

Crossing Over the Communicative Barrier: Case of Helen Keller's Developmental Disability and Language Learnability

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Abstract

The present qualitative study reviews Helen Keller's triumphing over her deafness and blindness through her fairly successful acquisition of language, growth of communicative competence and the representation of literacy skills. It engages the traditional language theories with her first person account The Story of My Life (1902) and, interprets her model of acquisition and learning of language. The cognitivist and behaviorist language theorists have presupposed the physiological normalcy of a learner for propounding a theory and, thus, have conveniently overlooked the intricate relationship between developmental disability and language learnability of special children, suffering from aural and visual impairment. Helen's exposure to language and her success with its representation in her times was undoubtedly a breakthrough in the world of communication. Helen has been through the conscious 'torment' of learning because of her developmental disability and onerous task of language accessibility, reinforcement and its assimilation. Her concept of language and learning paradigm was an experience that was understandable only through fingers and sense of touch. Before language, she felt locked in the dark prison of non-communicative life and her conscious lacked any recognizable linguistic expertise in the target language for its expression. The current study underscores the need for theory generation on the language deficient special learners by analyzing the unique case of Helen Keller as a reference point for research, and highlights the mechanism and developmental stages of learnability involved in the performativity of language for a disabled child.

Keywords: Developmental disability, language learnability, literacy skills, communicative competence

1. Introduction

Helen's language learnability has not been directly addressed by the cognitivist or behaviorist language theorists who have theorized the learnability of the normal human children and left out the case of special children—a question mark on the generalization of traditional language learning theories. The present study shows that the available language acquisition models partially apply on the language learning of a special child as the researchers during their study could not find any model that comprehensively addresses the disabled children. In Morgan's (1986) understanding, "learnability is but one condition that a successful theory of language acquisition must satisfy. In addition such a theory must provide an accurate developmental account" (p. 169). Pinker(1979), on the other hand, interprets that "a theory that is powerful enough to account for the *fact* of language acquisition may be a more promising first approximation of an ultimately viable theory than one that is able to describe the *course* of language acquisition" (p. 220). In the absence of a viable theory with "an accurate developmental account," Helen's case study may be productive as a write-up for understanding the challenges, constructs, developmental stages, phenomena, cognitive handicaps and 'course' of a special child's language learnability. Language

learnability of a special child lacks strong theoretical and philosophical support as the dominant theorists have dealt with the natural acquisition and learning of a child where environment primarily provides data input to learners in comparison with the special learners where it is an enormous labor on the part of the teacher and the taught. Helen's post-language communicative life revealed her inner self and triggered the withheld thought processes. Helen Keller's *The Story of My Life*, first person autonarrative, is a valuable case to reflect on the mechanisms involved in the language learnability of a special child.

Though language learning is an arduous task that is assisted by a number of people, Miss Sullivan's character has contributed the most in coaching Helen as the narrator recalls, "The most important day I remember in all my life is the one on which my teacher, Anne Mansfield Sullivan, came to me. I am filled with wonder when I consider the immeasurable contrast between the two lives which it connects" (Keller, 1914, p. 21). The first seventeen chapters of Helen's *The Story of My Life* account how the physically impaired child acquires language despite her complete auditory and optical handicaps. The contrast between her non-communicative and communicative life can be interpreted in the light of traditional concept, as Chomsky (1975) quotes, that language is "a mirror of mind" (p. 4). Hence, Sullivan's exploration of Helen's language learnability indexes Helen's mind through the linguistic representations and performativity. The current study investigates two basic research questions: 1) How does a child with developmental disability learn a language? 2) How challenging is it for a handicapped child to cross over the communicative barrier, and display the basic language skills?

Researches have been conducted on the relationship between the learnability and development of language but mostly they have been general in nature. They range from understanding speech disabilities and language disorders (Spiel, Brunner, Allmayer & Pletz, 2001) to finding speech and language impairment in young children (McLeod & Harrison, 2009), explaining mechanisms of language input to output to studying single case study of a disabled child (Landau and Gleitman, 1985), highlighting specific language disability (McClelland, 1977) to rethinking language therapy (Jordan & Bryan, 2001) but, they, by and large, failed to theorize a comprehensive mechanism of language learning and development of a special child. Historically, Pinker in *Language learnability and language development* (1985) has worked on the mechanisms, supported by developmental data, involved in the output of normal adult grammar in an informal way in contrast with the systematic work on language learnability (Osherson, Stob & Weinstein, 1986; Wexler & Culicover 1980). Landau and Gleitman's *Language and experience evidence from the blind child* (1985) is based on a single case study approach. They detail language development of a blind girl Kelli with restricted sensory experience, and focus on her acquisition of single words and partial understanding of sight verbs. Learners may experience specific language disability as McClelland (1977) reports Ernie's, aged 37, difficulty with reading a text. Ernie had well-developed auditory system but weak visual and kinesthetic abilities. The experiment was cut short by his untimely death. Children with one disability have to show great strength and efforts to overcome their deficiency and learn language (Rottenberg & Searfoss, 1992). However, children with disability too reflect intrinsic motivation for language learning and emergent literacy skills (Clay, 1979; Harste, Burke, & Woodward, 1981, Williams, 2004). Though technological advancement is assisting children with the visual and auditory support and research reveals positive implications for learners (Chang & Osguthorpe, 1990; Olson & Sulzby, 1991), and thus result in cognitive growth as well (Labbo, 1996).

2. Helen's Linguistic Development

The basic need to communicate evolved with the evolution of human society when man learnt to be social, live together and share life. Saussure (2011) has acknowledged human's "faculty of constructing a language, i.e. a system of distinct signs corresponding to distinct ideas" (p. 10). In Helen Keller's case, she managed the early days of her life by learning and making use of the sign language:

I felt the need of some communication with others and began to make crude signs. A shake of the head meant "No" and a nod, "Yes," a pull meant "Come" and a push, "Go." Was it bread that I wanted? Then I would imitate the acts of cutting the slices and buttering them. If I wanted my mother to make ice-cream for dinner I made the sign for working the freezer and shivered, indicating cold. My mother, moreover, succeeded in making me understand a good deal. I always knew when she wished me to bring her something, and I would run upstairs or any- where else she indicated. (Keller, 1914, p. 9)

In her long night of visual aural impairment, it was her mother who made her imitate thing she wanted to have. Her mother would also imitate for her in response. Her desire to express and communicate herself was obstructed by the few signs which she could learn during the course of time. They were inadequate to make her expressions explicit, vivid and comprehensible. This inhibition would drive her into outbursts of anger and despair, "the need of some means of communication became so urgent that these outbursts occurred daily, sometimes hourly" (Keller, 1914, p. 17).

Helen's speech organs were intact and performing even in her disability. Smith (1999) reads how Chomsky suggests language as one of the body organs, "Just as the heart and the rest of the circulatory system are organs with their own structure and functions, language is a kind of 'mental organ'" (p. 23). In his theory of language acquisition, Chomsky (1965) talks about the "innate 'language-forming capacity' of humans" (p. 30), and states that the human language-faculty is innate and species-specific. It is genetically transmitted and unique to the species. These innate characteristics predispose a child to acquire language. He (1965) further holds that "every speaker of a language has mastered and internalized a generative grammar that expresses his knowledge of his language" (p. 8). It means that the native speaker's internalized rule system is basically his/her knowledge of language structure. Infant's physical and mental maturity coincides with its language acquisition, and necessarily there must be some connection between the two processes. He talks of some *universal developmental stages* that regularize children's language acquisition process. Like the new words keep on adding in child's vocabulary until s/he reaches the age of 28 months but as we know that Helen's this time period was cut short to 19 months because of the disease that "closed my eyes and ears and plunged me into the unconsciousness of a new-born baby" diagnosed as "the acute congestion of the stomach and brain" (Keller, 1914, p. 7) by the medical practitioners of that time.

As learning a language is an instinctive phenomenon, the instinct to speak needs to be explored and constructively channelized in the orally handicapped children. Darwin (1872) endorses that all the humans have the "instinctive tendency to speak" (p. 53) and "instinctive tendency to acquire an art" (p. 54) that is language. However, Love (1934) adds sign language to the hereditary

characteristics, "There is a hereditary tendency to use language, although it be only a sign language, in all the higher animals, including man" (p.114). Instinctively, Helen Keller set on the mapped journey of language acquisition like any other normal child, "At six months, I could pipe out "How d'ye," and one day I attracted every one's attention by saying "Tea, tea, tea" quite plainly" (Keller, 1914, p. 6). Biologically, she was fit to acquire language and naturally she was following up the set pattern that is "imitation of reality by the organism or the mind" (Piaget, 2002, p. 173). She would pronounce some basic words oft-spoken in the environment. This was the time, actually, when she was exposed to language. Later on, after her illness, she was exposed to language in a new context that was learning by means of *conscious* efforts, reinforcement and repetition.

Four major stages of cognitive development, according to Piaget (1950) are: sensorimotor (0-2 years), intuitive or preoperational (2-7 years), concrete operations (7-11 years) and formal operations (11-16 years). Each major stage is qualitatively different from the preceding one. Helen skipped the first two stages as she resumed learning language when she was around seven. Nevertheless, she even developed advanced numerical recognition in spite of multiple perceptual handicaps (Langer, 1998). She by the age of nine years had discovered that "everything has a name!" (Chandler, 2007). This is how the child "discovers the magical power of words for referring to things in their absence" (p. 74), and it is labeled as 'displacement' and considered a key design feature of language (Hockett, 1958; Piaget, 1971). Since, the required cognitive development had already been accomplished, and thus, was in stock for doing the pending job of advanced language learning.

During the study, it is found that the theories of behaviourism also have minor implications in Helen's case as she had to learn language through repetition, practice and reinforcement. In the first quarter of the 20th century, Pavlov (1902) worked on the conditioning of dogs. He found out that the desirable behaviors could be taught to the animals through the process of conditioning and subsequently to the humans likewise. It was Watson (1928) who sought inspiration from the behaviourist school of psycholinguists and propounded his new theory. He maintained that people are made, not born. He also believed that a baby can be morphed into any adult form. His authoritative stance 'give me the baby' can be summed up in the following lines:

Give me the baby and I'll make it climb and use its hands in construction of buildings of stone or wood....I'll make it a thief, a gunman or a dope friend. The possibilities of shaping it in any direction are almost endless. Even gross anatomical differences limit us far less than you may think....Make him a deaf mute, and I will build you a Helen Keller. Men are built, nor born. (p. 87)

Miss Sullivan acted as an external motivational agency internalized language in Helen through repetition, drilling and reinforcement. To argue on Watson's claim, it can be said that human learning is a complex cognitive experience not as simple as to train a dog, pigeon, cat or a rat. Helen recalls "One day, while I was playing with my new doll, Miss Sullivan put my big rag doll into my lap also, spelled "d-o-l-l" and tried to make me understand that "d-o-l-l" applied to both" (Keller, 1914, p. 22).

Her teacher tried to impress upon her the abstract word by its association with the concrete object what a normal child practices during the stage of concrete operations (7-11 years) in Piaget's theory. She trained Helen how to use finger as an organ for expression. She got response from Helen who tried to imitate it. It took the teacher several weeks to make Helen realize that every concrete object and an action has a name, "I learned to spell in this uncomprehending way a great many words, among them pin, hat, cup and a few verbs like sit, stand and walk" (Keller, 1914, p. 22). Once, Miss Sullivan took Helen Keller out of the home and put cold water on her hand while, at the same time, wrote "w-a-t-e-r" on the other hand. Helen construed that every word that her teacher writes is a name of something that is attached to an idea and a thought:

I stood still, my whole attention fixed upon the motions of her fingers. Suddenly I felt a misty consciousness as of something forgotten— thrill of returning thought; and somehow the mystery of language was revealed to me. I knew then that "w-a-t-e-r" meant the wonderful cool something that was flowing over my hand. That living word awakened my soul, gave it light, hope, joy, set it free ! There were barriers still is true, but barriers that could in time be swept away. (Keller, 1914, pp. 23-24)

Love (1934) recalls Helen's experiences with the visual world as a normal child, her imaginative power as handicapped and Miss Sullivan's service in bringing back her memories to understand real life:

I believe Helen Keller resurrects the once vivid impressions of early childhood. . . They have only faded and, with her imagination, she can paint a vivid picture. This world beyond the reach of her hand has been brought near her by Miss Sullivan. Her teacher has, on the banks of the Tennessee, made a toy world for Helen with sand mountains, and real water forming the associated rivers and lakes. (p. 115)

Miss Sullivan linked her earliest thoughts of normal days with nature, and made her feel the objects. Love (1934) also values Helen's experience of illness accompanied with pain as it stands out as a striking factor among "all that went before or along with it" (p. 114). It seems as if she were somewhere in the sensorimotor stage of Piaget's language learning theory when a child internalizes immediate experiences through his/her senses. Helen through her hands kept exploring new objects, ideas and thoughts. Through her sense of touch, she added words to her vocabulary and expanded her cognition.

Normal children hear a lot of words being spoken around them. Resultantly, they acquire language unconsciously while the physically impaired children put a lot of effort to memorize and operationalize their learnt language through a slow, steady and repetitive process that at times becomes painful and exhausting. In the next phase, Miss Sullivan made Helen understand the meanings of an abstract idea, "love." She embraced Helen and fingerspelled into her hand, "I love Helen" (Keller, 1914, p. 29). She touched her forehead to ask her to think about her embrace and spelled her required response, "Think" (p. 30) and Helen shares, "In a flash I knew that the word was the name of the process that was going on in my head. This was my first *conscious* perception of an abstract idea" (pp. 30-31, my italics). Helen reflects, "the deaf child does not learn in a month, or even in two or three years, the numberless idioms and expressions used in the simplest daily intercourse"(p. 31). She compares her case with a normal hearing child, "The little hearing

child learns these from constant repetition and imitation. The conversation he hears in his home stimulates his mind and suggests topics and calls forth the spontaneous expression of his own thoughts. This natural exchange of ideas is denied to the deaf child” (p. 32). Miss Sullivan does it by repeating them and by showing her how she can take part in the conversation. Once Helen has learnt writing, she recalls that her teacher taught her new literacy skill that is reading with an incremental approach:

[Miss Sullivan] gave me slips of cardboard with printed words in raised letters. I quickly learned that each printed word stood for an object, an act, or a quality. I had a frame in which I could arrange the words in little sentences; but before I ever put sentences in the frame I used to make them in objects. I found the slips of paper which represented, for example, "doll," "is," "on," "bed" and placed each name on its object ; then I put my doll on the bed with the words is, on, bed arranged beside the doll, thus making a sentence of the words, and at the same time carrying out the idea of the sentence with the things themselves. (p. 33)

At the Perkins Institution for the Blind, Helen interacts with the blind children who were familiar with the braille alphabets. She expresses her sudden companionship and newly discovered joy, “What joy to talk with other children in my own language! Until then I had been like a foreigner speaking through an interpreter” (p. 44). So her concept of language is something that is sensed, learnt and expressed through fingers. Helen reflects how her teacher supplied her with appropriate and required words for the conversation and built her vocabulary:

From the beginning of my education Miss Sullivan made it a practice to speak to me as she would speak to any hearing child; the only difference was that she spelled the sentences into my hand instead of speaking them. If I did not know the words and idioms necessary to express my thoughts she supplied them, even suggesting conversation when I was unable to keep up my end of the dialogue. (p. 31)

Sullivan addressed the gap that existed between Helen’s genetic make-up and environmental inaccessibility to language as Chomsky (1992) adds that “Language is a tool for thought” (p. 49). Her thoughts remain trapped in her unconsciousness as Piaget (2002) reminds that “the incommunicable character of thought involves a certain degree of unconsciousness” (p. 209). Sullivan gives language to her thoughts by firstly making environment and language approachable to her by manipulating her sense of touch and later by complementing her broken language with appropriate vocabulary. Whenever Miss Sullivan receives positive feedback from her, she gives positive reinforcement to her, “Everything Miss Sullivan taught me she illustrated by a beautiful story or a poem. Whenever anything delighted or interested me she talked it over with me just as if she were a little girl herself” (Keller, 1914, p. 34). The peculiar genius, quick sympathy and loving tact Miss Sullivan shows for her student, was the prime factor in her language learning. In 1890, Miss Fuller, the principal of the Horace Mann School, took the task to help Helen in speaking:

Miss Fuller's method was this: she passed my hand lightly over her face, and let me feel the position of her tongue and lips when she made a sound, was eager to imitate every motion and an hour had learned six elements of speech : M, P, A, S, T, I. Miss Fuller gave me eleven lessons in all. I shall never forget the surprise and delight I felt

when I uttered my first connected sentence, "It is warm." True, they were broken and stammering syllables; but they were human speech. My soul, conscious of new strength, came out of bondage, and was reaching through those broken symbols of speech to all knowledge and all faith. (pp. 59-60)

As Theory of Lexical Functional Grammar (See Kaplan and Bresnan, 1982) informs that a child is born with the capacity and facility to learn the grammatical rule system of language, Helen learns to rearrange words into a sentence. "It," Noun Phrase, can be annotated as the subject of the sentence and links up with "warm" that can be annotated as the Adjective phrase through linking verb 'is'. In this way, she learns how to arrange constituent structure (c- structure) into functional structure (f- structure)—"It is warm." However, it needs to be acknowledged here that Helen's commitment to learning speech and breaking the barrier of silence is exemplary, "No deaf child who has earnestly tried to speak the words which he has never heard—to come out of the prison of silence" (p. 60). Villey (1930) comments on Helen Keller and Marie Heurtin's special case of disabilities and says "although deprived of nine tenths of our sensations, (they) arrived notwithstanding, at a complete development (p. 358). Helen would fingerread responses from the speaker's lips. She sensed the throat vibrations and facial movements and expressions at the face of her mammoth job, "My work was practice, practice, practice" (Keller, 1914, p. 61). Skinner (1957) holds that language is a behavior learnt through reinforcement and mastered by making association of words with meanings. Her lipreading, though a hard task, was an advancement in her reading that relied lesser on reading the manual alphabets. Her reading antics enhanced her vocabulary, enriched her thought processes and worked as a reservoir for her writings, "Everything I found in books that pleased me I retained in my memory, consciously or unconsciously, and adapted it" (Keller, 1914, p. 69). Piaget (2002) calls it imitation that is "the self's desire to be always repeating the history of things so as to become adapted to them; it matters little whether this reproduction is corporal or mental" (p. 173). Her early compositions were reproduction of ideas into words primarily through assimilation and imitation (the cognitive processes which Piaget believes in). It was a *conscious* effort to internalize the language system or its constructions:

Those early compositions were mental gymnastics. I was learning, as all young and inexperienced persons learn, by assimilation and imitation, to put ideas into words. Everything I found in books that pleased me I retained in my memory, consciously or unconsciously, and adapted it. (Keller, 1914, p. 69)

This was the *reason* Helen faced the blame of plagiarism when she wrote a short-story *The Frost King* from her memory unknowingly that the content does not belong to her. She expresses the difficulty involved in writing from the memory, "Trying to write is very much like trying to put a Chinese puzzle together. We have a pattern in mind which we wish to work out in words" (p. 70). Helen's language learnability and language development refutes "the age-old metaphor of a light going on inside for the onset and the development of consciousness, thought, and personhood" (Leiber, 1996, p. 439).

At first, Helen's ideas were vague as her vocabulary was inadequate to express them properly. She would find a new word and try to associate it with an image that "some earlier experience had engraved on my brain" (Keller, 1914, p. 29). These experiences are very much akin to Piaget's

(2007) notion of schema, “every schema of reproduction assimilation is extended sooner or later in generalizing assimilation and recognitory assimilation combined, recognition being derived from assimilation” (p. 5). Helen’s assimilated experiences help her recognize and assimilate new objects.

Helen has been a voracious reader. She shares how often she “amused myself by composing in my head short exercises, using the new words as I came across them, and ignoring rules and other technicalities as much as possible” (Keller, 1914, p. 78). This factor maintains Piaget’s second stage intuitive or preoperational (2-7 years) in which a child keeps on imitating whatever words s/he comes across least bothering himself/herself for reason and logic. Miss Sullivan would correct her pronunciation and help her to phrase and inflect. Her progress in lip-reading and speech was apparently slow yet the will to talk like normal children was always there.

Although various theoretical explanations regarding language learnability and development are partially applicable on understanding Helen’s language acquisition yet Piaget and Chomsky’s theoretical explanations are core to the analysis of her case study, and help greatly in learning the mechanism of her language learning. Helen’s language development starts with the Saussurean sign language in which she constructs her language through the imitation of ‘distinct signs’ for the expression of her ideas. She is genetically equipped with Chomskyan innateness to learn language, but her acquisition is interrupted by her physical disability. Since her desire to speak was ‘instinctive’ as Darwin writes, she picks up language from the environment. Her language development could not follow Piaget’s stages of cognitive development delineated for a normal child. Miss Sullivan introduced language to her as a behavior that can be learned and reinforced from the environment. At a later stage in her life, she develops the grammatical aspect of language.

3. Discussion

Helen Keller, as a normal baby, acquired language in the same way as Chomsky explains in his theory of language acquisition. No *conscious* effort was involved in this case. The innate structures in her mind predisposed her to acquire language keeping up with the pre-programming that Nature had wired in her brain). She had a language apparatus that primarily developed under genetic control. She acquired language up to the age of nineteenth month. The time between the ages of nineteenth months and approximately seven years was a period when she could only learn sign language (Keller, 1914, p. 21). However, Helen had to learn language with *conscious* efforts later on. Her teacher Miss Sullivan manipulated means and ways for her with a view to facilitating her in language learning that was, largely, mechanized and programmed. The saving grace for Helen was that her illness did not affect her senses. Consequently, she learnt language by the interaction of her senses with the environment, thus qualifying for Piaget’s second stage (Martin & Fabes, 2009).

She learnt how to read and write but she could not become a good speaker because of her inability to “acquire the amenities of conversation” and “distinguish the tone of the voice.” She could not even “go up and down the gamut of tones that give significance to words; nor ... watch the expression of the speaker’s face, and a look is often the very soul of what one says” (Keller, 1914, p. 32). Such obstacles frustrated Helen Keller’s efforts to talk like a normal child for obvious reasons. Indirectly, her dissatisfaction with her deformity proved a blessing in disguise in a sense

that it begot a strong will to override her developmental disability and achieve communicative competence.

In the light of the case study and the resultant findings, it can be argued that her language learning might be a syncretism of language acquisition and learning methods of mentalist, cognitivist and behaviorist schools of thought. Helen Keller put in a lot of effort while learning language. Chomsky's theory explains the inner structures of her language. She was competent to acquire language but her illness insulated her against any possible exposure to the language environment and deformed her performance. She was unlucky not to have the ability to acquire language with the ease every normal child is privileged to have. Her sense of "touch" was a substitute for the audio-faculty of a normal child. The maxim---"practice, practice and practice"--- internalized her language system. For Chomsky, maturation in mother tongue is not something imposed by some external force. It happens, automatically, by means of conditioning, reinforcement or any other means when a child lives in language environment. In Helen's case, the type of reinforcement or conditioning is closer to the behaviourists' definition as she had to repeat the language exercises many times with the aid of an external driving force.

Helen marshaled herself to do lip reading by employing her tactile sense. She was a strongly and intrinsically motivated child who was rightly encouraged by her incremental successes and her trainer Miss Sullivan. Her illness only impaired her faculties of hearing and sight. It reduced her speed and proficiency in language to a significant extent. It is very important that she was, at least, though once, exposed to human language. The process of language acquisition as a baby, unlike other children with language impairment who were never exposed to spoken language, played a significant role in reacquiring language at a later age in Helen's life as Love (1934) has discussed that the teachers may resurrect the faded impressions of early childhood into a vivid picture by using a child's imagination.

Keeping their normal cognitive growth and biological apparatus intact, special children, once exposed to language before the development of deformity, need special attention after they are handicapped by a natural disease or calamity. They should first be taught how to welcome the feel of a word to imitate it, and later how to understand the concept behind these words. This can be done by association or correlation of these words with the concrete objects or abstract ideas. Their sense of "touch" should be utilized to their maximum advantage. The finger-language and lip-reading should be trusted as the basic teaching and learning tools. This type of teaching and learning is a task asking for an extraordinary measure of patience. There is a need is to motivate the subject learners extrinsically as well as intrinsically. The trainees should be positively reinforced on regular basis. The children with auditory, optical and/or oral handicaps should be provided immediate facilities to address their problems at the earliest stage, and the teachers should *consciously* activate, channelize and operationalize their language learning faculties.

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