmatized as less than successful in comparison to mainstream, public (largely hearing) education.

The implications of language acquisition research on teaching are numerous. Based on what is known about how language is acquired, many changes, and perhaps an entire restructuring of the American educational system, need to take place. Rather than trying to force feed English, as we do now, we need to follow the patterns of natural language acquisition as outlined in the above research. As Padden (2006) notes, learning a language and reading at the same time is very hard and slow. Teachers must be patient with this slow process until it “clicks” and then reading takes off. Itard never really gave Victor enough time to succeed in this regard. Victor was learning French and reading at the same time, and was way past his critical stage.

A simple altering of teachers’ expectations and attitudes could go a long way toward helping to facilitate English development in our deaf students. Really, although they are not often considered as such, most deaf students *are* ESL students. Teachers need to remember that English is not in most cases the “native” or “natural” language of deaf people. It is a second language, and to expect deaf students to acquire it and use it in the same fashion as hearing students (for whom it is usually the first language) is a misunderstanding. Comparisons with those students for which it is the first language is unjustified. Additionally, the mistakes made by second language learners should be seen

as stepping stones toward acquisition and a window of opportunity for evaluating a student's progress, not criticized as shortcomings. Translation between languages should focus on meaning, relying on the first language, not on a word-for-word approach. Language acquisition is a continuum of development. The capacity of a student to express herself in any language should be accepted, not just a requirement and expectation for this to happen in English.

Why do we continue to teach English by the methods we do in this country, when it is so contrary to the available research on first and later language acquisition? Are we so lethargic that the inertia needed to overcome a change in how our educational system is setup renders us incapable of transformation? If we are to believe that our educational system has our students' best interests at heart, why - after twenty or more years of research that contradicts our current methods of instruction - does the system continue to allow students to receive substandard education?

Parents need to ensure they are interacting with their child as much as possible to help stimulate language development. As Brownlee notes, "the size of toddlers' vocabularies depends in large measure on how much their mothers talk to them" (p. 55). To actualize their greatest language potential, children need as much interaction as possible. This is true for hearing children to learn a spoken language. However, this is even more crucial for deaf children, especially those with hearing parents.

There is much to consider with this research. Considering that the language acquisition window diminishes as one ages, does this imply that adult learners of second languages are doomed to failure at worst, or mediocrity at best? Why do schools put off teaching "foreign" languages until well past a child's critical period of language

acquisition? If the educational system is to stay current with new research, one would expect that “foreign” language would be pushed forward from high school where it has traditionally been taught (although it is now also common in middle school) to early elementary school or even preschool, into the window of opportunity for language acquisition.

Applying this to deaf education in general, as most teachers of the Deaf are currently hearing people, and the majority have learned sign as a second language, does this then mean that the quality of education Deaf students will receive will always be substandard, as the quality of sign communication will be less than fluent? Many reasons have been put forth to explain why education in residential schools often lags behind that of public schools, but the possibility of this being in part from the fact that the hearing teachers are not communicating themselves clearly, and therefore the Deaf students are not fully comprehending the information, is a possibility that seems plausible and worthy of further consideration.

Reflecting back on our journey, in spite in Itard’s patience and brilliance as an educator, and there is much we can learn from him, we have to be careful not to make the same mistakes he did. Because of maturational constraints and frequent delayed exposure to language, we must strive to make every effort to provide the best language models we can to our deaf children. We must encourage critical thinking to stimulate cognitive development. While speech may be important to the language acquisition of some deaf children, we cannot neglect their natural language – sign. We cannot isolate deaf children, in mainstreamed classrooms or in hearing families who don’t sign,

however well intended. Like Victor's cues with his "action language", the deaf child herself will often point us in the right direction if we are only observant of the "signs".

### Victor's Legacy

Years of Itard's instruction failed to expose the secrets locked in Victor's mind. He never learned how to communicate well enough to describe his feral experiences. Still, was it all just a grand failure? Were Itard's five years spent trying to teach speech and socialization to the Wild Boy a waste of time? I would say no. Not only did Itard and Victor benefit from their relationship and trials, the entire world has reaped the benefits of their legacy, even if it wasn't realized by either of them at the time.

"Itard created a whole new approach to education, centered on the pupil, closely adapted to his developing needs and abilities, seconded by instructional devices – an approach we have accepted so thoroughly as our ideal that we scarcely imagine any other or credit anyone with its discovery" (Lane, 1976, p. 5). Itard was ahead of his time in his pedagogy of educating a nonverbal child by first awakening Victor's senses (Candland, 1994).

Furthermore, Itard's techniques were passed on to Edouard Sequin to be used with a severely retarded student, and these methods were brought to the United States by Sequin to establish the first special education programs here. Sequin's work was then noticed by Maria Montessori and used to establish pre-school education. Itard's original methods of first training the senses and motor skills, and then recognizing colors, shapes and letters are all now commonly used in special and pre-school education.

Itard's reading board used to teach Victor words by displaying letter cut outs was the prototype of the reading-readiness workbooks. He is credited with originating the "analytico-synthetic" method of teaching reading and numerous teaching tools and manipulatives still in use today. He founded an oral education approach for deaf/hard-of-hearing students between 1805-1808 that would later be implemented in France and used in modified formats in Europe and America, including a dual input ear trumpet that allowed the teacher and the student themselves to speak and be heard (Lane, 1976).

The Minister of the Interior highly complimented Itard's pedagogy, stating that "you could not have put more intelligence, patience, wisdom, and courage in your lessons, in your exercises, and in your experiments" (Lane, 1976, p. 134). Shattuck (1994) tells us how Itard went on to become a "famous doctor and an enlightened educator, one of the first to understand that the deaf should be trained not only in sign but also to read and write" (p. 163), even if that revelation happened after Victor.

Lane (1976) calls Itard the "ultimate pedagogue". Most of what we know about Victor is because of Itard's meticulous recordkeeping regarding his interactions with the Wild Boy and his inspired instructional techniques. He tailored his instruction to Victor's needs rather than following a pre-established progression of lessons as we often do in our schools. He was obviously patient in his work and often changed his plans and approach to better suit Victor's current mindset or requirements.

While associated with the institute for forty years, Itard never learned to sign. At the end of his life, he may have finally admitted his mistake in not implementing sign in his instruction with Victor and other deaf students. However, Victor was just another casualty of the Communication War, a "forbidden experiment" gone awry, a child of

nature plucked from his own world and arrogantly forced to live in ours until he died in obscurity. Perhaps, because of Victor and what we can learn from him, other children will not fall victim to the same obstacles in language acquisition.

Disappointments aside, Victor's life was hardly wasted, for from it, it is not unreasonable to assert, came the development of techniques used to teach the blind to read, the deaf to communicate, and eventually, the beginnings of better understanding of retardation and autism. Those of us blessed with the gifts of acculturation to human society would be proud to have accomplished as much for civilization as did Victor (Candland, 1994, p. xiv).

## References

- Baldwin, Dare A. (1991). "Infant Contributions to the Achievement of Joint Reference," in *Child Development*, 62. [Primary]
- Bettelheim, Bruno. (1967). *The Empty Fortress: Infant Autism and the Birth of the Self*. New York: The Free Press. [Primary]
- Bloom, Paul. (1993). "Language Development," in *Handbook of Psycholinguistics*. [Primary]
- \_\_\_\_\_. (1994). "Preface: Language Acquisitions," in Bloom (ed.) *Language Acquisition: Core Readings*. Cambridge, Massachusetts: MIT Press.
- Brownlee, Shannon. (1998). "Baby Talk: Learning Language, Researchers are Finding, is an Astonishing Act of Brain Computation – and it's Performed by People too Young to Tie their Shoes," in *U.S News & World Report*, June 15, 1998. p. 48-55.
- Candland, Douglas Keith. (1994). "Introduction," in Shattuck *The Forbidden Experiment: The Story of the Wild Boy of Aveyron*. New York: Kodansha International.
- Crane, Stephen. (1991). "Language Acquisition in the Absence of Experience," in *Behavioural and Brain Sciences*, 14. Cambridge University Press. [Primary]
- Cromer, Richard F. (1987). "Language Growth with Experience Without Feedback," in *Journal of Psycholinguistic Research*, 16, 3. Plenum Publishing Corporation. [Primary]
- Durkin, Diane Bennett. (1995). "Chapter 1: Acquiring a First Language," in *Language Issues: Readings for Teachers*. Los Angeles: Longman Publishers.
- Fernald, Anne. (1992). "Human Maternal Vocalizations to Infants as Biologically Relevant Signals: An Evolutionary Perspective," in Barkow *et al.*, *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, Oxford University Press.
- Fischer, Susan. (1975). "Influences on Word Order Change in American Sign Language," in *Word Order and Word Order Change*, ed. C. Li, 1-25. University of Texas Press: Austin. [Primary]
- Gleitman, Lila. (1990). "The Structural Sources of Verb Meanings," in *Language Acquisition* 1,1. Lawrence Erlbaum Associates. [Primary]
- Goldin-Meadow, Susan and Carolyn Mylander. (1990). "Beyond the Input Given: The Child's Role in the Acquisition of Language," in *Language*, 22, 6. Linguistic Society of America. [Primary]
- Lane, Harlan. (1976). *The Wild Boy of Aveyron*. Cambridge: Harvard University Press. [Primary]
- \_\_\_\_\_. (1984). *When the Mind Hears: A History of the Deaf*. New York: Vintage Books.
- Mahshie, S.N. (1995). "Developing Literacy: Theory," in *Educating Deaf Children Bilingually*. Washington D.C.: Gallaudet University Press.
- \_\_\_\_\_. (1995). *Educating Deaf Children Bilingually*. Washington, D.C.: Gallaudet University Press.
- Markman, Ellen M. (1990). "Constraints Children Place on Word Meanings," in *Cognitive Science*, 14, 1990. [Primary]

- Marschark, Marc, *et al.* (2002). *Educating Deaf Students: From Research to Practice*. Oxford University Press.
- Min, Sarah. (1999). "Language Lessons," in S. and T. Hirschberg. *Reflections on Language*. New York: Oxford University Press.
- Newport, Elissa L. (1990). "Maturational Constraints on Language Learning," in *Cognitive Science*, 14. [Primary]
- \_\_\_\_\_. (n.d.) Video Notes. "Critical Periods and Creolization: The Effects of Input and Age on the Acquisition of ASL." ASL Lecture Series, Newport Video: 5912, no. 17. [Primary]
- Padden, Carol and Harry Markowicz. (1982). "Learning to be Deaf: Conflicts Between Hearing and Deaf Cultures," in *LCHC: The Quarterly Newsletter of the Laboratory of Comparative Human Cognition*. University of California, San Diego: Center for Human Information Processing. [Primary]
- \_\_\_\_\_. Padden, Carol. (2006). "Literacy as a Critical Requirement for Success in Both Deaf and Hearing Worlds". Presentation given at the Rochester School for the Deaf. April 6, 2006.
- Petitto, Laura Ann. (1992). "Modularity and Constraints in Early Lexical Acquisition: Evidence from Children's Early Language and Gesture," in *Minnesota Symposium on Child Psychology*, 25, 1992. [Primary]
- \_\_\_\_\_. (1994). "Language in the Prelinguistic Child," in Bloom (ed.) *Language Acquisition: Core Readings*. Cambridge, MA.: MIT/Bradford Press. [Primary]
- Pinker, Steven. (1991). "Rules of Language," in *Science*, 253, 530-5. American Association for the Advancement of Science. [Primary]
- Rumelhart, D.E. and J.L. McClelland. (1986). "On Learning the Past Tenses of English Verbs," in *Parallel Distributed Processing*, Volume 2. MIT Press. [Primary]
- Sacks, Oliver. (1989). "Seeing Voices: A Journey into the World of the Deaf." Berkley: University of California Press. [Primary]
- Shattuck, Roger. (1994). *The Forbidden Experiment: The Story of the Wild Boy of Aveyron*. New York: Kodansha International. [Primary]
- Singleton, Jenny L. and Elissa L. Newport. (1987). "When Learners Surpass their Models: The Acquisition of American Sign Language from Impoverished Input." SRCD. [Primary]
- Supalla, Samuel J. (1991). "Manually Coded English: The Modality Question in Signed Language Development," in Siple, Patricia and Susan Fischer (Eds.). *Theoretical Issues in Sign Language Research, Vol. 2: Psychology*. University of Chicago Press. [Primary]
- Swisher, M. Virginia. (1989). "The Language-Learning Situation of Deaf Students," in *TESOL Quarterly*, vol. 23, no. 2, June 1989. [Primary]
- Ward, Andrew. (n.d.) Retrieved May 16, 2006 from "Feral Children" website: <http://www.feralchildren.com/en/index.php>